

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/26/2020

Reviewed on 06/26/2020

1 Identification

- **Product identifier**
- **Trade name:** MICRO-BED RESIN
- **Article number:** 14210
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 1 H372 Causes damage to the hearing organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

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· **Hazard-determining components of labeling:**

2-hydroxyethyl methacrylate

STYRENE

N-BUTYL METHACRYLATE, MONOMER

· **Hazard statements**

*Highly flammable liquid and vapor.**Causes skin irritation.**Causes serious eye irritation.**May cause an allergic skin reaction.**Suspected of causing cancer.**Suspected of damaging fertility or the unborn child.**Causes damage to the hearing organs through prolonged or repeated exposure.*

· **Precautionary statements**

*Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Keep away from heat/sparks/open flames/hot surfaces. - No smoking.**Keep container tightly closed.**Ground/bond container and receiving equipment.**Use explosion-proof electrical/ventilating/lighting/equipment.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Do not breathe dust/fume/gas/mist/vapors/spray.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Contaminated work clothing must not be allowed out of the workplace.**Wear protective gloves/protective clothing/eye protection/face protection.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**Specific treatment (see on this label).**Get medical advice/attention if you feel unwell.**Take off contaminated clothing and wash it before reuse.**If skin irritation or rash occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**Wash contaminated clothing before reuse.**In case of fire: Use for extinction: CO₂, powder or water spray.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

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- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

27813-02-1	methacrylic acid, monoester with propane-1,2-diol	>25-≤50%
868-77-9	2-hydroxyethyl methacrylate	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER	>10-≤25%
100-42-5	STYRENE	>2.5-≤10%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

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- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

868-77-9	2-hydroxyethyl methacrylate	1.9 mg/m ³
	N-BUTYL METHACRYLATE, MONOMER	19 mg/m ³
100-42-5	STYRENE	20 ppm

· **PAC-2:**

868-77-9	2-hydroxyethyl methacrylate	21 mg/m ³
	N-BUTYL METHACRYLATE, MONOMER	210 mg/m ³
100-42-5	STYRENE	130 ppm

· **PAC-3:**

868-77-9	2-hydroxyethyl methacrylate	1,000 mg/m ³
	N-BUTYL METHACRYLATE, MONOMER	1,300 mg/m ³
100-42-5	STYRENE	1100* ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

100-42-5 STYRENE

PEL	Long-term value: 100 ppm Ceiling limit value: 200; 600* ppm *5-min peak in any 3 hrs
REL	Short-term value: 425 mg/m ³ , 100 ppm Long-term value: 215 mg/m ³ , 50 ppm
TLV	Short-term value: (170) mg/m ³ , (40) NIC-20 ppm Long-term value: (85) mg/m ³ , (20) NIC-10 ppm BEI, NIC-A3, NIC-OTO

- **Ingredients with biological limit values:**

100-42-5 STYRENE

BEI	400 mg/g creatinine Medium: urine Time: end of shift Parameter: Mandelic acid plus phenylglyoxylic acid (nonspecific)
	0.2 mg/L Medium: venous blood Time: end of shift Parameter: Styrene (semi-quantitative)

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid

Color: Clear

- **Odor:** Ester-like

- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 60 °C (140 °F)

- **Flash point:** 18 °C (64.4 °F)

- **Flammability (solid, gaseous):** Not flammable.

- **Ignition temperature:** 290 °C (554 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapor pressure at 20 °C (68 °F):** 3 hPa (2.3 mm Hg)

- **Density at 20 °C (68 °F):** 1.02006 g/cm³ (8.5124 lbs/gal)

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

Water: Fully miscible.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

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· Solvent content:	
Organic solvents:	6.1 %
VOC content:	6.12 %
	62.5 g/l / 0.52 lb/gal
· Solids content: 0.0 %	
· Other information No further relevant information available.	

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

100-42-5 STYRENE

Oral	LD50	5,000 mg/kg (rat)
Inhalative	LC50/4 h	24 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

100-42-5	STYRENE	2B
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· **NTP (National Toxicology Program)**

100-42-5	STYRENE	R
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· **OSHA-Ca (Occupational Safety Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR, IMDG, IATA | UN1993 |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · ADR · IMDG, IATA | Flammable liquids, n.o.s. (Styrene monomer, stabilized, n-Butyl methacrylate, stabilized)
1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)
FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED) |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | |
|  | |
| <ul style="list-style-type: none"> · Class · Label | 3 Flammable liquids
3 |
| <ul style="list-style-type: none"> · ADR, IMDG, IATA | |
|  | |
| <ul style="list-style-type: none"> · Class · Label | 3 Flammable liquids
3 |

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· Packing group · DOT, ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code): 33 · EMS Number: · Stowage Category	Warning: Flammable liquids F-E, S-E A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information: · DOT · Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· ADR · Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, N-BUTYL METHACRYLATE, STABILIZED), 3, III

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara
· Section 355 (extremely hazardous substances): None of the ingredients is listed.
· Section 313 (Specific toxic chemical listings): 100-42-5 STYRENE
· TSCA (Toxic Substances Control Act): All components have the value ACTIVE.
· Hazardous Air Pollutants 100-42-5 STYRENE
· Proposition 65
· Chemicals known to cause cancer: 100-42-5 STYRENE
· Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.

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· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

100-42-5 STYRENE

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

2-hydroxyethyl methacrylate

STYRENE

N-BUTYL METHACRYLATE, MONOMER

· **Hazard statements**

Highly flammable liquid and vapor.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to the hearing organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

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If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 06/26/2020 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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Revision: 26.06.2020

1 Identification

- **Product identifier**
- **Trade name:** MICRO-BED RESIN
- **Article number:** 14210
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Website: ems.proscitech.com
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 1 H372 Causes damage to the hearing organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

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*Eye Irrit. 2A H319 Causes serious eye irritation.**Skin Sens. 1 H317 May cause an allergic skin reaction.*

· **Label elements**

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

*2-hydroxyethyl methacrylate**STYRENE**N-BUTYL METHACRYLATE, MONOMER*

· **Hazard statements**

*Highly flammable liquid and vapour.**Causes skin irritation.**Causes serious eye irritation.**May cause an allergic skin reaction.**Suspected of causing cancer.**Suspected of damaging fertility or the unborn child.**Causes damage to the hearing organs through prolonged or repeated exposure.*

· **Precautionary statements**

*Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Keep away from heat/sparks/open flames/hot surfaces. No smoking.**Keep container tightly closed.**Ground/bond container and receiving equipment.**Use explosion-proof electrical/ventilating/lighting equipment.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Do not breathe dust/fume/gas/mist/vapours/spray.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Contaminated work clothing should not be allowed out of the workplace.**Wear protective gloves/protective clothing/eye protection/face protection.**IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**Specific treatment (see on this label).**Get medical advice/attention if you feel unwell.**Take off contaminated clothing and wash it before reuse.**If skin irritation or rash occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**Wash contaminated clothing before reuse.**In case of fire: Use for extinction: CO2, powder or water spray.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

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- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition and Information on Ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

27813-02-1	methacrylic acid, monoester with propane-1,2-diol	>25-≤50%
868-77-9	2-hydroxyethyl methacrylate	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER	>10-≤25%
100-42-5	STYRENE	>2.5-≤10%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.

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- Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

100-42-5 STYRENE

WES	Short-term value: 426 mg/m ³ , 100 ppm
	Long-term value: 213 mg/m ³ , 50 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Colour: Clear

· **Odour:** Ester-like

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 60 °C

· **Flash point:** 18 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 290 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure at 20 °C:** 3 hPa

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Trade name: MICRO-BED RESIN

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· Density at 20 °C:	1.02006 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	6.1 %
VOC (EC)	6.12 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

· **LD/LC50 values relevant for classification:**

100-42-5 STYRENE

Oral	LD50	5,000 mg/kg (rat)
Inhalative	LC50/4 h	24 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Carc. 2, Repr. 2

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Trade name: MICRO-BED RESIN

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12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADG, IMDG, IATA 	<p style="text-align: center;">UN1993</p>
<ul style="list-style-type: none"> · UN proper shipping name · ADG · IMDG, IATA 	<p style="text-align: center;">1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)</p> <p style="text-align: center;">FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · ADG, IMDG, IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	<p style="text-align: center;">3 Flammable liquids.</p> <p style="text-align: center;">3</p>
<ul style="list-style-type: none"> · Packing group · ADG, IMDG, IATA 	<p style="text-align: center;">III</p>
<ul style="list-style-type: none"> · Environmental hazards: 	<p style="text-align: center;">Not applicable.</p>

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Trade name: MICRO-BED RESIN

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· Special precautions for user	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E, <u>S-E</u>
· Stowage Category	A
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, N-BUTYL METHACRYLATE, STABILIZED), 3, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

868-77-9	2-hydroxyethyl methacrylate	S5
100-42-5	STYRENE	S5

· **Australia: Priority Existing Chemicals**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

2-hydroxyethyl methacrylate

STYRENE

N-BUTYL METHACRYLATE, MONOMER

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Trade name: **MICRO-BED RESIN**

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- **Hazard statements**

Highly flammable liquid and vapour.
 Causes skin irritation.
 Causes serious eye irritation.
 May cause an allergic skin reaction.
 Suspected of causing cancer.
 Suspected of damaging fertility or the unborn child.
 Causes damage to the hearing organs through prolonged or repeated exposure.

- **Precautionary statements**

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Do not breathe dust/fume/gas/mist/vapours/spray.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing.
 IF exposed or concerned: Get medical advice/attention.
 Specific treatment (see on this label).
 Get medical advice/attention if you feel unwell.
 Take off contaminated clothing and wash it before reuse.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 In case of fire: Use for extinction: CO₂, powder or water spray.
 Store in a well-ventilated place. Keep cool.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

AU

Safety Data Sheet

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1 Identification

- **Product identifier**
- **Trade name:** MICRO-BED RESIN
- **Article number:** 14210
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Electron Microscopy Sciences
 1560 Industry Road
 USA-Hatfield, PA 19440
 Tel: 215-412-8400 Fax: 215-412-8450
 email: sgkcck@aol.com
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
 ChemTrec 1-800-424-9300 Contract CCN7661
 1-703-527-3887

2 Hazard identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids - Category 2

H225 Highly flammable liquid and vapour.



GHS08 Health hazard

Carcinogenicity – Category 2

H351 Suspected of causing cancer.

Reproductive Toxicity - Category 2

H361 Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Repeated Exposure - Category 1

H372 Causes damage to the hearing organs through prolonged or repeated exposure.



GHS07

Skin Irritation - Category 2

H315 Causes skin irritation.

Eye Irritation - Category 2A

H319 Causes serious eye irritation.

Skin Sensitizer - Category 1

H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07



GHS08

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Trade name: **MICRO-BED RESIN**

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· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

2-hydroxyethyl methacrylate

STYRENE

N-BUTYL METHACRYLATE, MONOMER

· **Hazard statements**

Highly flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to the hearing organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

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Trade name: MICRO-BED RESIN

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3 Composition/Information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

27813-02-1	methacrylic acid, monoester with propane-1,2-diol	30-60% w/w *
868-77-9	2-hydroxyethyl methacrylate	30-60% w/w *
	N-BUTYL METHACRYLATE, MONOMER	7-13% w/w *
100-42-5	STYRENE	3-7% w/w *

* Actual concentration ranges are withheld as a trade secret.

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

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- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/ Personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

N-BUTYL METHACRYLATE, MONOMER

EL TWA: 50 ppm

100-42-5 STYRENE

EL STEL: 75 ppm

TWA: 50 ppm

IARC 2B

EV STEL: 100 ppm

TWA: 35 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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Trade name: MICRO-BED RESIN

(Contd. of page 4)

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Clear

· **Odor:** Ester-like

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 60 °C

· **Flash point:** 18 °C

· **Flammability (solid, gaseous):** Not flammable.

· **Ignition temperature:** 290 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapor pressure at 20 °C:** 3 hPa

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Trade name: MICRO-BED RESIN

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· Density at 20 °C:	1.02006 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	6.1 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

100-42-5 STYRENE

Oral	LD50	5,000 mg/kg (rat)
Inhalative	LC50/4 h	24 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

100-42-5 STYRENE

2B

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· NTP (National Toxicology Program)

100-42-5 STYRENE

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|---|
| · UN-Number | UN1993 |
| · DOT/TDG, ADR, IMDG, IATA | |
| · UN proper shipping name | Flammable liquids, n.o.s. (Styrene monomer, stabilized, n-Butyl methacrylate, stabilized) |
| · DOT/TDG | |
| · ADR | 1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED) |
| · IMDG, IATA | FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED) |
| · Transport hazard class(es) | |
| · DOT/TDG (Transport dangerous goods): | |
|  | |
| · Class | 3 Flammable liquids |

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Safety Data Sheet


according to HPR, Schedule 1

Printing date 06/26/2020

Reviewed on 06/26/2020

Trade name: MICRO-BED RESIN

(Contd. of page 7)

· Label	3
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT/TDG, ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E, <u>S-E</u>
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT/TDG	
· Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, N-BUTYL METHACRYLATE, STABILIZED), 3, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

100-42-5 | STYRENE

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

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CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/26/2020

Reviewed on 06/26/2020

Trade name: MICRO-BED RESIN

(Contd. of page 8)

- **Canadian substance listings:**

- **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

100-42-5 STYRENE

- **Canadian Ingredient Disclosure list (limit 1%)**

868-77-9 2-hydroxyethyl methacrylate

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

2-hydroxyethyl methacrylate

STYRENE

N-BUTYL METHACRYLATE, MONOMER

- **Hazard statements**

Highly flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to the hearing organs through prolonged or repeated exposure.

- **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

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Safety Data Sheet
according to HPR, Schedule 1

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Reviewed on 06/26/2020

Trade name: MICRO-BED RESIN

(Contd. of page 9)

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of the latest revision of the safety data sheet** 06/26/2020 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

CA

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 26.06.2020

Revision: 26.06.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** MICRO-BED RESIN
- **Article number:** 14210
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Repr. 2 H361d Suspected of damaging the unborn child.

STOT RE 2 H373 May cause damage to the hearing organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02



GHS07



GHS08

(Contd. on page 2)

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Trade name: MICRO-BED RESIN

(Contd. of page 1)

· **Signal word** *Danger*· **Hazard-determining components of labelling:**

2-hydroxyethyl methacrylate

STYRENE

N-BUTYL METHACRYLATE, MONOMER

· **Hazard statements**H225 *Highly flammable liquid and vapour.*H315 *Causes skin irritation.*H319 *Causes serious eye irritation.*H317 *May cause an allergic skin reaction.*H361d *Suspected of damaging the unborn child.*H373 *May cause damage to the hearing organs through prolonged or repeated exposure.*· **Precautionary statements**P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*P241 *Use explosion-proof [electrical/ventilating/lighting] equipment.*P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*P405 *Store locked up.*P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*· **2.3 Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 27813-02-1 EINECS: 248-666-3	methacrylic acid, monoester with propane-1,2-diol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	>25-≤50%
CAS: 868-77-9 EINECS: 212-782-2	2-hydroxyethyl methacrylate ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	>10-≤25%
CAS: 100-42-5 EINECS: 202-851-5	STYRENE ⚠ Flam. Liq. 3, H226; ⚠ Repr. 2, H361d; STOT RE 1, H372; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	>2.5-≤10%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

GB

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Safety data sheet

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Trade name: MICRO-BED RESIN

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SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing: If symptoms persist consult doctor.

· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· 5.2 Special hazards arising from the substance or mixture No further relevant information available.

· 5.3 Advice for firefighters

· Protective equipment: Mouth respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect from heat.

Protect against electrostatic charges.

