

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/11/2016

Reviewed on 01/11/2016

1 Identification

- **Product identifier**
- **Trade name:** COLLOIDAL ALUMINA
- **Article number:** 50365-05, 50365-06
- **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**



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**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**
ALUMINUM HYDROXIDE OXIDE
- **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
- **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Wear eye protection / face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

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Specific treatment (see on this label).

Wash contaminated clothing before reuse.

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

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

· **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:**

24623-77-6	ALUMINUM HYDROXIDE OXIDE	10-25%
7697-37-2	nitric acid	≤ 2,5%

4 First-aid measures

· **Description of first aid measures**

· **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.

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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:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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 protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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:**

7697-37-2 nitric acid

PEL	Long-term value: 5 mg/m ³ , 2 ppm
REL	Short-term value: 10 mg/m ³ , 4 ppm Long-term value: 5 mg/m ³ , 2 ppm
TLV	Short-term value: 10 mg/m ³ , 4 ppm Long-term value: 5.2 mg/m ³ , 2 ppm

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

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- **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.
- **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:	Whitish
Odor:	Odorless
Odor threshold:	Not determined.

· **pH-value at 20 °C (68 °F):** 4

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)

· **Flash point:** Not applicable.

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

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Trade name: COLLOIDAL ALUMINA

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· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density: Not determined.	
· 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:	0.0 %
· VOC content:	0.0 g/l / 0.00 lb/gl
· 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:**
- **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:
Irritant

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- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **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.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:** Not known to be hazardous to water.

- **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

- **Environmental hazards:** Not applicable.

- **Special precautions for user** Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

- **UN "Model Regulation":** Void

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15 Regulatory information

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

· **Sara**

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

7697-37-2	nitric acid
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· **Section 313 (Specific toxic chemical listings):**

7697-37-2	nitric acid
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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **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.

· **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)**

None of the ingredients is listed.

· **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**



GHS07

· **Signal word** Warning

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

ALUMINUM HYDROXIDE OXIDE

· **Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

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Contaminated work clothing must not be allowed out of the workplace.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Specific treatment (see on this label).
 Wash contaminated clothing before reuse.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of water.
 Take off contaminated clothing and wash it before reuse.
 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** 01/11/2016 / -
- **Abbreviations and acronyms:**
 - 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)
 - 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**
 - Skin Irrit. 2: **Skin corrosion/irritation, Hazard Category 2**
 - Eye Irrit. 2A: **Serious eye damage/eye irritation, Hazard Category 2A**
 - Skin Sens. 1: **Sensitisation - Skin, Hazard Category 1**

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

Printing date 11.01.2016

Revision: 11.01.2016

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

- **Product identifier**
- **Trade name:** COLLOIDAL ALUMINA
- **Article number:** 50365-05, 50365-06
- **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: sgkcek@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)
- 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 Hazards identification

- **Classification of the substance or mixture**



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.

- **Label elements**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning

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Trade name: COLLOIDAL ALUMINA

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

ALUMINUM HYDROXIDE OXIDE

- **Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

- **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

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

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

Continue rinsing.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

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

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

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

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**

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

- **Dangerous components:**

24623-77-6	ALUMINUM HYDROXIDE OXIDE	10-25%
7697-37-2	nitric acid	≤ 2,5%

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

4 First aid measures

- **Description of first aid measures**

- **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.

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Trade name: COLLOIDAL ALUMINA

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting 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:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/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:**

7697-37-2 nitric acid

NES Short-term value: 10 mg/m³, 4 ppmLong-term value: 5.2 mg/m³, 2 ppm

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

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according to 1907/2006/EC, Article 31

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Trade name: COLLOIDAL ALUMINA

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- **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.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Liquid
· Colour:	Whitish
· Odour:	Odourless
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 4

· Change in condition

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	100 °C

· **Flash point:** Not applicable.