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Trade name: MICRO-BED RESIN

(Contd. of page 3)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

100-42-5 STYRENE

WEL	Short-term value: 1080 mg/m ³ , 250 ppm Long-term value: 430 mg/m ³ , 100 ppm
-----	--

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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Trade name: MICRO-BED RESIN

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Colour:	Clear
· Odour:	Ester-like
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	60 °C

· Flash point: 18 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 290 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure at 20 °C: 3 hPa

· Density at 20 °C:	1.02006 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with water: Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents:	6.1 %
VOC (EC)	6.12 %

Solids content: 0.0 %

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Trade name: MICRO-BED RESIN

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· 9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:****100-42-5 STYRENE**

Oral	LD50	5,000 mg/kg (rat)
Inhalative	LC50/4 h	24 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity**
Suspected of damaging the unborn child.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure**
May cause damage to the hearing organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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Trade name: MICRO-BED RESIN


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- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- | | |
|---|---|
| · 14.1 UN-Number
· ADR, IMDG, IATA | UN1993 |
| · 14.2 UN proper shipping name
· ADR
· IMDG, IATA | 1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)
FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED) |
| · 14.3 Transport hazard class(es)
· ADR, IMDG, IATA | |
|  | |
| · Class
· Label | 3 Flammable liquids.
3 |
| · 14.4 Packing group
· ADR, IMDG, IATA | III |
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user
· Hazard identification number (Kemler code):
· EMS Number:
· Stowage Category | Warning: Flammable liquids.
33
F-E, S-E
A |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADR
· Limited quantities (LQ)
· Excepted quantities (EQ) | 5L
Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml |

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Safety data sheet
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Trade name: MICRO-BED RESIN

(Contd. of page 7)

· Transport category	3
· Tunnel restriction code	D/E
<hr/>	
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, N-BUTYL METHACRYLATE, STABILIZED), 3, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H361d Suspected of damaging the unborn child.
H372 Causes damage to the hearing organs through prolonged or repeated exposure.
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity - inhalation – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2

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*Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Skin Sens. 1: Skin sensitisation – Category 1**Repr. 2: Reproductive toxicity – Category 2**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*

GB

Bezpečnostní list podle 1907/2006/ES, Článek 31

Datum vydání: 26.06.2020

Revize: 26.06.2020

ODDÍL 1: Identifikace látky/směsi a společnosti/podniku

- **1.1 Identifikátor výrobku**
- **Obchodní označení:** MICRO-BED RESIN
- **Číslo výrobku:** 14210
- **1.2 Příslušná určená použití látky nebo směsi a nedoporučená použití**
Další relevantní informace nejsou k dispozici.
- **Použití látky / přípravku** Laboratorní chemikálie
- **1.3 Podrobné údaje o dodavateli bezpečnostního listu**
- **Identifikace výrobce/dovozce:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Obor poskytující informace:** Product safety department
- **1.4 Telefonní číslo pro naléhavé situace:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ODDÍL 2: Identifikace nebezpečnosti

- **2.1 Klasifikace látky nebo směsi**
- **Klasifikace v souladu s nařízením (ES) č. 1272/2008**



GHS02 plamen

Flam. Liq. 2 H225 Vysoce hořlavá kapalina a páry.



GHS08 nebezpečnost pro zdraví

Repr. 2 H361d Podezření na poškození plodu v těle matky.

STOT RE 2 H373 Může způsobit poškození sluchových orgánů při prodloužené nebo opakované expozici.



GHS07

Skin Irrit. 2 H315 Dráždí kůži.

Eye Irrit. 2 H319 Způsobuje vážné podráždění očí.

Skin Sens. 1 H317 Může vyvolat alergickou kožní reakci.

- **2.2 Prvky označení**
- **Označování v souladu s nařízením (ES) č. 1272/2008** Produkt je klasifikován a označen podle nařízení CLP.
- **Výstražné symboly nebezpečnosti**



GHS02



GHS07



GHS08

- **Signální slovo** Nebezpečí

(pokračování na straně 2)

Bezpečnostní list

podle 1907/2006/ES, Článek 31

Datum vydání: 26.06.2020

Revize: 26.06.2020

Obchodní označení: MICRO-BED RESIN

(pokračování strany 1)

- **Nebezpečné komponenty k etiketování:**
2-Hydroxyethyl-methakrylát
styren
N-BUTYL METHACRYLATE, MONOMER
- **Standardní věty o nebezpečnosti**
H225 Vysoce hořlavá kapalina a páry.
H315 Dráždí kůži.
H319 Způsobuje vážné podráždění očí.
H317 Může vyvolat alergickou kožní reakci.
H361d Podezření na poškození plodu v těle matky.
H373 Může způsobit poškození sluchových orgánů při prodloužené nebo opakované expozici.
- **Pokyny pro bezpečné zacházení**
P210 Chraňte před teplem, horkými povrchy, jiskrami, otevřeným ohněm a jinými zdroji zapálení. Zákaz kouření.
P241 Používejte [elektrické/ventilační/osvětlovací] zařízení do výbušného prostředí.
P303+P361+P353 PŘI STYKU S KŮŽÍ (nebo s vlasy): Veškeré kontaminované části oděvu okamžitě svlékněte. Opláchněte kůži vodou [nebo osprchujte].
P305+P351+P338 PŘI ZASAŽENÍ OČÍ: Několik minut opatrně vyplachujte vodou. Vyjměte kontaktní čočky, jsou-li nasazeny a pokud je lze vyjmout snadno. Pokračujte ve vyplachování.
P405 Skladujte uzamčené.
P501 Obsah/nádobu likvidujte v souladu s místními/regionálními/národními/mezinárodními předpisy.
- **2.3 Další nebezpečnost**
- **Výsledky posouzení PBT a vPvB**
- **PBT:** Nedá se použít.
- **vPvB:** Nedá se použít.

ODDÍL 3: Složení/informace o složkách

- **3.2 Chemická charakteristika: Směsi**
- **Popis:** Směs obsahuje následné látky bez nebezpečných příměsí.

· **Výrobek obsahuje tyto nebezpečné látky:**

CAS: 27813-02-1 EINECS: 248-666-3	methacrylic acid, monoester with propane-1,2-diol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	>25-≤50%
CAS: 868-77-9 EINECS: 212-782-2	2-Hydroxyethyl-methakrylát ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	>10-≤25%
CAS: 100-42-5 EINECS: 202-851-5	styren ⚠ Flam. Liq. 3, H226; ⚠ Repr. 2, H361d; STOT RE 1, H372; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	>2,5-≤10%

· **Dodatečná upozornění:** Znění uvedených údajů o nebezpečnosti látky je uvedeno v kapitole 16.

ODDÍL 4: Pokyny pro první pomoc

- **4.1 Popis první pomoci**
- **Všeobecné pokyny:**
Příznaky otravy se mohou projevit až po mnoha hodinách, proto je nutný lékařský dohled nejméně 48 hodin po nehodě.

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- **Při nadýchání:**
Bohatý přísuv čerstvého vzduchu a pro jistotu vyhledat lékaře.
Při bezvědomí uložit a přepravit ve stabilní poloze na boku.
- **Při styku s kůží:** Ihned omýt vodou a mýdlem a dobře opláchnout.
- **Při zasažení očí:**
Oči s otevřenými víčky vyplachovat po více minut proudem tekoucí vody. Při přetrvávajících potížích se poradit s lékařem.
- **Při požití:** Při přetrvávajících potížích konzultovat s lékařem.
- **4.2 Nejdůležitější akutní a opožděné symptomy a účinky** Další relevantní informace nejsou k dispozici.
- **4.3 Pokyn týkající se okamžité lékařské pomoci a zvláštního ošetření**
Další relevantní informace nejsou k dispozici.

ODDÍL 5: Opatření pro hašení požáru

- **5.1 Hasiva**
- **Vhodná hasiva:**
CO₂, hasící prášek nebo rozestříkované vodní paprsky. Větší ohně zdolat rozestříkovanými vodními paprsky nebo pěnou odolnou vůči alkoholu.
- **5.2 Zvláštní nebezpečnost vyplývající z látky nebo směsi** Další relevantní informace nejsou k dispozici.
- **5.3 Pokyny pro hasiče**
- **Zvláštní ochranné prostředky pro hasiče:** Použít ochranný dýchací přístroj.

ODDÍL 6: Opatření v případě náhodného úniku

- **6.1 Opatření na ochranu osob, ochranné prostředky a nouzové postupy**
Nosit ochrannou výstroj. Nechráněné osoby se nesmí přibližovat.
- **6.2 Opatření na ochranu životního prostředí:**
Zředit velkým množstvím vody.
Nenechat proniknout do kanalizace/povrchových vod/podzemních vod.
- **6.3 Metody a materiál pro omezení úniku a pro čištění:**
Sebrat s materiály, vázícími kapaliny (písek, štěrkový písek, pojidla kyselin, universální pojidla, piliny).
Kontaminovaný materiál odstranit jako odpad podle bodu 13.
Zajistit dostatečné větrání.
- **6.4 Odkaz na jiné oddíly**
Informace o bezpečném zacházení viz kapitola 7.
Informace o osobní ochranné výstroji viz kapitola 8.
Informace k odstranění viz kapitola 13.

ODDÍL 7: Zacházení a skladování

- **7.1 Opatření pro bezpečné zacházení**
Na pracovišti zabezpečit dobré větrání a odsávání.
Zamezit vytváření aerosolů.
- **Upozornění k ochraně před ohněm a explozí:**
Nepřibližovat se ze zápalnými zdroji - nekouřit.
Chránit před horkem.
Zajistit proti elektrostatickému náboji.
- **7.2 Podmínky pro bezpečné skladování látek a směsí včetně neslučitelných látek a směsí**
- **Pokyny pro skladování:**
- **Požadavky na skladovací prostory a nádoby:** Skladovat na chladném místě.
- **Upozornění k hromadnému skladování:** Není nutné.

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- **Další údaje k podmínkám skladování:**
Nádrž držet neprodyšně uzavřenou.
Skladovat v dobře uzavřených nádobách v chladu a suchu.
Chránit před horkem a přímým slunečním světlem.
- **7.3 Specifické konečné / specifická konečná použití** Další relevantní informace nejsou k dispozici.

ODDÍL 8: Omezování expozice / osobní ochranné prostředky

- **Technická opatření:** Žádné další údaje, viz bod 7.

· 8.1 Kontrolní parametry

· Kontrolní parametry:

100-42-5 styren

NPK	Krátkodobá hodnota: 400 mg/m ³ Dlouhodobá hodnota: 100 mg/m ³ B, I, P
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· Složky s biologických mezních hodnot:

100-42-5 styren

BEH	400 mg/g kreatininu Biologického materiálu: moči Doba odběru: Konec směny Ukazatel: Mandlová kyselina
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	600 mg/g kreatininu Biologického materiálu: moči Doba odběru: Konec směny Ukazatel: Mandlová + Fenyglyoxylová kyselina
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- **Další upozornění:** Jako podklad sloužily při zhotovení platné listiny.

· 8.2 Omezování expozice

· Osobní ochranné prostředky:

· Všeobecná ochranná a hygienická opatření:

- Zdržovat od potravin, nápojů a krmiv.
- Zašpiněné, nasáknuté šaty ihned vysvléci.
- Před přestávkami a po práci umýt ruce.
- Zamezit styku s pokožkou a zrakem.

· Ochrana dýchacích orgánů:

Při krátkodobém nebo nízkém zatížení použít dýchací přístroj s filtrem, při intenzivním nebo delším zatížení se musí použít dýchací přístroj nezávislý na okolním vzduchu.

· Ochrana rukou:



Ochranné rukavice

Materiál rukavic musí být nepropustný a odolný proti produktu / látce / směsi.

Vzhledem k tomu, že chybí testy, není možné doporučit materiál rukavic pro produkt / přípravek / chemickou směs. Výběr materiálu rukavic proveďte podle času průniku, permeability a degradace.

· Materiál rukavic

Správný výběr rukavic nezávisí jen na materiálu, ale také na dalších kritériích, která se liší podle výrobce. Protože je výrobek směs více látek, nelze materiál rukavic předem vypočítat a je nutno udělat před použitím zkoušku.

· Doba průniku materiálem rukavic

Je nutno u výrobce rukavic zjistit a dodržovat přesné časy průniku materiálem ochranných rukavic.

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· Ochrana očí:



Uzavřené ochranné brýle

ODDÍL 9: Fyzikální a chemické vlastnosti

· 9.1 Informace o základních fyzikálních a chemických vlastnostech

· Všeobecné údaje

· Vzhled:

Skupenství: Tekutina

Barva: Jasná

· Zápach: Esterovitý

· Prahová hodnota zápachu: Není určeno.

· Hodnota pH: Není určeno.

· Změna stavu

Bod tání/bod tuhnutí: Není určeno.

Počáteční bod varu a rozmezí bodu varu: 60 °C

· Bod vzplanutí: 18 °C

· Hořlavost (pevné látky, plyny): Nedá se použít.

· Zápallná teplota: 290 °C

· Teplota rozkladu: Není určeno.

· Teplota samovznícení: Produkt není samozápalný.

· Výbušné vlastnosti: I když produktu nehrozí nebezpečí exploze, je přesto možné nebezpečí exploze ve směsi par se vzduchem.

· Meze výbušnosti:

Dolní mez: Není určeno.

Horní mez: Není určeno.

· Tlak páry při 20 °C: 3 hPa

· Hustota při 20 °C: 1,02006 g/cm³

· Relativní hustota: Není určeno.

· Hustota páry: Není určeno.

· Rychlost odpařování: Není určeno.

· Rozpuštnost ve / směšitelnost s vodě:

Úplně mísitelná.

· Rozdělovací koeficient: n-oktanol/voda: Není určeno.

· Viskozita:

Dynamicky: Není určeno.

Kinematicky: Není určeno.

· Obsah ředidel:

Organická ředidla: 6,1 %

VOC (EC) 6,12 %

Obsah netěkavých složek: 0,0 %

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· 9.2 Další informace

Další relevantní informace nejsou k dispozici.

ODDÍL 10: Stálost a reaktivita

- **10.1 Reaktivita** Další relevantní informace nejsou k dispozici.
- **10.2 Chemická stabilita**
- **Termický rozklad / Podmínky, kterých je nutno se vyvarovat:**
Nedochází k rozkladu při doporučeném způsobu použití.
- **10.3 Možnost nebezpečných reakcí** Žádné nebezpečné reakce nejsou známy.
- **10.4 Podmínky, kterým je třeba zabránit** Další relevantní informace nejsou k dispozici.
- **10.5 Neslučitelné materiály:** Další relevantní informace nejsou k dispozici.
- **10.6 Nebezpečné produkty rozkladu:** Nejsou známy žádné nebezpečné produkty při rozkladu.

ODDÍL 11: Toxikologické informace

- **11.1 Informace o toxikologických účincích**
- **Akutní toxicita** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.

· Zařazení relevantní hodnoty LD/LC 50:

100-42-5 styren

Orálně	LD50	5.000 mg/kg (rat)
Inhalováním	LC50/4 h	24 mg/l (rat)

- **Primární dráždivé účinky:**
- **Žíravost/dráždivost pro kůži**
Dráždí kůži.
- **Vážné poškození očí / podráždění očí**
Způsobuje vážné podráždění očí.
- **Senzibilizace dýchacích cest / senzibilizace kůže**
Může vyvolat alergickou kožní reakci.
- **Účinky CMR (karcinogenita, mutagenita a toxicita pro reprodukci)**
- **Mutagenita v zárodečných buňkách** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Karcinogenita** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Toxicita pro reprodukci**
Podezření na poškození plodu v těle matky.
- **Toxicita pro specifické cílové orgány – jednorázová expozice**
Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Toxicita pro specifické cílové orgány – opakovaná expozice**
Může způsobit poškození sluchových orgánů při prodloužené nebo opakované expozici.
- **Nebezpečnost při vdechnutí** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.

ODDÍL 12: Ekologické informace

- **12.1 Toxicita**
- **Aquatická toxicita:** Další relevantní informace nejsou k dispozici.
- **12.2 Perzistence a rozložitelnost** Další relevantní informace nejsou k dispozici.
- **12.3 Bioakumulační potenciál** Další relevantní informace nejsou k dispozici.
- **12.4 Mobilita v půdě** Další relevantní informace nejsou k dispozici.
- **Další ekologické údaje:**
- **Všeobecná upozornění:**
Třída ohrožení vody 1 (Samozařazení): slabé ohrožení vody

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- Nesmí se dostat nezředěný nebo ve větším množství do spodní vody, povodí nebo kanalizace.
- **12.5 Výsledky posouzení PBT a vPvB**
 - **PBT:** Nedá se použít.
 - **vPvB:** Nedá se použít.
 - **12.6 Jiné nepříznivé účinky** Další relevantní informace nejsou k dispozici.

ODDÍL 13: Pokyny pro odstraňování

- **13.1 Metody nakládání s odpady**
- **Doporučení:** Nesmí se odstraňovat společně s odpady z domácnosti. Nepřipustit únik do kanalizace.
- **Kontaminované obaly:**
- **Doporučení:** Odstranění podle příslušných předpisů.
- **Doporučený čisticí prostředek:** Voda, případně s přísadami čisticích prostředků.

ODDÍL 14: Informace pro přepravu

<ul style="list-style-type: none"> · 14.1 UN číslo · ADR, IMDG, IATA 	UN1993	
<ul style="list-style-type: none"> · 14.2 Oficiální (OSN) pojmenování pro přepravu · ADR · IMDG, IATA 	1993 LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (STYREN, MONOMERNÍ, STABILIZOVANÝ, n-BUTYLMETHAKRYLÁT, STABILIZOVANÝ) FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)	
<ul style="list-style-type: none"> · 14.3 Třída/třídy nebezpečnosti pro přepravu · ADR, IMDG, IATA 	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> · třída · Etiketa 	3 Hořlavé kapaliny 3
<ul style="list-style-type: none"> · 14.4 Obalová skupina · ADR, IMDG, IATA 	III	
<ul style="list-style-type: none"> · 14.5 Nebezpečnost pro životní prostředí: 	Nedá se použít.	
<ul style="list-style-type: none"> · 14.6 Zvláštní bezpečnostní opatření pro uživatele · Identifikační číslo nebezpečnosti (Kemlerovo číslo): · EMS-skupina: · Stowage Category 	Varování: Hořlavé kapaliny 33 F-E, S-E A	
<ul style="list-style-type: none"> · 14.7 Hromadná přeprava podle přílohy II úmluvy MARPOL a předpisu IBC 	Nedá se použít.	
<ul style="list-style-type: none"> · Přeprava/další údaje: · ADR · Omezené množství (LQ) 	5L	

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· Vyňatá množství (EQ)	Kód: E1 Nejvyšší čisté množství na vnitřní obal: 30 ml Nejvyšší čisté množství na vnější obal: 1000 ml
· Přepravní kategorie	3
· Kód omezení pro tunely:	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1993 LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (STYREN, MONOMERNÍ, STABILIZOVANÝ, N-BUTYLMETHAKRYLÁT, STABILIZOVANÝ), 3, III

ODDÍL 15: Informace o předpisech

- **15.1 Předpisy týkající se bezpečnosti, zdraví a životního prostředí/specifické právní předpisy týkající se látky nebo směsi**
- **Rady 2012/18/EU**
- **Nebezpečné látky jmenovitě uvedené - PŘÍLOHA I** Žádná z obsažených látek není na seznamu.
- **Kategorie Seveso P5c** HOŘLAVÉ KAPALINY
- **Kvalifikační množství (v tunách) při uplatnění požadavků pro podlimitní množství 5.000 t**
- **Kvalifikační množství (v tunách) při uplatnění požadavků pro nadlimitní množství 50.000 t**
- **Rady (ES) č. 1907/2006 PŘÍLOHA XVII** Omezující podmínky: 3
- **15.2 Posouzení chemické bezpečnosti:** Posouzení chemické bezpečnosti nebylo provedeno.

ODDÍL 16: Další informace

Údaje se opírají o dnešní stav našich vědomostí, nepředstavují však záruku vlastností produktu a nevznikají tak žádné smluvní právní vztahy.

- **Relevantní věty**
 - H226 Hořlavá kapalina a páry.
 - H315 Dráždí kůži.
 - H317 Může vyvolat alergickou kožní reakci.
 - H319 Způsobuje vážné podráždění očí.
 - H332 Zdraví škodlivý při vdechování.
 - H335 Může způsobit podráždění dýchacích cest.
 - H361d Podezření na poškození plodu v těle matky.
 - H372 Způsobuje poškození sluchových orgánů při prodloužené nebo opakované expozici.
- **Zkratky a akronymy:**
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - VOC: Volatile Organic Compounds (USA, EU)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative

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Flam. Liq. 2: Hořlavé kapaliny – Kategorie 2
Flam. Liq. 3: Hořlavé kapaliny – Kategorie 3
Acute Tox. 4: Akutní toxicita - inhalační – Kategorie 4
Skin Irrit. 2: Žíravost/dráždivost pro kůži – Kategorie 2
Eye Irrit. 2: Vážné poškození očí / podráždění očí – Kategorie 2
Skin Sens. 1: Senzibilizace kůže – Kategorie 1
Repr. 2: Toxicita pro reprodukci – Kategorie 2
STOT SE 3: Toxicita pro specifické cílové orgány (jednorázová expozice) – Kategorie 3
STOT RE 1: Toxicita pro specifické cílové orgány (opakovaná expozice) – Kategorie 1
STOT RE 2: Toxicita pro specifické cílové orgány (opakovaná expozice) – Kategorie 2

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-CZ-

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.06.2020

Herziening van: 26.06.2020

RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **1.1 Productidentificatie**
- **Handelsnaam:** MICRO-BED RESIN
- **Artikelnummer:** 14210
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Aurion**
Binnenhaven 5
6709 PD Wageningen
The Netherlands
Tel: 31 317 415094
Fax: 31 317 415955
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS02 vlam

Flam. Liq. 2 H225 Licht ontvlambare vloeistof en damp.



GHS08 gezondheidsgevaar

Repr. 2 H361d Wordt ervan verdacht het ongeboren kind te schaden.

STOT RE 2 H373 Kan schade aan de gehoororganen veroorzaken bij langdurige of herhaalde blootstelling.



GHS07

Skin Irrit. 2 H315 Veroorzaakt huidirritatie.

Eye Irrit. 2 H319 Veroorzaakt ernstige oogirritatie.

Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

- **2.2 Etiketteringselementen**
- **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**
Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

(Vervolg op blz. 2)

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(Vervolg van blz. 1)

· **Gevarenpictogrammen**

GHS02 GHS07 GHS08

· **Signaalwoord** Gevaar· **Gevaaraanduidende componenten voor de etikettering:**

2-hydroxyethylmethacrylaat

styreen

N-BUTYL METHACRYLATE, MONOMER

· **Gevarenaanduidingen**

H225 Licht ontvlambare vloeistof en damp.

H315 Veroorzaakt huidirritatie.

H319 Veroorzaakt ernstige oogirritatie.

H317 Kan een allergische huidreactie veroorzaken.

H361d Wordt ervan verdacht het ongeboren kind te schaden.

H373 Kan schade aan de gehoororganen veroorzaken bij langdurige of herhaalde blootstelling.

· **Veiligheidsaanbevelingen**

P210 Verwijderd houden van warmte, hete oppervlakken, vonken, open vuur en andere ontstekingsbronnen. Niet roken.

P241 Explosieveilige [elektrische/ventilatie-/verlichtings-]apparatuur gebruiken.

P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken. Huid met water afspoelen [of afdouchen].

P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

· **2.3 Andere gevaren**· **Resultaten van PBT- en zPzB-beoordeling**· **PBT:** Niet bruikbaar.· **zPzB:** Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

· **3.2 Chemische karakterisering: Mengsels**· **Beschrijving:** Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.· **Gevaarlijke inhoudstoffen:**

CAS: 27813-02-1 EINECS: 248-666-3	methacrylzuur, monoester met propaan-1,2-diol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	>25-≤50%
CAS: 868-77-9 EINECS: 212-782-2	2-hydroxyethylmethacrylaat ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	>10-≤25%
CAS: 100-42-5 EINECS: 202-851-5	styreen ⚠ Flam. Liq. 3, H226; ⚠ Repr. 2, H361d; STOT RE 1, H372; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	>2,5-≤10%

(Vervolg op blz. 3)

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· Aanvullende gegevens:

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

RUBRIEK 4: Eerstehulpmaatregelen

· 4.1 Beschrijving van de eerstehulpmaatregelen**· Algemene informatie:**

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

· Na het inademen:

Veel verse lucht toedienen en voor alle zekerheid een arts raadplegen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· Na huidcontact: Onmiddellijk met water en zeep afwassen en goed naspoelen.**· Na oogcontact:**

De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een dokter raadplegen.

· Na inslikken: Als de klachten niet minderen, een arts raadplegen**· 4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.**· 4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**

Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 5: Brandbestrijdingsmaatregelen

· 5.1 Blusmiddelen**· Geschikte blusmiddelen:**

CO₂, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.

· 5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt

Geen verdere relevante informatie verkrijgbaar.

· 5.3 Advies voor brandweelieden**· Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

· 6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures

Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.

· 6.2 Milieuvoorzorgsmaatregelen:

Met veel water verdunnen.

Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.

· 6.3 Insluitings- en reinigingsmethoden en -materiaal:

Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.

Besmet materiaal zoals afval volgens punt 13 verwijderen.

Voor voldoende ventilatie zorgen.

· 6.4 Verwijzing naar andere rubrieken

Informatie inzake veilig gebruik - zie hoofdstuk 7.

Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.

Informatie inzake berging - zie hoofdstuk 13.

(Vervolg op blz. 4)

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(Vervolg van blz. 3)

RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:**
Onststekingsbronnen op afstand houden - niet roken.
Beschermen tegen hitte.
Maatregelen treffen tegen ontlading van statische elektriciteit.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Op een koele plaats bewaren.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:**
Tanks ondoordringbaar gesloten houden.
Koel en droog bewaren in goed gesloten vaten.
Tegen hitte en directe zonnestralen beschermen.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **8.1 Controleparameters**
- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**
Het produkt bevat geen relevante hoeveelheden van stoffen, die met betrekking tot de werkplaatsen, qua grenswaarden gecontroleerd moeten worden.
- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
Verwijderd houden van eet- en drinkwaren.
Verontreinigde kleding onmiddellijk uittrekken.
Vóór de pauze en aan het einde van werktijd handen wassen.
Aanraking met de ogen en de huid vermijden.
- **Ademhalingsbescherming:**
Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.
- **Handbescherming:**



Veiligheidshandschoenen

- Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliën mengsel afgegeven worden.
Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.
- **Handschoenmateriaal**
De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

(Vervolg op blz. 5)

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- **Doordringingstijd van het handschoenmateriaal**
De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.
- **Oogbescherming:**



Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

· 9.1 Informatie over fysische en chemische basiseigenschappen

· Algemene gegevens

· Voorkomen:

Vorm:	Vloeistof
Kleur:	Helder
Geur:	Esterachtig
Geurdrempelwaarde:	Niet bepaald.

· **pH-waarde:** Niet bepaald.

· Toestandsverandering

Smelt-/vriespunt:	Niet bepaald.
Beginkookpunt en kooktraject:	60 °C

· **Vlampunt:** 18 °C

· **Ontvlambaarheid (vast, gas):** Niet bruikbaar.

· **Ontstekingstemperatuur:** 290 °C

· **Ontledingstemperatuur:** Niet bepaald.

· **Zelfontbrandingstemperatuur:** Het produkt ontbrandt niet uit zichzelf.

· **Ontploffingseigenschappen:** Het produkt is niet ontploffingsgevaarlijk, maar de vorming van ontploffingsgevaarlijke damp-/luchtmengsels is mogelijk.

· Ontploffingsgrenzen:

Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.

· **Dampspanning bij 20 °C:** 3 hPa

· **Dichtheid bij 20 °C:** 1,02006 g/cm³

· **Relatieve dichtheid** Niet bepaald.

· **Dampdichtheid** Niet bepaald.

· **Verdampingssnelheid** Niet bepaald.

· Oplosbaarheid in/mengbaarheid met

Water: Volledig mengbaar.

· **Verdelingscoëfficiënt: n-octanol/water:** Niet bepaald.

· Viscositeit

Dynamisch:	Niet bepaald.
Kinematisch:	Niet bepaald.

· Oplosmiddelgehalte:

Organisch oplosmiddel: 6,1 %

(Vervolg op blz. 6)

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VOC (EG)	6,12 %
Gehalte aan vaste bestanddelen:	0,0 %
· 9.2 Overige informatie	Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· Indelingsrelevantie LD/LC50-waarden:		
100-42-5 styreen		
Oraal	LD50	5.000 mg/kg (rat)
Inhalatief	LC50/4 h	24 mg/l (rat)

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie**
Veroorzaakt huidirritatie.
- **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstige oogirritatie.
- **Sensibilisatie van de luchtwegen/de huid**
Kan een allergische huidreactie veroorzaken.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting**
Wordt ervan verdacht het ongeboren kind te schaden.
- **STOT bij eenmalige blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij herhaalde blootstelling**
Kan schade aan de gehoororganen veroorzaken bij langdurige of herhaalde blootstelling.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 7)

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- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): A(4) Weinig schadelijk voor in water levende organismen kan in het aquatische milieu op lange termijn schadelijke effecten veroorzaken
Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- | | |
|---|--|
| · 14.1 VN-nummer | |
| · ADR, IMDG, IATA | UN1993 |
| · 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN | |
| · ADR | 1993 BRANDBARE VLOEISTOF, N.E.G. (STYREEN MONOMEER, GESTABILISEERD, n-BUTYLMETHACRYLAAT, GESTABILISEERD) |
| · IMDG, IATA | FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED) |
| · 14.3 Transportgevarenklasse(n) | |
| · ADR, IMDG, IATA | |
| |  |
| · klasse | 3 Brandbare vloeistoffen |
| · Etiket | 3 |
| · 14.4 Verpakkingsgroep: | |
| · ADR, IMDG, IATA | III |
| · 14.5 Milieugevaren: | Niet bruikbaar. |
| · 14.6 Bijzondere voorzorgen voor de gebruiker | Waarschuwing: Brandbare vloeistoffen |
| · Gevaarsidentificatienummer (Kemler-getal): | 33 |
| · EMS-nummer: | F-E,S-E |
| · Stowage Category | A |
| · 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code | Niet bruikbaar. |

(Vervolg op blz. 8)

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· Transport/verdere gegevens:**· ADR****· Beperkte hoeveelheden (LQ)**

5L

· Uitgezonderde hoeveelheden (EQ)

Code: E1

Grootste netto hoeveelheid per binnenverpakking: 30 ml

Grootste netto hoeveelheid per buitenverpakking: 1000 ml

· Vervoerscategorie

3

· Tunnelbeperkingscode

D/E

· IMDG**· Limited quantities (LQ)**

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· VN "Model Regulation":UN 1993 BRANDBARE VLOEISTOF, N.E.G. (STYREEN
M O N O M E E R , G E S T A B I L I S E E R D , N -
BUTYLMETHACRYLAAT, GESTABILISEERD), 3, III**RUBRIEK 15: Regelgeving****· 15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel****· SZW-lijst van kankerverwekkende stoffen**

geen der bestanddelen staat op de lijst.

· SZW-lijst van mutagene stoffen

geen der bestanddelen staat op de lijst.

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid

geen der bestanddelen staat op de lijst.

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling

100-42-5 styreen

2

· NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding

geen der bestanddelen staat op de lijst.

· Lijst Zeer Zorgwekkende Stoffen (ZZS)

geen der bestanddelen staat op de lijst.

· Lijst van Potentieel Zeer Zorgwekkende Stoffen

27813-02-1 methacrylzuur, monoester met propaan-1,2-diol

868-77-9 2-hydroxyethylmethacrylaat

· Richtlijn 2012/18/EU**· Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** geen der bestanddelen staat op de lijst.**· Seveso-categorie P5c ONTVLAMBARE VLOEISTOFFEN****· Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen** 5.000 t**· Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen** 50.000 t**· Verordening (EG) nr. 1907/2006 BIJLAGE XVII Beperkingsvoorwaarden:** 3**· Nationale voorschriften:****· Gevaarklasse v. water:**

Waterbezwaarlijkheid (NL): A(4) Weinig schadelijk voor in water levende organismen kan in het aquatische milieu op lange termijn schadelijke effecten veroorzaken

(Vervolg op blz. 9)

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· **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

· Relevante zinnen

- H226 Ontvlambare vloeistof en damp.
- H315 Veroorzaakt huidirritatie.
- H317 Kan een allergische huidreactie veroorzaken.
- H319 Veroorzaakt ernstige oogirritatie.
- H332 Schadelijk bij inademing.
- H335 Kan irritatie van de luchtwegen veroorzaken.
- H361d Wordt ervan verdacht het ongeboren kind te schaden.
- H372 Veroorzaakt schade aan de gehoororganen bij langdurige of herhaalde blootstelling.