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

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Trade name: COLLOIDAL ALUMINA

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· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density:	Not determined.
· 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:	0.0 %
· VOC (EC)	0.00 %
· 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**
- **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:

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Trade name: COLLOIDAL ALUMINA

Irritant

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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:** Not known to be hazardous to water.
- **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

- | | |
|---|-----------------|
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

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**

7697-37-2 nitric acid

S5, S6

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

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· **Hazard pictograms**

GHS07

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

ALUMINUM HYDROXIDE OXIDE

· **Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

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

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

Continue rinsing.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

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

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

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.· **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:**

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/11/2016

Reviewed on 01/11/2016

1 Identification

- **Product identifier**
- **Trade name:** COLLOIDAL ALUMINA
- **Article number:** 50365-05, 50365-06
- **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**



Skin Irritation - Category 2 H315 Causes skin irritation.

Eye Irritation - Category 2A H319 Causes serious eye irritation.

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



GHS07

- **Signal word** Warning
- **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
- **Precautionary statements**
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.

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Safety Data Sheet

acc. to OSHA HCS

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Trade name: COLLOIDAL ALUMINA

(Contd. of page 1)

- **Hazard description:**
- **WHMIS-symbols:**
D2B - Toxic material causing other toxic effects



- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **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:**

7697-37-2	nitric acid	≤ 1% w/w
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4 First-aid measures

- **Description of first aid measures**
- **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.

CA

(Contd. on page 3)

Safety Data Sheet

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Reviewed on 01/11/2016

Trade name: COLLOIDAL ALUMINA

(Contd. of page 2)

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:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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 protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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:**

7697-37-2 nitric acid

EL Short-term value: 4 ppm

Long-term value: 2 ppm

EV Short-term value: 10 mg/m³, 4 ppmLong-term value: 5 mg/m³, 2 ppm

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

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Safety Data Sheet

acc. to OSHA HCS

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Trade name: COLLOIDAL ALUMINA

(Contd. of page 3)

- **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.
- **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:	Whitish
Odor:	Odorless
Odor threshold:	Not determined.

pH-value at 20 °C:	4
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· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C

Flash point:	Not applicable.
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Flammability (solid, gaseous):	Not flammable.
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Trade name: COLLOIDAL ALUMINA

(Contd. of page 4)

· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density:	Not determined.
· 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:	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:**
- **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:
Irritant

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Trade name: COLLOIDAL ALUMINA

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- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **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.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:** Not known to be hazardous to water.

- **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

- **Environmental hazards:** Not applicable.

- **Special precautions for user** Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

- **UN "Model Regulation":** Void

CA

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Safety Data Sheet

acc. to OSHA HCS

Printing date 01/11/2016

Reviewed on 01/11/2016

Trade name: COLLOIDAL ALUMINA

(Contd. of page 6)

15 Regulatory information

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

- Sara

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

7697-37-2	nitric acid
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- **Section 313 (Specific toxic chemical listings):**

7697-37-2	nitric acid
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- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **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.

- **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)**

None of the ingredients is listed.

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

None of the ingredients is listed.

- **Canadian substance listings:**

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

All ingredients are listed.

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

None of the ingredients is listed.

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

7697-37-2	nitric acid
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- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

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Reviewed on 01/11/2016

Trade name: COLLOIDAL ALUMINA

(Contd. of page 7)

· **Precautionary statements**

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

Wash thoroughly after handling.

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

Continue rinsing.

Specific treatment (see on this label).

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

· **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** 01/11/2016 / -

· **Abbreviations and acronyms:**

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)

WHMIS: Workplace Hazardous Materials Information System (Canada)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

Skin Irritation - Category 2: Skin corrosion/irritation, Hazard Category 2

Eye Irritation - Category 2A: Serious eye damage/eye irritation, Hazard Category 2A

CA

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

Printing date 11.01.2016

Revision: 11.01.2016

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

- **1.1 Product identifier**
- **Trade name:** COLLOIDAL ALUMINA
- **Article number:** 50365-05, 50365-06
- **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**



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**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
ALUMINUM HYDROXIDE OXIDE
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
- **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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Safety data sheet

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Trade name: COLLOIDAL ALUMINA

(Contd. of page 1)

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

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: 24623-77-6	ALUMINUM HYDROXIDE OXIDE ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317	10-25%
CAS: 7697-37-2 EINECS: 231-714-2	nitric acid ⚠ Ox. Liq. 3, H272; ⚠ Skin Corr. 1A, H314	≤ 2,5%

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

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **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:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Dilute with plenty of water.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.01.2016

Revision: 11.01.2016

Trade name: COLLOIDAL ALUMINA

(Contd. of page 2)

- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
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:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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:**

7697-37-2 nitric acid

WEL Short-term value: 2.6 mg/m ³ , 1 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

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Safety data sheet

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Trade name: COLLOIDAL ALUMINA

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- **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

SECTION 9: Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Liquid
Colour:	Whitish
Odour:	Odourless
Odour threshold:	Not determined.