· Afkortingen en acroniemen:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Ontvlambare vloeistoffen – Categorie 2
- Flam. Liq. 3: Ontvlambare vloeistoffen – Categorie 3
- Acute Tox. 4: Acute toxiciteit - inademing – Categorie 4
- Skin Irrit. 2: Huidcorrosie/-irritatie – Categorie 2
- Eye Irrit. 2: Ernstig oogletsel/oogirritatie – Categorie 2
- Skin Sens. 1: Sensibilisatie van de huid – Categorie 1
- Repr. 2: Voortplantingstoxiciteit – Categorie 2
- STOT SE 3: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 3
- STOT RE 1: Specifieke doelorgaantoxiciteit bij herhaalde blootstelling – Categorie 1
- STOT RE 2: Specifieke doelorgaantoxiciteit bij herhaalde blootstelling – Categorie 2

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

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RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** MICRO-BED RESIN
- **Code du produit:** 14210
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS02 flamme

Flam. Liq. 2 H225 Liquide et vapeurs très inflammables.



GHS08 danger pour la santé

Repr. 2 H361d Susceptible de nuire au fœtus.

STOT RE 2 H373 Risque présumé d'effets graves pour les organes de l'ouïe à la suite d'expositions répétées ou d'une exposition prolongée.



GHS07

Skin Irrit. 2 H315 Provoque une irritation cutanée.

Eye Irrit. 2 H319 Provoque une sévère irritation des yeux.

Skin Sens. 1 H317 Peut provoquer une allergie cutanée.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.
- **Pictogrammes de danger**



GHS02



GHS07



GHS08

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· **Mention d'avertissement** Danger

· **Composants dangereux déterminants pour l'étiquetage:**

méthacrylate de 2-hydroxyéthyle

styrène

N-BUTYL METHACRYLATE, MONOMER

· **Mentions de danger**

H225 Liquide et vapeurs très inflammables.

H315 Provoque une irritation cutanée.

H319 Provoque une sévère irritation des yeux.

H317 Peut provoquer une allergie cutanée.

H361d Susceptible de nuire au fœtus.

H373 Risque présumé d'effets graves pour les organes de l'ouïe à la suite d'expositions répétées ou d'une exposition prolongée.

· **Conseils de prudence**

P210 Tenir à l'écart de la chaleur, des surfaces chaudes, des étincelles, des flammes nues et de toute autre source d'inflammation. Ne pas fumer.

P241 Utiliser du matériel [électrique/de ventilation/d'éclairage] antidéflagrant.

P303+P361+P353 EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau [ou se doucher].

P305+P351+P338 EN CAS DE CONTACT AVEC LES YEUX: Rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.

P405 Garder sous clef.

P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

· **2.3 Autres dangers**

· **Résultats des évaluations PBT et vPvB**

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

· **3.2 Caractérisation chimique: Mélanges**

· **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

· **Composants dangereux:**

CAS: 27813-02-1 EINECS: 248-666-3	acide méthacrylique, monoester avec propane-1,2-diol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	>25-≤50%
CAS: 868-77-9 EINECS: 212-782-2	méthacrylate de 2-hydroxyéthyle ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	>10-≤25%
CAS: 100-42-5 EINECS: 202-851-5	styrène ⚠ Flam. Liq. 3, H226; ⚠ Repr. 2, H361d; STOT RE 1, H372; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	>2,5-≤10%

· **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

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RUBRIQUE 4: Premiers secours

· **4.1 Description des premiers secours**

· **Remarques générales:**

Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.

· **Après inhalation:**

Donner de l'air frais en abondance et consulter un médecin pour plus de sécurité.

En cas d'inconscience, coucher et transporter la personne en position latérale stable.

· **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.

· **Après contact avec les yeux:**

Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières. Si les troubles persistent, consulter un médecin.

· **Après ingestion:** Si les troubles persistent, consulter un médecin.

· **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

· **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**

Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

· **5.1 Moyens d'extinction**

· **Moyens d'extinction:**

CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.

· **5.2 Dangers particuliers résultant de la substance ou du mélange**

Pas d'autres informations importantes disponibles.

· **5.3 Conseils aux pompiers**

· **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

· **6.1 Précautions individuelles, équipement de protection et procédures d'urgence**

Porter un équipement de sécurité. Eloigner les personnes non protégées.

· **6.2 Précautions pour la protection de l'environnement:**

Diluer avec beaucoup d'eau.

Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.

· **6.3 Méthodes et matériel de confinement et de nettoyage:**

Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).

Evacuer les matériaux contaminés en tant que déchets conformément au point 13.

Assurer une aération suffisante.

· **6.4 Référence à d'autres rubriques**

Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.

Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.

Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

· **7.1 Précautions à prendre pour une manipulation sans danger**

Veiller à une bonne ventilation/aspiration du poste de travail.

Eviter la formation d'aérosols.

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- **Préventions des incendies et des explosions:**
Tenir à l'abri des sources d'inflammation - ne pas fumer.
Tenir à l'abri de la chaleur.
Prendre des mesures contre les charges électrostatiques.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Stocker dans un endroit frais.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:**
Tenir les emballages hermétiquement fermés.
Stocker au frais et au sec dans des fûts bien fermés.
Protéger de la forte chaleur et du rayonnement direct du soleil.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.

· 8.1 Paramètres de contrôle

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

100-42-5 styrène

VLEP	Valeur momentanée: 200 mg/m ³ , 46,6 ppm Valeur à long terme: 100 mg/m ³ , 23,3 ppm R2, risque de pénétration percutanée, (13)
------	--

- **Remarques supplémentaires:**
Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.
- **8.2 Contrôles de l'exposition**
- **Equipement de protection individuel:**
- **Mesures générales de protection et d'hygiène:**
Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.
Retirer immédiatement les vêtements souillés ou humectés.
Se laver les mains avant les pauses et en fin de travail.
Eviter tout contact avec les yeux et avec la peau.
- **Protection respiratoire:**
En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.
- **Protection des mains:**



Gants de protection

- **Matériau des gants**
Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

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- **Temps de pénétration du matériau des gants**
Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.
- **Protection des yeux:**



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

· 9.1 Informations sur les propriétés physiques et chimiques essentielles

· Indications générales

· Aspect:

Forme:	Liquide
Couleur:	Transparent
Odeur:	Genre ester
Seuil olfactif:	Non déterminé.

· valeur du pH: Non déterminé.

· Changement d'état

Point de fusion/point de congélation:	Non déterminé.
Point initial d'ébullition et intervalle d'ébullition:	60 °C

· Point d'éclair 18 °C

· Inflammabilité (solide, gaz): Non applicable.

· Température d'inflammation: 290 °C

· Température de décomposition: Non déterminé.

· Température d'auto-inflammabilité: Le produit ne s'enflamme pas spontanément.

· Propriétés explosives: Le produit n'est pas explosif; toutefois, des mélanges explosifs vapeur-air peuvent se former.

· Limites d'explosion:

Inférieure:	Non déterminé.
Supérieure:	Non déterminé.

· Pression de vapeur à 20 °C: 3 hPa

· Densité à 20 °C: 1,02006 g/cm³

· Densité relative Non déterminé.

· Densité de vapeur: Non déterminé.

· Taux d'évaporation: Non déterminé.

· Solubilité dans/miscibilité avec l'eau:

Entièrement miscible

· Coefficient de partage: n-octanol/eau: Non déterminé.

· Viscosité:

Dynamique:	Non déterminé.
Cinématique:	Non déterminé.

· Teneur en solvants:

Solvants organiques: 6,1 %

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VOC (CE)	6,12 %
Teneur en substances solides:	0,0 %
· 9.2 Autres informations	Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· Valeurs LD/LC50 déterminantes pour la classification:

100-42-5 styrène

Oral	LD50	5.000 mg/kg (rat)
Inhalatoire	LC50/4 h	24 mg/l (rat)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Provoque une irritation cutanée.
- **Lésions oculaires graves/irritation oculaire**
Provoque une sévère irritation des yeux.
- **Sensibilisation respiratoire ou cutanée**
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**
Susceptible de nuire au fœtus.
- **Toxicité spécifique pour certains organes cibles - exposition unique**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**
Risque présumé d'effets graves pour les organes de l'ouïe à la suite d'expositions répétées ou d'une exposition prolongée.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.

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- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant
Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.
- **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

RUBRIQUE 14: Informations relatives au transport

<ul style="list-style-type: none"> · 14.1 Numéro ONU · ADR, IMDG, IATA 	<p style="text-align: center;">UN1993</p>
<ul style="list-style-type: none"> · 14.2 Désignation officielle de transport de l'ONU · ADR · IMDG, IATA 	<p>1993 LIQUIDE INFLAMMABLE, N.S.A. (STYRÈNE MONOMÈRE STABILISÉ, MÉTHACRYLATE DE n-BUTYLE STABILISÉ)</p> <p>FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)</p>
<ul style="list-style-type: none"> · 14.3 Classe(s) de danger pour le transport · ADR, IMDG, IATA 	<div style="text-align: center;">  </div> <p>3 Liquides inflammables.</p> <p>3</p>
<ul style="list-style-type: none"> · 14.4 Groupe d'emballage · ADR, IMDG, IATA 	<p style="text-align: center;">III</p>
<ul style="list-style-type: none"> · 14.5 Dangers pour l'environnement: 	<p style="text-align: center;">Non applicable.</p>
<ul style="list-style-type: none"> · 14.6 Précautions particulières à prendre par l'utilisateur · Numéro d'identification du danger (Indice Kemler): · No EMS: · Stowage Category 	<p>Attention: Liquides inflammables.</p> <p style="text-align: center;">33</p> <p style="text-align: center;">F-E, S-E</p> <p style="text-align: center;">A</p>

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· 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC	Non applicable.
· Indications complémentaires de transport:	
· ADR	5L
· Quantités limitées (LQ)	Code: E1
· Quantités exceptées (EQ)	Quantité maximale nette par emballage intérieur: 30 ml Quantité maximale nette par emballage extérieur: 1000 ml
· Catégorie de transport	3
· Code de restriction en tunnels	D/E
· IMDG	5L
· Limited quantities (LQ)	Code: E1
· Excepted quantities (EQ)	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· "Règlement type" de l'ONU:	UN 1993 LIQUIDE INFLAMMABLE, N.S.A. (STYRÈNE MONOMÈRE STABILISÉ, MÉTHACRYLATE DE N-BUTYLE STABILISÉ), 3, III

RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- Directive 2012/18/UE
- Substances dangereuses désignées - ANNEXE I Aucun des composants n'est compris.
- Catégorie SEVESO P5c LIQUIDES INFLAMMABLES
- Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas 5.000 t
- Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut 50.000 t
- RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII Conditions de limitation: 3
- **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

RUBRIQUE 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

- **Phrases importantes**
- H226 Liquide et vapeurs inflammables.
- H315 Provoque une irritation cutanée.
- H317 Peut provoquer une allergie cutanée.
- H319 Provoque une sévère irritation des yeux.
- H332 Nocif par inhalation.
- H335 Peut irriter les voies respiratoires.
- H361d Susceptible de nuire au fœtus.
- H372 Risque avéré d'effets graves pour les organes de l'ouïe à la suite d'expositions répétées ou d'une exposition prolongée.
- **Acronymes et abréviations:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route
- IMDG: International Maritime Code for Dangerous Goods

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*IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Liquides inflammables – Catégorie 2**Flam. Liq. 3: Liquides inflammables – Catégorie 3**Acute Tox. 4: Toxicité aiguë - inhalation – Catégorie 4**Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2**Eye Irrit. 2: Lésions oculaires graves/irritation oculaire – Catégorie 2**Skin Sens. 1: Sensibilisation cutanée – Catégorie 1**Repr. 2: Toxicité pour la reproduction – Catégorie 2**STOT SE 3: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 3**STOT RE 1: Toxicité spécifique pour certains organes cibles (exposition répétée) – Catégorie 1**STOT RE 2: Toxicité spécifique pour certains organes cibles (exposition répétée) – Catégorie 2*

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Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 26.06.2020

überarbeitet am: 26.06.2020

ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname:** MICRO-BED RESIN
- **Artikelnummer:** 14210
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany

Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS02 Flamme

Flam. Liq. 2 H225 Flüssigkeit und Dampf leicht entzündbar.



GHS08 Gesundheitsgefahr

Repr. 2 H361d Kann vermutlich das Kind im Mutterleib schädigen.

STOT RE 2 H373 Kann die Hörorgane schädigen bei längerer oder wiederholter Exposition.



GHS07

Skin Irrit. 2 H315 Verursacht Hautreizungen.

Eye Irrit. 2 H319 Verursacht schwere Augenreizung.

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Handelsname: MICRO-BED RESIN

(Fortsetzung von Seite 1)

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

· 2.2 Kennzeichnungselemente

· Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

· Gefahrenpiktogramme



GHS02 GHS07 GHS08

· Signalwort Gefahr

· Gefahrbestimmende Komponenten zur Etikettierung:

2-Hydroxyethylmethacrylat

Styrol

N-BUTYL METHACRYLATE, MONOMER

· Gefahrenhinweise

H225 Flüssigkeit und Dampf leicht entzündbar.

H315 Verursacht Hautreizungen.

H319 Verursacht schwere Augenreizung.

H317 Kann allergische Hautreaktionen verursachen.

H361d Kann vermutlich das Kind im Mutterleib schädigen.

H373 Kann die Hörorgane schädigen bei längerer oder wiederholter Exposition.

· Sicherheitshinweise

P210 Von Hitze, heißen Oberflächen, Funken, offenen Flammen und anderen Zündquellen fernhalten. Nicht rauchen.

P241 Explosionsgeschützte [elektrische/Lüftungs-/Beleuchtungs-] Geräte verwenden.

P303+P361+P353 BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen [oder duschen].

P305+P351+P338 BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.

P405 Unter Verschluss aufbewahren.

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

· 2.3 Sonstige Gefahren

· Ergebnisse der PBT- und vPvB-Beurteilung

· **PBT:** Nicht anwendbar.

· **vPvB:** Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· 3.2 Chemische Charakterisierung: Gemische

· **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

· Gefährliche Inhaltsstoffe:

CAS: 27813-02-1 EINECS: 248-666-3	Hydroxypropylmethacrylat ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	>25-≤50%
CAS: 868-77-9 EINECS: 212-782-2	2-Hydroxyethylmethacrylat ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	>10-≤25%

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CAS: 100-42-5
EINECS: 202-851-5

Styrol

 Flam. Liq. 3, H226;  Repr. 2, H361d; STOT RE 1, H372;  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319

>2,5-≤10%

· **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**

· **Allgemeine Hinweise:**

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

· **Nach Einatmen:**

Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.

Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.

· **Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.

· **Nach Augenkontakt:**

Augen mehrere Minuten bei geöffnetem Lidspalt unter fließendem Wasser spülen. Bei anhaltenden Beschwerden Arzt konsultieren.

· **Nach Verschlucken:** Bei anhaltenden Beschwerden Arzt konsultieren.

· **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**

Keine weiteren relevanten Informationen verfügbar.

· **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**

Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

· **5.1 Löschmittel**

· **Geeignete Löschmittel:**

CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.

· **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**

Keine weiteren relevanten Informationen verfügbar.

· **5.3 Hinweise für die Brandbekämpfung**

· **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

· **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**

Schutzausrüstung tragen. Ungeschützte Personen fernhalten.

· **6.2 Umweltschutzmaßnahmen:**

Mit viel Wasser verdünnen.

Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

· **6.3 Methoden und Material für Rückhaltung und Reinigung:**

Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.

Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.

Für ausreichende Lüftung sorgen.

· **6.4 Verweis auf andere Abschnitte**

Informationen zur sicheren Handhabung siehe Abschnitt 7.

Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.

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Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:**
Zündquellen fernhalten - nicht rauchen.
Vor Hitze schützen.
Maßnahmen gegen elektrostatische Aufladung treffen.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** An einem kühlen Ort lagern.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:**
Behälter dicht geschlossen halten.
In gut verschlossenen Gebinden kühl und trocken lagern.
Vor Hitze und direkter Sonnenbestrahlung schützen.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** Entzündbare Flüssigkeiten
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

· 8.1 Zu überwachende Parameter

- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

868-77-9 2-Hydroxyethylmethacrylat

MAK | vgl.Abschn.IIb

N-BUTYL METHACRYLATE, MONOMER

MAK | vgl.Abschn.IV

100-42-5 Styrol

AGW | Langzeitwert: 86 mg/m³, 20 ml/m³
2(II);DFG, Y

- **Bestandteile mit biologischen Grenzwerten:**

100-42-5 Styrol

BGW | 600 mg/g Kreatinin

Untersuchungsmaterial: Urin

Probennahmezeitpunkt: bei Langzeitexposition: am Schichtende nach mehreren vorangegangenen Schichten, Expositionsende bzw. Schichtende

Parameter: Mandelsäure plus Phenylglyoxylsäure

- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

· 8.2 Begrenzung und Überwachung der Exposition

- **Persönliche Schutzausrüstung:**

- **Allgemeine Schutz- und Hygienemaßnahmen:**

Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

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Beschmutzte, getränkte Kleidung sofort ausziehen.
Vor den Pausen und bei Arbeitsende Hände waschen.
Berührung mit den Augen und der Haut vermeiden.

· **Atemschutz:**

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.

· **Handschutz:**



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

· **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

· **Allgemeine Angaben**

· **Aussehen:**

Form: Flüssigkeit

Farbe: Klar

· **Geruch:** Esterartig

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

· **Zustandsänderung**

Schmelzpunkt/Gefrierpunkt: Nicht bestimmt.

Siedebeginn und Siedebereich: 60 °C

· **Flammpunkt:** 18 °C

· **Entzündbarkeit (fest, gasförmig):** Nicht anwendbar.

· **Zündtemperatur:** 290 °C

· **Zersetzungstemperatur:** Nicht bestimmt.

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· Selbstentzündungstemperatur:	Das Produkt ist nicht selbstentzündlich.
· Explosive Eigenschaften:	Das Produkt ist nicht explosionsgefährlich, jedoch ist die Bildung explosionsgefährlicher Dampf-/Luftgemische möglich.
· Explosionsgrenzen:	
Untere:	Nicht bestimmt.
Obere:	Nicht bestimmt.
· Dampfdruck bei 20 °C:	3 hPa
· Dichte bei 20 °C:	1,02006 g/cm ³
· Relative Dichte	Nicht bestimmt.
· Dampfdichte	Nicht bestimmt.
· Verdampfungsgeschwindigkeit	Nicht bestimmt.
· Löslichkeit in / Mischbarkeit mit Wasser:	Vollständig mischbar.
· Verteilungskoeffizient: n-Octanol/Wasser:	Nicht bestimmt.
· Viskosität:	
Dynamisch:	Nicht bestimmt.
Kinematisch:	Nicht bestimmt.
· Lösemittelgehalt:	
Organische Lösemittel:	6,1 %
VOC (EU)	6,12 %
· Festkörpergehalt:	0,0 %
· 9.2 Sonstige Angaben	Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

· Einstufungsrelevante LD/LC50-Werte:		
100-42-5 Styrol		
Oral	LD50	5.000 mg/kg (rat)
Inhalativ	LC50/4 h	24 mg/l (rat)

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**
Verursacht Hautreizungen.

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- **Schwere Augenschädigung/-reizung**
Verursacht schwere Augenreizung.
- **Sensibilisierung der Atemwege/Haut**
Kann allergische Hautreaktionen verursachen.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität**
Kann vermutlich das Kind im Mutterleib schädigen.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Kann die Hörorgane schädigen bei längerer oder wiederholter Exposition.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend
Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

ABSCHNITT 14: Angaben zum Transport

- | | |
|--|--|
| · 14.1 UN-Nummer | |
| · ADR, IMDG, IATA | UN1993 |
| · 14.2 Ordnungsgemäße UN-Versandbezeichnung | |
| · ADR | 1993 ENTZÜNDBARER FLÜSSIGER STOFF, N.A.G.
(STYREN, MONOMER, STABILISIERT, n-BUTYLMETHACRYLAT, STABILISIERT) |

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· IMDG, IATA	FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)
· 14.3 Transportgefahrenklassen	
· ADR, IMDG, IATA	
	
· Klasse	3 Entzündbare flüssige Stoffe
· Gefahrzettel	3
· 14.4 Verpackungsgruppe	
· ADR, IMDG, IATA	III
· 14.5 Umweltgefahren:	Nicht anwendbar.
· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender	Achtung: Entzündbare flüssige Stoffe
· Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl):	33
· EMS-Nummer:	F-E, <u>S-E</u>
· Stowage Category	A
· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code	Nicht anwendbar.
· Transport/weitere Angaben:	
· ADR	
· Begrenzte Menge (LQ)	5L
· Freigestellte Mengen (EQ)	Code: E1 Höchste Nettomenge je Innenverpackung: 30 ml Höchste Nettomenge je Außenverpackung: 1000 ml
· Beförderungskategorie	3
· Tunnelbeschränkungscode	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1993 ENTZÜNDBARER FLÜSSIGER STOFF, N.A.G. (STYREN, MONOMER, STABILISIERT, N-BUTYLMETHACRYLAT, STABILISIERT), 3, III

ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Richtlinie 2012/18/EU**
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Keiner der Inhaltsstoffe ist enthalten.
- **Seveso-Kategorie P5c ENTZÜNDBARE FLÜSSIGKEITEN**
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 5.000 t**

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- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 50.000 t**
- **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII Beschränkungsbedingungen: 3**

- **Nationale Vorschriften:**

- **Technische Anleitung Luft:**

Klasse	Anteil in %
NK	6,1

- **Wassergefährdungsklasse: WGK 1 (Selbsteinstufung): schwach wassergefährdend.**
- **15.2 Stoffsicherheitsbeurteilung: Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.**

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Relevante Sätze**

- H226 Flüssigkeit und Dampf entzündbar.
- H315 Verursacht Hautreizungen.
- H317 Kann allergische Hautreaktionen verursachen.
- H319 Verursacht schwere Augenreizung.
- H332 Gesundheitsschädlich bei Einatmen.
- H335 Kann die Atemwege reizen.
- H361d Kann vermutlich das Kind im Mutterleib schädigen.
- H372 Schädigt die Hörorgane bei längerer oder wiederholter Exposition.

- **Abkürzungen und Akronyme:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Entzündbare Flüssigkeiten – Kategorie 2
- Flam. Liq. 3: Entzündbare Flüssigkeiten – Kategorie 3
- Acute Tox. 4: Akute Toxizität - inhalativ – Kategorie 4
- Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2
- Eye Irrit. 2: Schwere Augenschädigung/Augenreizung – Kategorie 2
- Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1
- Repr. 2: Reproduktionstoxizität – Kategorie 2
- STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3
- STOT RE 1: Spezifische Zielorgan-Toxizität (wiederholte Exposition) – Kategorie 1
- STOT RE 2: Spezifische Zielorgan-Toxizität (wiederholte Exposition) – Kategorie 2

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 26.06.2020

Revisione: 26.06.2020

SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** MICRO-BED RESIN
- **Articolo numero:** 14210
- **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**
Non sono disponibili altre informazioni.
- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio
- **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**
- **Produttore/fornitore:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Società Italiana Chimici**
Via Rio Nell Ellba 140
00138 Rome, Italy
Tel: 39 06 8800211
Fax: 39 30 06 8815313
Web: www.sichim.com
- **Informazioni fornite da:** Product safety department
- **1.4 Numero telefonico di emergenza:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

- **2.1 Classificazione della sostanza o della miscela**
- **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS02 fiamma

Flam. Liq. 2 H225 Liquido e vapori facilmente infiammabili.



GHS08 pericolo per la salute

Repr. 2 H361d Sospettato di nuocere al feto.

STOT RE 2 H373 Può provocare danni agli organi uditivi in caso di esposizione prolungata e ripetuta.



GHS07

Skin Irrit. 2 H315 Provoca irritazione cutanea.

Eye Irrit. 2 H319 Provoca grave irritazione oculare.

Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

- **2.2 Elementi dell'etichetta**
- **Etichettatura secondo il regolamento (CE) n. 1272/2008**
Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

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Pittogrammi di pericolo

GHS02 GHS07 GHS08

Avvertenza Pericolo**Componenti pericolosi che ne determinano l'etichettatura:**2-idrossietile metacrilato
stirene

N-BUTYL METHACRYLATE, MONOMER

Indicazioni di pericolo

H225 Liquido e vapori facilmente infiammabili.

H315 Provoca irritazione cutanea.

H319 Provoca grave irritazione oculare.

H317 Può provocare una reazione allergica cutanea.

H361d Sospettato di nuocere al feto.

H373 Può provocare danni agli organi uditivi in caso di esposizione prolungata e ripetuta.

Consigli di prudenza

P210 Tenere lontano da fonti di calore, superfici calde, scintille, fiamme libere o altre fonti di accensione. Non fumare.

P241 Utilizzare impianti [elettrici/di ventilazione/d'illuminazione] a prova di esplosione.

P303+P361+P353 IN CASO DI CONTATTO CON LA PELLE (o con i capelli): togliersi di dosso immediatamente tutti gli indumenti contaminati. Sciacquare la pelle [o fare una doccia].

P305+P351+P338 IN CASO DI CONTATTO CON GLI OCCHI: sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

2.3 Altri pericoli**Risultati della valutazione PBT e vPvB**

PBT: Non applicabile.

vPvB: Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti**3.2 Caratteristiche chimiche: Miscela****Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.**Sostanze pericolose:**

CAS: 27813-02-1 EINECS: 248-666-3	acido metacrilico, monoestere con propan-1,2-diolo ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	>25-≤50%
CAS: 868-77-9 EINECS: 212-782-2	2-idrossietile metacrilato ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	>10-≤25%
CAS: 100-42-5 EINECS: 202-851-5	stirene ⚠ Flam. Liq. 3, H226; ⚠ Repr. 2, H361d; STOT RE 1, H372; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	>2,5-≤10%

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· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

SEZIONE 4: Misure di primo soccorso

· **4.1 Descrizione delle misure di primo soccorso**

· **Indicazioni generali:**

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

· **Inalazione:**

Portare il soggetto in zona molto ben areata e per sicurezza consultare un medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

· **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.

· **Contatto con gli occhi:**

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte. Se persiste il dolore consultare il medico.

· **Ingestione:** Se il dolore persiste consultare il medico.

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.

· **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**
Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

· **5.1 Mezzi di estinzione**

· **Mezzi di estinzione idonei:**

CO₂, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.

· **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.

· **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**

· **Mezzi protettivi specifici:** Indossare il respiratore.

SEZIONE 6: Misure in caso di rilascio accidentale

· **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**

Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.

· **6.2 Precauzioni ambientali:**

Diluire abbondantemente con acqua.

Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.

· **6.3 Metodi e materiali per il contenimento e per la bonifica:**

Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).

Smaltimento del materiale contaminato conformemente al punto 13.

Provvedere ad una sufficiente areazione.

· **6.4 Riferimento ad altre sezioni**

Per informazioni relative ad una manipolazione sicura, vedere capitolo 7.

Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.

Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

· **7.1 Precauzioni per la manipolazione sicura**

Accurata ventilazione/aspirazione nei luoghi di lavoro.

Evitare la formazione di aerosol.

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- **Indicazioni in caso di incendio ed esplosione:**
Tenere lontano da fonti di calore, non fumare.
Proteggere dal calore.
Adottare provvedimenti contro cariche elettrostatiche.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Conservare in ambiente fresco.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:**
Mantenere i recipienti ermeticamente chiusi.
Conservare in luogo fresco e asciutto in fusti ben chiusi.
Proteggere dal calore e dai raggi diretti del sole.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.

8.1 Parametri di controllo

- **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

100-42-5 stirene

TWA	Valore a breve termine: 170 mg/m ³ , 40 ppm
	Valore a lungo termine: 85 mg/m ³ , 20 ppm
A4, IBE	

- **Componenti con valori limite biologici:**

100-42-5 stirene

IBE	400 mg/g creatinina
	Campioni: urine
	Momento del prelievo: a fine turno
	Indicatore biologico: acido mandelico + acido fenilglicosilico
	0,2 mg/l
	Campioni: sangue venoso
	Momento del prelievo: a fine turno
	Indicatore biologico: stirene

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

8.2 Controlli dell'esposizione

Mezzi protettivi individuali:

- **Norme generali protettive e di igiene del lavoro:**

Tenere lontano da cibo, bevande e foraggi.
Togliere immediatamente gli abiti contaminati.
Lavarsi le mani prima dell'intervallo o a lavoro terminato.
Evitare il contatto con gli occhi e la pelle.

Maschera protettiva:

Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

Guanti protettivi:



Guanti protettivi

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Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.

A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.

Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

· **Materiale dei guanti**

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego

· **Tempo di permeazione del materiale dei guanti**

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

· **Occhiali protettivi:**



Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche

· **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**

· **Indicazioni generali**

· **Aspetto:**

Forma: Liquido

Colore: Chiaro

· **Odore:** Simile all'estere

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non definito.

· **Cambiamento di stato**

Punto di fusione/punto di congelamento: Non definito.

Punto di ebollizione iniziale e intervallo di ebollizione: 60 °C

· **Punto di infiammabilità:** 18 °C

· **Infiammabilità (solidi, gas):** Non applicabile.

· **Temperatura di accensione:** 290 °C

· **Temperatura di decomposizione:** Non definito.

· **Temperatura di autoaccensione:** Prodotto non autoinfiammabile.

· **Proprietà esplosive:** Prodotto non è esplosivo, è tuttavia possibile la formazione di miscele di vapori/aria esplosive.

· **Limiti di infiammabilità:**

Inferiore: Non definito.

Superiore: Non definito.

· **Tensione di vapore a 20 °C:** 3 hPa

· **Densità a 20 °C:** 1,02006 g/cm³

· **Densità relativa** Non definito.

· **Densità di vapore:** Non definito.

· **Velocità di evaporazione** Non definito.

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· Solubilità in/Miscibilità con acqua:	Completamente miscibile.
· Coefficiente di ripartizione: n-ottanolo/acqua:	Non definito.
· Viscosità:	
Dinamica:	Non definito.
Cinematica:	Non definito.
· Tenore del solvente:	
Solventi organici:	6,1 %
VOC (CE)	6,12 %
Contenuto solido:	0,0 %
· 9.2 Altre informazioni	Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

- **10.1 Reattività** Non sono disponibili altre informazioni.
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Valori LD/LC50 rilevanti per la classificazione:****100-42-5 stirene**

Orale	LD50	5.000 mg/kg (rat)
Per inalazione	LC50/4 h	24 mg/l (rat)

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea**
Provoca irritazione cutanea.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Provoca grave irritazione oculare.
- **Sensibilizzazione respiratoria o cutanea**
Può provocare una reazione allergica cutanea.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione**
Sospettato di nuocere al feto.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**
Può provocare danni agli organi uditivi in caso di esposizione prolungata e ripetuta.

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· **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.**SEZIONE 12: Informazioni ecologiche**

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.


SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

SEZIONE 14: Informazioni sul trasporto

- | | |
|--|---|
| · 14.1 Numero ONU
· ADR, IMDG, IATA | UN1993 |
| · 14.2 Nome di spedizione dell'ONU
· ADR

· IMDG, IATA | 1993 LIQUIDO INFIAMMABILE, N.A.S. (STIRENE MONOMERO STABILIZZATO, METACRILATO DI n-BUTILE STABILIZZATO)

FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED) |
| · 14.3 Classi di pericolo connesso al trasporto
· ADR, IMDG, IATA | |
|  | |
| · Classe
· Etichetta | 3 Liquidi infiammabili
3 |
| · 14.4 Gruppo di imballaggio
· ADR, IMDG, IATA | III |

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· 14.5 Pericoli per l'ambiente:	Non applicabile.
· 14.6 Precauzioni speciali per gli utilizzatori	Attenzione: Liquidi infiammabili
· N° identificazione pericolo (Numero Kemler):	33
· Numero EMS:	F-E, S-E
· Stowage Category	A
· 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC	Non applicabile.
· Trasporto/ulteriori indicazioni:	
· ADR	
· Quantità limitate (LQ)	5L
· Quantità esenti (EQ)	Codice: E1 Quantità massima netta per imballaggio interno: 30 ml Quantità massima netta per imballaggio esterno: 1000 ml
· Categoria di trasporto	3
· Codice di restrizione in galleria	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1993 LIQUIDO INFIAMMABILE, N.A.S. (STIRENE MONOMERO STABILIZZATO, METACRILATO DI N-BUTILE STABILIZZATO), 3, III

SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
 - **Direttiva 2012/18/UE**
 - **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.
 - **Categoria Seveso P5c** LIQUIDI INFIAMMABILI
 - **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore** 5.000 t
 - **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore** 50.000 t
 - **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3
 - **Disposizioni nazionali:**
 - **Istruzione tecnica aria:**
- | Classe | quota in % |
|--------|------------|
| NC | 6,1 |
- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

- **Fraasi rilevanti**
H226 Liquido e vapori infiammabili.

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*H315 Provoca irritazione cutanea.**H317 Può provocare una reazione allergica cutanea.**H319 Provoca grave irritazione oculare.**H332 Nocivo se inalato.**H335 Può irritare le vie respiratorie.**H361d Sospettato di nuocere al feto.**H372 Provoca danni agli organi uditivi in caso di esposizione prolungata e ripetuta.***· Abbreviazioni e acronimi:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Liquidi infiammabili – Categoria 2**Flam. Liq. 3: Liquidi infiammabili – Categoria 3**Acute Tox. 4: Tossicità acuta per inalazione – Categoria 4**Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2**Eye Irrit. 2: Gravi lesioni oculari/irritazione oculare – Categoria 2**Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1**Repr. 2: Tossicità per la riproduzione – Categoria 2**STOT SE 3: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 3**STOT RE 1: Tossicità specifica per organi bersaglio (esposizione ripetuta) – Categoria 1**STOT RE 2: Tossicità specifica per organi bersaglio (esposizione ripetuta) – Categoria 2*

安全データシート

JIS Z 7253:2012 による

印刷日: 2020.06.26

改訂日: 2020.06.26

1 化学品及び会社情報

- ・製品識別子
- ・商品名: MICRO-BED RESIN
- ・製品番号: 14210
- ・該当純物質または混合物の関連特定用途及び使用禁止用途 追加的な関連情報は得られていません。
- ・成分の利用/調合 実験用化学物質
- ・安全データシートの供給元の詳細情報
- ・製造者/納入者:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ・その他の情報問い合わせ先: Product safety department
- ・緊急通報用電話番号:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危険有害性の要約

- ・純物質または混合物の分類



火炎

引火性液体 区分2

H225 引火性の高い液体及び蒸気



健康に危険

生殖毒性 区分2

H361 生殖能又は胎児への悪影響のおそれの疑い

特定標的臓器有害性(反復暴露) 区分2 H373 聴覚器官 を長期間または繰り返された露出によって損傷させることがある。



皮膚腐食性/刺激性 区分2

H315 皮膚刺激

重篤な眼の損傷性/眼刺激性 区分2A H319 強い眼刺激

感作性(皮膚) 区分1

H317 アレルギー性皮膚反応を起こすおそれ

- ・ラベル要素

- ・GHS ラベル要素

本製品はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

- ・危険図表



GHS02



GHS07



GHS08

- ・表示語 危険

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商品名: MICRO-BED RESIN

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・**危険と定められた成分をラベル表示:**

メタクリル酸 2 - ヒドロキシエチル
スチレン
N-BUTYL METHACRYLATE, MONOMER

・**危険文句**

引火性の高い液体及び蒸気
皮膚刺激
強い眼刺激
アレルギー性皮膚反応を起こすおそれ
生殖能又は胎児への悪影響のおそれの疑い
聴覚器官を長期間または繰り返された露出によって損傷させることがある。

・**注意文句**

熱/火花/裸火/高温のもののような着火源から遠ざけること。 - 禁煙。
防爆型の電気機器 / 換気装置 / 照明機器 / 機器を使用すること。
皮膚 (または髪) に付着した場合: 直ちに汚染された衣類をすべて脱ぐこと。皮膚を流水 / シャワーで洗うこと。
眼に入った場合: 水で数分間注意深く洗うこと。次にコンタクトレンズを着用していて容易に外せる場合は外すこと。その後も洗浄を続けること。
施錠して保管すること。
現地/地域/国/国際規定に従い内容物・容器の露出

・**その他の危険性**

・PBT (残留性、生物濃縮性、毒性物質) 及び vPvB (高残留性、高生物濃縮性物質) アセスメント
・PBT (残留性、生物濃縮性、毒性物質): 情報なし
・vPvB (高残留性、高生物濃縮性物質): 情報なし

3 組成及び成分情報

・**化学的特性:** 混合物

・**説明:** 危険のない混ぜ合わせかたをした以下成分からなる混合物

・**危険な含有成分:**

27813-02-1	methacrylic acid, monoester with propane-1,2-diol ⚠ 皮膚腐食性/刺激性 区分2, H315; 重篤な眼の損傷性/眼刺激性 区分2A, H319	>25-≤50%
868-77-9	メタクリル酸 2 - ヒドロキシエチル ⚠ 皮膚腐食性/刺激性 区分2, H315; 重篤な眼の損傷性/眼刺激性 区分2, H319; 感作性(皮膚) 区分1, H317	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER ⚠ 引火性液体 区分3, H226; ⚠ 皮膚腐食性/刺激性 区分2, H315; 重篤な眼の損傷性/眼刺激性 区分2, H319; 感作性(皮膚) 区分1, H317; 特定標的臓器有害性(単回暴露) 区分3, H335	>10-≤25%
100-42-5	スチレン ⚠ 引火性液体 区分3, H226; ⚠ 生殖毒性 区分2, H361; 特定標的臓器有害性(反復暴露) 区分1, H372; ⚠ 急性毒性(吸入) 区分4, H332; 皮膚腐食性/刺激性 区分2, H315; 重篤な眼の損傷性/眼刺激性 区分2, H319	>2.5-≤10%

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4 応急措置

・ 応急手当処置に関する説明

・ 一般情報:

中毒症状は時間がかかり経過した後に現れる場合もあるため、事故後最低 4 8 時間は医師の監視のもとで過ごすこと

・ 吸い込んだ場合:

外気を十分に送り込み、安全のため医師を呼ぶ

意識不明の場合には安定させた状態で横向きに寝かせ、移送する

・ 皮膚が触れた場合: 即刻石鹼と水で洗い、よくすすぐ

・ 眼に入った場合:

瞼を開けたまま、流水で何分間か眼をすすぎ、状態がよくなる場合には医者に相談する

・ 飲み込んだ場合: 状態が好転しない場合には医師に相談する

・ 医師への指示事項:

・ 最も重要な急性及び慢性の症状及び影響 追加的な関連情報は得られていません。

・ 何らかの即時医療処置及び特別治療の必要性を示す兆候 追加的な関連情報は得られていません。

5 火災時の措置

・ 消火剤

・ 適切な消火剤:

CO₂, 消火粉末剤あるいは水放射。火が大きい場合には水放射もしくは耐アルコール性泡を使用

・ 本化学物質または混合物から発生する特別な危険性 追加的な関連情報は得られていません。

・ 消防士向けアドバイス

・ 特別な保護装備: 呼吸保護マスクを着用

6 漏出時の措置

・ 個人的予防措置、保護具及び応急処置法 防護服を着用。防護服を着用していない人は近づけない

・ 環境関連予防措置:

大量の水で薄める

下水処理施設、地上水あるいは地下水に達しないようにする

・ 封じ込め及び浄化のための方法及び材料:

液体吸収材 (砂、珪藻土、酸結合剤、ユニバーサル結合剤、おがくず) で吸収する

13 項に下がい汚染材は廃棄物として処理する

十分な換気を心がける

・ 他のセクションへの言及

安全な取り扱い方に関しては 7 項を参照

人の保護装備の情報に関しては 8 項を参照

廃棄処分に関しては 13 項参照

7 取扱い及び保管上の注意

・ 取り扱い方:

・ 安全操作のための予防措置

作業場では十分な換気、埃を吸い取るよう心がける

エアゾールの発生を防ぐ

・ 火災および爆発防止に関する注意事項:

発火元は遠ざける。禁煙

高温から保護する

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静電荷を防ぐ措置をほどこす

・ **混融危険性を含めた安全貯蔵条件**

・ **保管:**

- ・ **保管スペースおよび容器に関する要求事項:** 涼しい場所に保管する
- ・ **同じ場所に保管する際の注意事項:** 必要ない
- ・ **保管条件に関するその他の注意事項:**
 容器は密閉した状態に保つ
 よく密閉した樽の中で涼しく乾燥した場所に保管する
 熱および直射日光は避ける
- ・ **特定の最終用途** 追加的な関連情報は得られていません。

8ばく 霧防止及び保護措置

- ・ **技術設備の形体に関する追加注意事項:** その他の申し立てなし、7項参照

・ **管理パラメーター**

・ **作業場において限界値の監視を要する成分:**

100-42-5 スチレン

OEL 長期値: 85 mg/m³, 20 ppm

・ **生物学的許容値**

100-42-5 スチレン

OEL-B 430 mg/l
 試料: urine
 試料採取時期: End of shift at end of work week
 物質: Mandelic acid + Phenylglyoxyl acid

0.2 mg/l
 試料: blood
 試料採取時期: End of shift at end of work week
 物質: Styrene

- ・ **追加注意事項:** 生成時に有効なリストがもとなっている

・ **暴露管理**

・ **人的保護装備:**

・ **一般防止措置および衛生措置:**

- 食物、飲み物、飼料からは遠ざける
- 汚れのしみ込んだ衣類は即刻脱ぐ
- 休憩の前、作業終了後には手を洗う
- 眼に入らないよう、また皮膚に接触しないよう注意する

・ **呼吸保護器具:**

- 短時間もしくは負担が小さい場合には呼吸フィルター付装置を、集中的にあるいは長時間触れる場合には、酸素ボンベ付き呼吸保護装置を使用すること

・ **手の保護:**



保護手袋

手袋の材質は物質/材料/調合剤に対して耐性であり、成分を通すことがあってはならない
 テストをおこなっていないため、物質/調合剤/化合物を取り扱う際の手袋の材質として勧められるもの
 はない

浸透時間、透過性および劣化の点を留意しながら手袋の材質を選択する

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手袋材

適当な手袋は材質だけではなく、その他の品質によっても変わり、各メーカーによって異なる。調査する際の物質は複数の成分から生成されるため、手袋材の耐久性は予想できない。このため使用前には必ずチェックしなければならない

- 手袋材の浸透時間 正確な浸透時間については保護手袋メーカーに問い合わせ、それを遵守すること
- 眼の保護:



密閉式保護めがね

9 物理的及び化学的性質

基本的な物理及び化学特性に関する情報

一般指示事項

外観

- 形: 液体
- 色: 透明
- におい: エステルのような
- 嗅覚閾値: 決まっていない。

- pH-値: 決まっていない。

状態の変化

- 融点/融解範囲: 決まっていない
- 沸点/沸点範囲: 60 °C

- 引火点: 18 °C

- 発火性(個体、気体): 情報なし

- 発火温度: 290 °C

- 分解温度: 決まっていない。

- 自然発火性: プロダクトは自然発火しない

- 爆発の危険: プロダクトは爆発する危険はない。ただし爆発する危険のある蒸気と空気の混合物を形成する可能性はある

爆発限界:

- 下限: 決まっていない。
- 上限: 決まっていない。

- 蒸気圧 約 20 °C: 3 hPa

- 密度 約 20 °C: 1.02006 g/cm³
- 相対的密度: 決まっていない。
- 蒸気密度: 決まっていない。
- 気化速度: 決まっていない。

以下成分における消和性/との混和性

- 水: 完全に混合できる

- 分配係数 (n-オクタノール/水): 決まっていない。

粘性:

- 力学的: 決まっていない。

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運動性:	決まっていない。
溶剤含有量: 有機溶剤:	6.1 %
固形物含有量: 他の情報	0.0 % 追加的な関連情報は得られていません。

10 安定性及び反応性

- ・反応性 追加的な関連情報は得られていません。
- ・化学的安定性
- ・熱分解/回避すべき条件: 規定どおりの使用では分解しない
- ・危険反応の可能性 危険な反応は起きていない
- ・避けるべき条件 追加的な関連情報は得られていません。
- ・不適合物質: 追加的な関連情報は得られていません。
- ・危険な分解生成物: 危険な分解プロダクトはない

11 有害性情報

- ・毒性学的影響に関する情報
- ・急性毒性:

分類上の LD/LC50 値:		
100-42-5 スチレン		
口	LD50	5,000 mg/kg (rat)
吸収	LC50/4 h	24 mg/l (rat)

- ・初期刺激作用:
- ・皮膚において: 皮膚と粘膜を刺激
- ・眼において: 刺激作用
- ・感作作用: 皮膚接触によって感作作用の可能性あり
- ・毒性に関する補足注意事項:
調合に関する E U の最新の一般分類ガイドラインの計算によれば、プロダクトでは以下の危険が見込まれる
毒性がある
刺激的
- ・次の種類の潜在的な効果に対する情報
- ・CMR-作用 (癌誘発、因子変異、そして進化危険作用)
生殖毒性 区分2

12 環境影響情報

- ・毒性
- ・水生生物に対する毒性: 追加的な関連情報は得られていません。
- ・持続性及び分解性 追加的な関連情報は得られていません。
- ・環境システムにおける作用:
- ・生体内蓄積能 追加的な関連情報は得られていません。
- ・土壌内移動性 追加的な関連情報は得られていません。
- ・その他のエコロジーに関する注意事項:
- ・一般注意事項:
水への危険度分類 1 (ドイツの規定) (自己査定): 水に対する危険性はわずかにある

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- 薄めずに、あるいは大量に地下水、河川もしくは下水施設に流してはならない
- ・PBT (残留性、生物濃縮性、毒性物質) 及び vPvB (高残留性、高生物濃縮性物質) アセスメント
- ・PBT (残留性、生物濃縮性、毒性物質): 情報なし
- ・vPvB (高残留性、高生物濃縮性物質): 情報なし
- ・他の副作用 追加的な関連情報は得られていません。

13 廃棄上の注意

- ・廃棄物処理方法
- ・勧告: 家庭ごみとはいっしょに処分できない。下水処理施設に流してはならない
- ・洗浄されていないパッケージ:
- ・勧告: 関係当局の規則に従って処分する
- ・推薦する洗剤: 水、場合に応じて洗剤も使って

14 輸送上の注意

・ UN 番号	UN1993
・ ADR, IMDG, IATA	
・ 国連出荷正式名	1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)
・ ADR	
・ IMDG, IATA	FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)
・ 輸送の危険性クラス	
・ ADR, IMDG, IATA	
	
・ 分類	3 可燃性液体成分
・ 危険物ラベル	3
・ パッケージの分類	III
・ ADR, IMDG, IATA	
・ 環境危険:	情報なし
・ ユーザー用特別予防措置	警告: 可燃性液体成分
・ ケムラー符号:	33
・ EMS (電子メールサービスナンバー) 番号:	F-E,S-E
・ Stowage Category	A
・ マルポール条約 (MARPOL73/78) 付属書II及び IBCコードに準じたバルク輸送	情報なし

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・ 輸送/その他の説明:

・ ADR

・ Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

・ IMDG

・ Limited quantities (LQ)

5L

・ Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

・ UN "模範規制:

UN 1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, N-BUTYL METHACRYLATE, STABILIZED), 3, III

15 適用法令

- ・ 該当純物質または混合物に対する安全、衛生及び環境規制・法律
- ・ 化審法

・ 既存化学物質

27813-02-1	methacrylic acid, monoester with propane-1,2-diol	2-958, 2-1044
868-77-9	メタクリル酸 2 - ヒドロキシエチル	2-1044
	N-BUTYL METHACRYLATE, MONOMER	2-1039
100-42-5	スチレン	3-4

・ 特定化学物質

内容成分はリストアップされていない

・ 監視化学物質、旧第三種監視化学物質、旧第三種監視化学物質

868-77-9	メタクリル酸 2 - ヒドロキシエチル	旧第二種監視化学物質
100-42-5	スチレン	旧第二種監視化学物質

・ 優先評価化学物質

100-42-5	スチレン
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・ 白物質

内容成分はリストアップされていない

・ 既存化学物質安全性点検結果 (分解性・蓄積性)

868-77-9	メタクリル酸 2 - ヒドロキシエチル
	N-BUTYL METHACRYLATE, MONOMER
100-42-5	スチレン

・ 既存化学物質安全性点検結果 (毒性)

868-77-9	メタクリル酸 2 - ヒドロキシエチル
	N-BUTYL METHACRYLATE, MONOMER

・ PRTR 制度 - 第一種指定化学物質

	N-BUTYL METHACRYLATE, MONOMER	419
100-42-5	スチレン	240

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・PRTR 制度 - 第二種指定化学物質

内容成分はリストアップされていない

・毒物及び劇物取締法:劇物

内容成分はリストアップされていない

・毒物及び劇物取締法:有機シアン化合物から除かれるもの

内容成分はリストアップされていない

・毒物及び劇物取締法:毒物

内容成分はリストアップされていない

・毒物及び劇物取締法:特定毒物

内容成分はリストアップされていない

・労働安全衛生法

・危険物

・爆発性の物 (施行令別表第 1 第 1 号)

内容成分はリストアップされていない

・発火性の物 (施行令別表第 1 第 2 号)

内容成分はリストアップされていない

・酸化性の物 (施行令別表第 1 第 3 号)

内容成分はリストアップされていない

・引火性の物 (施行令別表第 1 第 4 号)

内容成分はリストアップされていない

・可燃性のガス (施行令別表第 1 第 5 号)

内容成分はリストアップされていない

・特定化学物質等

・第一類物質

内容成分はリストアップされていない

・第二類物質

100-42-5 スチレン

・第三類物質

内容成分はリストアップされていない

・名称等を通知すべき有害物 (別表第 9)

100-42-5 スチレン

323

・製造許可物質

内容成分はリストアップされていない

・鉛中毒予防規則 (施行令別表第 4)

内容成分はリストアップされていない

・四アルキル鉛中毒予防規則 (施行令別表第 5)

内容成分はリストアップされていない

・有機溶剤中毒予防規則第 (施行令別表第 6 の 2)

・第一種有機溶剤等

内容成分はリストアップされていない

・第二種有機溶剤等

内容成分はリストアップされていない

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・ **第三種有機溶剤等**

内容成分はリストアップされていない

・ **強い変異原性が認められた化学物質**

内容成分はリストアップされていない

・ **消防法**

868-77-9 メタクリル酸 2 - ヒドロキシエチル

N-BUTYL METHACRYLATE, MONOMER

100-42-5 スチレン

・ **海洋汚染防止法**

N-BUTYL METHACRYLATE, MONOMER

100-42-5 スチレン

・ **特定物質等の規制等によるオゾン層の保護に関する法律**

・ **特定物質代替物質**

内容成分はリストアップされていない

・ **特定物質**

内容成分はリストアップされていない

・ **大気汚染防止法**

100-42-5 スチレン

・ **水質汚濁防止法**

・ **有害物質**

内容成分はリストアップされていない

・ **指定物質**

100-42-5 スチレン

3-3-27

・ **GHS ラベル要素**

本製品はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

・ **危険図表**



GHS02 GHS07 GHS08

・ **表示語** 危険

・ **危険と定められた成分をラベル表示:**

メタクリル酸 2 - ヒドロキシエチル

スチレン

N-BUTYL METHACRYLATE, MONOMER

・ **危険文句**

引火性の高い液体及び蒸気

皮膚刺激

強い眼刺激

アレルギー性皮膚反応を起こすおそれ

生殖能又は胎児への悪影響のおそれの疑い

聴覚器官を長期間または繰り返された露出によって損傷させることがある。

・ **注意文句**

熱/火花/裸火/高温のもののような着火源から遠ざけること。 - 禁煙。

防爆型の電気機器 / 換気装置 / 照明機器 / 機器を使用すること。

(11ページに続く)

安全データシート

JIS Z 7253:2012 による

印刷日: 2020.06.26

改訂日: 2020.06.26

商品名: MICRO-BED RESIN

(10ページの続き)

皮膚（または髪）に付着した場合：直ちに汚染された衣類をすべて脱ぐこと。皮膚を流水 / シャワーで洗うこと。

眼に入った場合：水で数分間注意深く洗うこと。次にコンタクトレンズを着用していて容易に外せる場合は外すこと。その後も洗浄を続けること。

施錠して保管すること。

現地/地域/国/国際規定に従い内容物・容器の露出

・ **化学物質の安全性評価:** 化学物質安全性評価が遂行されていない

16 その他の情報

この情報は現在の我々の認識に基づいている。ただし、プロダクトの特性を保証するものではなく、また契約において法的根拠にはならない

縮約と二文字語:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

PRTR/化管法: 化学物質排出把握管理促進法

引火性液体 区分2: Flammable liquids – Category 2

引火性液体 区分3: Flammable liquids – Category 3

急性毒性(吸入) 区分4: Acute toxicity – Category 4

皮膚腐食性/刺激性 区分2: Skin corrosion/irritation – Category 2

重篤な眼の損傷性/眼刺激性 区分2: Serious eye damage/eye irritation – Category 2

重篤な眼の損傷性/眼刺激性 区分2A: Serious eye damage/eye irritation – Category 2A

感作性(皮膚) 区分1: Skin sensitisation – Category 1

生殖毒性 区分2: Reproductive toxicity – Category 2

特定標的臓器有害性(単回暴露) 区分3: Specific target organ toxicity (single exposure) – Category 3

特定標的臓器有害性(反復暴露) 区分1: Specific target organ toxicity (repeated exposure) – Category 1

特定標的臓器有害性(反復暴露) 区分2: Specific target organ toxicity (repeated exposure) – Category 2

물질안전보건자료

GHS에 따라

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1 화학제품과 회사에 관한 정보

- 제품 식별자
- 제품명: MICRO-BED RESIN
- 상품번호: 14210
- 해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.
- 제품의 권고 용도와 사용상의 제한: 실험실화학품
- 안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보
- 제조자/수입자/유통업자 정보:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- Samchang Commercial Co., Ltd.
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298
-
- Daedok Science, Co. Ltd.
34141 E10 Korea Advanced Institute of Science
Guseong-Dong, Yuseong-gu, Daejeon,
Korea
Phone: 82 42 710 2091
Fax: 82 42 367 0005
Website: www.labsmro.com
- 추가적인 정보 획득 가능: Product safety department
- 비상연락 전화번호:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성·위험성

- 순물질 또는 혼합물의 분류



화염

인화성 액체 - 구분 2

H225 고인화성 액체 및 증기



건강에 위험

생식독성 - 구분 2

H361 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨

특정표적장기 독성 - 반복 노출 - 구분 2 H373 청각기관 을 장시간 또는 반복된 노출로 인하여 손상시킬 수 있다.



(2 쪽에 계속)

KR

물질안전보건자료 GHS에 따라

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제품명: MICRO-BED RESIN

(1 쪽부터계속)

- 피부 부식성/피부 자극성 - 구분 2 H315 피부에 자극을 일으킴
- 심한 눈 손상성/눈 자극성 - 구분 2 H319 눈에 심한 자극을 일으킴
- 피부 과민성 - 구분 1 H317 알레르기성 피부 반응을 일으킬 수 있음

- 라벨표기 요소
- GHS 라벨 요소
- 그림문자



- 신호어 위험
- **상표상에명확히위험성이표시된성분:**
2-hydroxyethyl methacrylate
STYRENE
N-BUTYL METHACRYLATE, MONOMER

- **유해.위험 문구**
고인화성 액체 및 증기
피부에 자극을 일으킴
눈에 심한 자극을 일으킴
알레르기성 피부 반응을 일으킬 수 있음
태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
청각기관 을 장시간 또는 반복된 노출로 인하여 손상시킬 수 있다.

- **예방조치 문구**
열·스파크·화염·고열로부터 멀리하시오 - 금연
폭발 방지용 전기·환기·조명·장비를 사용하시오.
피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하시오. 피부를 물로 씻으시오/샤워하시오
눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하시오. 계속 씻으시오.
밀봉하여 저장하시오.
(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하시오.

- 기타 유해성
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

- **화학적 특성:** 혼합물
- **설명:** 무해한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험 요소:		
27813-02-1	methacrylic acid, monoester with propane-1,2-diol ⚠ 피부 부식성/피부 자극성 - 구분 2, H315; 심한 눈 손상성/눈 자극성 - 구분 2, H319	>25-≤50%

(3 쪽에계속)

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(2 쪽부터 계속)

868-77-9	2-hydroxyethyl methacrylate ⚠️ 피부 부식성/피부 자극성 - 구분 2, H315; 심한 눈 손상성/눈 자극성 - 구분 2, H319; 피부 과민성 - 구분 1, H317	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER ⚠️ 인화성 액체 - 구분 3, H226; ⚠️ 피부 부식성/피부 자극성 - 구분 2, H315; 심한 눈 손상성/눈 자극성 - 구분 2, H319; 피부 과민성 - 구분 1, H317; 특정표적장기 독성 - 1회 노출 - 구분 3, H335	>10-≤25%
100-42-5	STYRENE ⚠️ 인화성 액체 - 구분 3, H226; ☠️ 생식독성 - 구분 2, H361; 특정표적장기 독성 - 반복 노출 - 구분 1, H372; ⚠️ 급성 독성 - 흡입 - 구분 4, H332; 피부 부식성/피부 자극성 - 구분 2, H315; 심한 눈 손상성/눈 자극성 - 구분 2, H319	>2.5-≤10%

4 응급조치 요령

· 응급조치요령 내용

· 일반적 정보:

중독 증상은 몇 시간 이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.

· 흡입했을 때:

신선한 공기를 쐬고 나서 반드시 의료진의 도움을 구한다.

환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

· 피부에 접촉했을 때: 즉시 물과 비누로 씻고 잘 행군다.

· 눈에 들어갔을 때: 흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 증상이 지속될 경우에는 의사와 상담한다.

· 먹었을 때: 증상이 지속될 경우에는 의사와 상담한다.

· 기타 의사의 주의사항:

· 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.

· 즉각적인 의료처리 및 특별치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

5 폭발·화재시 대처방법

· 소화제

· 적절한 소화제:

이산화탄소, 진화용 석회 가루 또는 물 방사를 사용하고, 더 큰 화재는 물을 분사하거나 알코올이 함유된 거품으로 끈다.

· 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.

· 소방관에 대한 권고사항

· 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비 설치.

6 누출 사고 시 대처방법

· 개인적 예방조치, 보호장비 및 응급처리 절차 안전장비 착용하고, 무방비의 사람은 격리시킨다.

· 환경 관련 예방조치:

많은 물로 희석시킨다.

하수도망/해수면위의물/지하수로도달하지 않게 한다.

· 밀폐 및 정화 방법과 소재:

액체가 혼합된 물질(모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.

항목 13에 따라 오염된 물질을 쓰레기로 처분한다.

충분한 환기가 되도록 한다.

· 타 섹션 참조

안전관리에 대한 정보는 제7장을 참고하십시오.

(4 쪽에 계속)

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개인 보호 장비에 대한 정보는 제8 장 을 참고하시 오.
 쓰레기 처 리 에 대한 정보는 제13 장 을 참고하시 오.

7 취급 및 저장방법

- 취급:
- **안전 취급을 위한 예방조치**
 작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.
 연무질이 형성되는 것을 피한다.
- **화재 및 폭발 사고 예방대책에 관한 정보:**
 발 화 요 소 는 멀 리 둔 다-금 연.
 열로부터 보호한다.
 정 전 기 의 충 전 으로부터 보호한다.
- **혼합위험성 등 안전 저장 조건**
- **보관:**
- **안전한 저장 방법:** 차 가 운 장 소 에 보 관 한 다.
- **하나의 공동 보관 시설에 대한 보관 관련 정보:** 필 요 없 음
- **보 관 조 건 에 관 한 추 가 적 인 정 보:**
 용기를 새 지 않 게 밀 폐 한 채 보 관 한 다.
 밀 폐 된 용 기 속 에 서 늘 하 고 건 조 하 게 보 관 한 다.
 열 이 나 직 사 광 선 으로부터 보호한다.
- **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- **첨단시설 디자인에 대한 추가정보:** 더 이 상 의 자 료 는 없 음. 항 목 7 을 참 고 하 시 오.
- **통제 변수**

· **화학물질의 노출기준, 생물학적 노출기준 등:**

100-42-5 STYRENE

TLV (KR)	단기간의값: 40 ppm 장기간의값: 20 ppm Skin, 발암성2, 생식독성2
PEL (US)	장기간의값: 100 ppm 최고노출기준: 200; 600* ppm *5-min peak in any 3 hrs
REL (US)	단기간의값: 425 mg/m ³ , 100 ppm 장기간의값: 215 mg/m ³ , 50 ppm
TLV (US)	단기간의값: (170) mg/m ³ , (40) NIC-20 ppm 장기간의값: (85) mg/m ³ , (20) NIC-10 ppm BEI, NIC-A3, NIC-OTO

- **추 가 정 보:** 제 조 할 당 시 에 유 효 한 목 록 을 기 초 로 사 용 했 다.
- **노출 통제**
- **개인 보호구**
- **일반적보호조치및위생조치:**
 식 료 품, 음 료 수 와 사 료 로 부 터 멀 리 멀 어 뜨 려 놓 는 다.
 더 러 워 지 거 나 음 료 수 가 물 은 옷 은 즉 시 탈 의 한 다.
 휴 식 전 이 나 작 업 이 끝 날 때 마 다 손 을 씻 는 다.
 눈 과 피 부 와 의 접 촉 은 피 한 다.

(5 쪽에계속)

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- **호흡기 보호:**
단 시간 또는 경미한 오염의 경우에는 호흡 여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

- **손 보호:**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.
테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.
투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

- **장갑의재료**

적합한장갑의선택은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선택되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전에예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

- **장갑재료의투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.
- **눈 보호:**



확조이는보안경

9 물리화학적 특성

- **기본 물리 및 화학적 특성에 대한 정보**

- **일반정보**

- **외형**

· 물리적 상태: 액체
· 색: 밝은
· 냄새: 에스테르종류의
· 후각역치: 알맞지않다.

- pH: 알맞지않다.

- **상태변화**

· 녹는점/어는점: 맞지않는
· 초기 끓는점과 끓는점 범위: 60 °C

- 인화점: 18 °C

- 인화성(고체, 기체): 해당사항 없음.

- 점화온도: 290 °C

- 분해 온도: 알맞지않다.

- 자기점화: 이제품은자연발화성이없다.

- **폭발위험:** 이제품은폭발위험성이없지만, 폭발가능성이있는증기화합물/공기화합물의형성가능성이있다.

- **인화 또는 폭발 범위의 상한/하한**

· 아래로: 알맞지않다.
· 위로: 알맞지않다.

- 중기압 의경우 20 °C: 3 hPa

(6 쪽에계속)

물질안전보건자료

GHS에 따라

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· 밀도 의경우 20 °C:	1.02006 g/cm ³
· 비중:	알맞지않다.
· 중기밀도:	알맞지않다.
· 중발 속도:	알맞지않다.
· 용해도:	
물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
역학성:	알맞지않다.
동점성:	알맞지않다.
· 용매내용물	
유기용매:	6.1 %
VOC (EU)	6.12 %
· 고체의 함량:	0.0 %
· 기타 정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에따라사용할경우해체는없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:		
100-42-5 STYRENE		
구강의	LD50	5,000 mg/kg (rat)
흡입의	LC50/4 h	24 mg/l (rat)

- 일차적 자극 효과:
- 피부 부식성 또는 자극성: 피부와점막을자극한다.
- 심한 눈 손상 또는 자극성: 자극
- 감각화: 피부접촉을통하여감각화가가능성이있다.
- 추가적인 독성에 관한 정보:
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전준비에대하여제시하고있다.
건강에해로운
자극적인

(7 쪽에계속)

물질안전보건자료

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(6 쪽부터계속)

- 다음 종류의 잠재적인 효과에 대한 정보
- CMR-효과 (암 유발, 돌연변이성 그리고 생식 독성)
- 생식독성 - 구분 2


12 환경에 미치는 영향

- **독성**
- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **추가적인 생태학 정보:**
- **일반 특징:**
- 수질오염등급 1 (자체등급분류): 약하게수질오염이된 희석시키지않은채대량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.
- **PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과**
- **PBT(잔류성, 생물농축성, 독성 물질):** 해당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질):** 해당사항 없음.
- **기타 부작용** 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- **폐기물 처리 방법**
- **권고:** 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- **비위생적 포장:**
- **권고:** 당국의지침에입각한쓰레기처리.
- **추천 세정제:** 경우에따라서세제가첨가된물

14 운송에 필요한 정보

<ul style="list-style-type: none"> · 유엔 번호 · ADR, IMDG, IATA 	UN1993
<ul style="list-style-type: none"> · UN 적정 선적명 · ADR · IMDG, IATA 	1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED) FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)
<ul style="list-style-type: none"> · 교통 위험 클래스 · ADR, IMDG, IATA 	
	3 발화성용액
<ul style="list-style-type: none"> · 등급 	3 발화성용액

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물질안전보건자료

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· 위험물 라벨	3
· 용기등급 · ADR, IMDG, IATA	III
· 환경적 유해물질:	해당사항 없음.
· 이용자 특별 예방조치 · 위험 코드: · EMS-번호: · Stowage Category	경고: 발화성용액 33 F-E, <u>S-E</u> A
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.
· 운 송/추가 정보:	
· ADR · 한정 수량 (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· 운송 구분 · 터널 제한 코드	3 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "모범 규제":	UN 1993 FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, N-BUTYL METHACRYLATE, STABILIZED), 3, III

15 법적 규제현황

· 산업안전보건법에 의한 규제:		
· 제조 등 금지물질:		
어떠한내용물도 목록화되어있지않다		
· 허가대상물질:		
어떠한내용물도 목록화되어있지않다		
· 관리대상유해물질:		
100-42-5	STYRENE	
· 작업환경측정 대상 유해인자		
100-42-5	STYRENE	1A48
· 특수건강진단 대상 유해인자		
100-42-5	STYRENE	1A48
· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률		
· Korean Existing Chemical Inventory		
27813-02-1	methacrylic acid, monoester with propane-1,2-diol	KE-25135

(9 쪽에계속)

물질안전보건자료

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868-77-9	2-hydroxyethyl methacrylate	KE-25025
	N-BUTYL METHACRYLATE, MONOMER	KE-24922
100-42-5	STYRENE	KE-35342

· 화학물질관리법

· 사고대비물질

어떠한내용물도목록화되어있지않다

· 금지물질

어떠한내용물도목록화되어있지않다

· 제한물질

어떠한내용물도목록화되어있지않다

· 유독물질

어떠한내용물도목록화되어있지않다

· 허가물질

100-42-5 | STYRENE

· 위험물안전관리법 (위험물 및 지정수량) 제 4: 1,000 리터

· 등록 또는 신고 면제대상 화학물질

어떠한내용물도목록화되어있지않다

· ‘21년까지 등록하여야 할 압, 들연번이, 생식능력 이상을 일으키거나 일으킬 우려가 있는 기존화학물질

어떠한내용물도목록화되어있지않다

· 중점관리물질의 지정

· 표1 중점관리물질(제2조 관련)

100-42-5 | STYRENE

· 표2 중점관리물질(제2조 관련)

어떠한내용물도목록화되어있지않다

· GHS 라벨 요소

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· 그림문자



GHS02 GHS07 GHS08

· 신호어 위험

· 상표상에명확히위험성이표시된성분:

2-hydroxyethyl methacrylate
STYRENE
N-BUTYL METHACRYLATE, MONOMER

· 유해.위험 문구

고인화성 액체 및 증기
피부에 자극을 일으킴
눈에 심한 자극을 일으킴
알레르기성 피부 반응을 일으킬 수 있음
태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
청각기관을 장시간 또는 반복된 노출로 인하여 손상시킬 수 있다.

· 예방조치 문구

열·스파크·화염·고열로부터 멀리하십시오 - 금연

(10 쪽에계속)

물질안전보건자료

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폭발 방지용 전기·환기·조명·장비를 사용하십시오.

피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으시오/샤워하십시오

눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으시오.

밀봉하여 저장하십시오.

(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.

· **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법을관계에기반을두고있지도않다

· **최초 작성일자:** 2020.06.26

· **개정 횟수 및 최종 개정일자:** 1 / 2020.06.26

· **약어와 두문자어:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 26.06.2020

Revisión: 26.06.2020

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** MICRO-BED RESIN

· **Número del artículo:** 14210

· 1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados

No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

· 1.3 Datos del proveedor de la ficha de datos de seguridad

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

· 1.4 Teléfono de emergencia:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· 2.1 Clasificación de la sustancia o de la mezcla

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS02 llama

Flam. Liq. 2 H225 Líquido y vapores muy inflamables.



GHS08 peligro para la salud

Repr. 2 H361d Se sospecha que daña al feto.

STOT RE 2 H373 Puede provocar daños en el sistema auditivo tras exposiciones prolongadas o repetidas



GHS07

Skin Irrit. 2 H315 Provoca irritación cutánea.

Eye Irrit. 2 H319 Provoca irritación ocular grave.

Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.

· 2.2 Elementos de la etiqueta

· **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**

El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

(se continua en página 2)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 26.06.2020

Revisión: 26.06.2020

Nombre comercial: MICRO-BED RESIN

(se continua en página 1)

· Pictogramas de peligro



GHS02 GHS07 GHS08

· Palabra de advertencia Peligro

· Componentes peligrosos a indicar en el etiquetaje:

metacrilato de 2-hidroxietilo
estireno

N-BUTYL METHACRYLATE, MONOMER

· Indicaciones de peligro

H225 Líquido y vapores muy inflamables.

H315 Provoca irritación cutánea.

H319 Provoca irritación ocular grave.

H317 Puede provocar una reacción alérgica en la piel.

H361d Se sospecha que daña al feto.

H373 Puede provocar daños en el sistema auditivo tras exposiciones prolongadas o repetidas

· Consejos de prudencia

P210 Mantener alejado del calor, de superficies calientes, de chispas, de llamas abiertas y de cualquier otra fuente de ignición. No fumar.

P241 Utilizar material [eléctrico/ de ventilación/iluminación] antideflagrante.

P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente toda la ropa contaminada. Enjuagar la piel con agua [o ducharse].

P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Enjuagar con agua cuidadosamente durante varios minutos. Quitar las lentes de contacto cuando estén presentes y pueda hacerse con facilidad. Proseguir con el lavado.

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· 2.3 Otros peligros

· Resultados de la valoración PBT y mPmB

· PBT: No aplicable.

· mPmB: No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

· 3.2 Caracterización química: Mezclas

· Descripción: Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

· Componentes peligrosos:

CAS: 27813-02-1 EINECS: 248-666-3	ácido metacrílico, monoéster con propano-1,2-diol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	>25-≤50%
CAS: 868-77-9 EINECS: 212-782-2	metacrilato de 2-hidroxietilo ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	>25-≤50%
	N-BUTYL METHACRYLATE, MONOMER ⚠ Flam. Liq. 3, H226; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	>10-≤25%
CAS: 100-42-5 EINECS: 202-851-5	estireno ⚠ Flam. Liq. 3, H226; ⚠ Repr. 2, H361d; STOT RE 1, H372; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	>2,5-≤10%

(se continua en página 3)

Ficha de datos de seguridad

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(se continua en página 2)

· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

SECCIÓN 4: Primeros auxilios

· **4.1 Descripción de los primeros auxilios**

· **Instrucciones generales:**

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

· **En caso de inhalación del producto:**

Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

· **En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.

· **En caso de con los ojos:**

Limpia los ojos abiertos durante varios minutos con agua corriente. En caso de trastornos persistentes consultar un médico.

· **En caso de ingestión:** Consultar un médico si los trastornos persisten.

· **4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.

· **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente** No existen más datos relevantes disponibles.

SECCIÓN 5: Medidas de lucha contra incendios

· **5.1 Medios de extinción**

· **Sustancias extintoras apropiadas:**

CO₂, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.

· **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.

· **5.3 Recomendaciones para el personal de lucha contra incendios**

· **Equipo especial de protección:** Colocarse la protección respiratoria.

SECCIÓN 6: Medidas en caso de vertido accidental

· **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia**

Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.

· **6.2 Precauciones relativas al medio ambiente:**

Diluir con mucha agua.

Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.

· **6.3 Métodos y material de contención y de limpieza:**

Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).

Desechar el material contaminado como vertido según ítem 13.

Asegurar suficiente ventilación.

· **6.4 Referencia a otras secciones**

Ver capítulo 7 para mayor información sobre una manipulación segura.

Ver capítulo 8 para mayor información sobre el equipo personal de protección.

Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

· **7.1 Precauciones para una manipulación segura**

Asegurar suficiente ventilación /aspiración en el puesto de trabajo.

Evitar la formación de aerosoles.

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- **Prevención de incendios y explosiones:**
Mantener alejadas las fuentes de encendido. No fumar.
Proteger del calor.
Tomar medidas contra las cargas electrostáticas.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** Almacenar en un lugar fresco.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
Almacenarlo en envases bien cerrados en un lugar fresco y seco.
Proteger del calor y de la luz directa del sol.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

· 8.1 Parámetros de control

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

100-42-5 estireno

LEP	Valor de corta duración: 172 mg/m ³ , 40 ppm Valor de larga duración: 86 mg/m ³ , 20 ppm VLB, ae
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- **Componentes con valores límite biológicos:**

100-42-5 estireno

VLB	400 mg/g creatinina Muestra: orina Momento de Muestero: Final de la jornada laboral Indicador Biológico: Ácido mandélico más ácido fenilgloxílico 0,2 mg/l Muestra: sangre venosa Momento de Muestero: Final de la jornada laboral Indicador Biológico: Estireno
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- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

· 8.2 Controles de la exposición

· Equipo de protección individual:

· Medidas generales de protección e higiene:

Mantener alejado de alimentos, bebidas y alimentos para animales.
Quitarse de inmediato la ropa ensuciada o impregnada.
Lavarse las manos antes de las pausas y al final del trabajo.
Evitar el contacto con los ojos y la piel.

· Protección respiratoria:

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

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· Protección de manos:



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

· Material de los guantes

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

· Tiempo de penetración del material de los guantes

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

· Protección de ojos:



Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

Forma:

Líquido

Color:

Claro

· Olor:

Similar al de los ésteres

· Umbral olfativo:

No determinado.

· valor pH:

No determinado.

· Cambio de estado

Punto de fusión/punto de congelación:

Indeterminado.

Punto inicial de ebullición e intervalo de ebullición: 60 °C

· Punto de inflamación:

18 °C

· Inflamabilidad (sólido, gas):

No aplicable.

· Temperatura de ignición:

290 °C

· Temperatura de descomposición:

No determinado.

· Temperatura de auto-inflamación:

El producto no es autoinflamable.

· Propiedades explosivas:

El producto no es explosivo; sin embargo, pueden formarse mezclas explosivas de vapor / aire.

· Límites de explosión:

Inferior:

No determinado.

Superior:

No determinado.

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· Presión de vapor a 20 °C:	3 hPa
· Densidad a 20 °C:	1,02006 g/cm ³
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Tasa de evaporación:	No determinado.
· Solubilidad en / miscibilidad con agua:	Completamente mezclable.
· Coeficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad:	
Dinámica:	No determinado.
Cinemática:	No determinado.
· Concentración del disolvente:	
Disolventes orgánicos:	6,1 %
VOC (CE)	6,12 %
· Contenido de cuerpos sólidos:	0,0 %
· 9.2 Otros datos	No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

- 10.1 Reactividad No existen más datos relevantes disponibles.
- 10.2 Estabilidad química
- Descomposición térmica / condiciones que deben evitarse: No se descompone al emplearse adecuadamente.
- 10.3 Posibilidad de reacciones peligrosas No se conocen reacciones peligrosas.
- 10.4 Condiciones que deben evitarse No existen más datos relevantes disponibles.
- 10.5 Materiales incompatibles: No existen más datos relevantes disponibles.
- 10.6 Productos de descomposición peligrosos: No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- 11.1 Información sobre los efectos toxicológicos
- Toxicidad aguda A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:

100-42-5 estireno

Oral	LD50	5.000 mg/kg (rat)
Inhalatorio	LC50/4 h	24 mg/l (rat)

- Efecto estimulante primario:
- Corrosión o irritación cutáneas
Provoca irritación cutánea.
- Lesiones o irritación ocular graves
Provoca irritación ocular grave.
- Sensibilización respiratoria o cutánea
Puede provocar una reacción alérgica en la piel.
- Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)
- Mutagenicidad en células germinales
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- Carcinogenicidad A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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- **Toxicidad para la reproducción**
Se sospecha que daña al feto.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
Puede provocar daños en el sistema auditivo tras exposiciones prolongadas o repetidas
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 1 (autoclasiación): escasamente peligroso para el agua
En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN1993
- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 1993 LÍQUIDO INFLAMABLE, N.E.P. (ESTIRENO MONÓMERO ESTABILIZADO, METACRILATO DE n-BUTILO ESTABILIZADO)
- **IMDG, IATA** FLAMMABLE LIQUID, N.O.S. (STYRENE MONOMER, STABILIZED, n-BUTYL METHACRYLATE, STABILIZED)

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· 14.3 Clase(s) de peligro para el transporte

· ADR, IMDG, IATA



· Clase 3 Líquidos inflamables
· Etiqueta 3

· 14.4 Grupo de embalaje

· ADR, IMDG, IATA III

· 14.5 Peligros para el medio ambiente: No aplicable.

· 14.6 Precauciones particulares para los usuarios Atención: Líquidos inflamables

· Número de identificación de peligro (Número Kemler): 33
· Número EMS: F-E,S-E
· Stowage Category A

· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC No aplicable.

· Transporte/datos adicionales:

· ADR
· Cantidades limitadas (LQ) 5L
· Cantidades exceptuadas (EQ) Código: E1
Cantidad neta máxima por envase interior: 30 ml
Cantidad neta máxima por embalaje exterior: 1000 ml
· Categoría de transporte 3
· Código de restricción del túnel D/E

· IMDG
· Limited quantities (LQ) 5L
· Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· "Reglamentación Modelo" de la UNECE: UN 1993 LÍQUIDO INFLAMABLE, N.E.P. (ESTIRENO MONÓMERO ESTABILIZADO, METACRILATO DE N-BUTILO ESTABILIZADO), 3, III

SECCIÓN 15: Información reglamentaria

· 15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla

- Directiva 2012/18/UE
- Sustancias peligrosas nominadas - ANEXO I ninguno de los componentes está incluido en una lista
- Categoría Seveso P5c LÍQUIDOS INFLAMABLES
- Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 5.000 t
- Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior 50.000 t
- REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones: 3

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· **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· Frases relevantes

- H226 Líquidos y vapores inflamables.
- H315 Provoca irritación cutánea.
- H317 Puede provocar una reacción alérgica en la piel.
- H319 Provoca irritación ocular grave.
- H332 Nocivo en caso de inhalación.
- H335 Puede irritar las vías respiratorias.
- H361d Se sospecha que daña al feto.
- H372 Provoca daños en el sistema auditivo tras exposiciones prolongadas o repetidas

· Abreviaturas y acrónimos:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Líquidos inflamables – Categoría 2
- Flam. Liq. 3: Líquidos inflamables – Categoría 3
- Acute Tox. 4: Toxicidad aguda - por inhalación – Categoría 4
- Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2
- Eye Irrit. 2: Lesiones oculares graves o irritación ocular – Categoría 2
- Skin Sens. 1: Sensibilización cutánea – Categoría 1
- Repr. 2: Toxicidad para la reproducción – Categoría 2
- STOT SE 3: Toxicidad específica en determinados órganos (exposición única) – Categoría 3
- STOT RE 1: Toxicidad específica en determinados órganos (exposiciones repetidas) – Categoría 1
- STOT RE 2: Toxicidad específica en determinados órganos (exposiciones repetidas) – Categoría 2