- **pH-value at 20 °C:** 4

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C

- **Flash point:** Not applicable.

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

- **Ignition temperature:**

Decomposition temperature: Not determined.

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

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

- **Vapour pressure:** Not determined.

- **Density:** Not determined.

- **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.

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

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Trade name: COLLOIDAL ALUMINA

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Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.00 %
· 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.
- **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** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **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:** Not known to be hazardous to water.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

GB

(Contd. on page 6)

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

Printing date 11.01.2016

Revision: 11.01.2016

Trade name: COLLOIDAL ALUMINA

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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

- | | |
|--|-----------------|
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

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.
- **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**
H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
- **Abbreviations and acronyms:**
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)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Liq. 3: Oxidising Liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 11.01.2016

Herziening van: 11.01.2016

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

- **1.1 Productidentificatie**
- **Handelsnaam:** COLLOIDAL ALUMINA
- **Artikelnummer:** 50365-05, 50365-06
- **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**



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.
- **Gevarenpictogrammen**



GHS07

- **Signaalwoord** Waarschuwing
- **Gevaaraanduidende componenten voor de etikettering:**
ALUMINUM HYDROXIDE OXIDE

(Vervolg op blz. 2)

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- **Gevarenaanduidingen**

- H315 Veroorzaakt huidirritatie.
- H319 Veroorzaakt ernstige oogirritatie.
- H317 Kan een allergische huidreactie veroorzaken.

- **Veiligheidsaanbevelingen**

- P261 Inademing van stoff/rook/gas/nevel/damp/spuitnevel vermijden.
- P280 Beschermende handschoenen/beschermende kleding/oogbescherming/gelaatsbescherming dragen.
- P305+P351+P338 **BIJ CONTACT MET DE OGEN:** voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.
- P321 Specifieke behandeling vereist (zie op dit etiket).
- P333+P313 Bij huidirritatie of uitslag: een arts raadplegen.
- 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: 24623-77-6	ALUMINUM HYDROXIDE OXIDE ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317	10-25%
CAS: 7697-37-2 EINECS: 231-714-2	salpeterzuur ⚠ Ox. Liq. 3, H272; ⚠ Skin Corr. 1A, H314	≤ 2,5%

- **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**

- **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.

NL

(Vervolg op blz. 3)

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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:** Geen bijzondere maatregelen nodig.

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

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures** Niet nodig.
- **6.2 Milieuvorzorgsmaatregelen:** Met veel water verdunnen.
- **6.3 InsluTINGS- en reinigingsmethoden en -materiaal:**
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
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.

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:** Geen bijzondere maatregelen noodzakelijk.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **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:**

7697-37-2 salpeterzuur

WGW	Korte termijn waarde: 1,3 mg/m ³ , 0,5 ppm
-----	---

- **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.

(Vervolg op blz. 4)

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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 ademhalingstoestel 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 chemicaliënmengsel 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.

· **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:	Witachtig
Reuk:	Reukloos
Geurdrempelwaarde:	Niet bepaald.

· **pH-waarde bij 20 °C:** 4

· **Toestandsverandering**

Smelpunt/smeltbereik:	Niet bepaald.
Kookpunt/kookpuntbereik:	100 °C

· **Vlampunt:** Niet bruikbaar.

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

· **Ontstekingstemperatuur:**

Ontbindingstemperatuur: Niet bepaald.

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

· **Ontploffingsgevaar:** Het produkt is niet ontploffingsgevaarlijk.

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· Ontploffingsgrenzen:	
Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.
· Dampspanning:	Niet bepaald.
Dichtheid:	Niet bepaald.
· 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:	0,0 %
VOC (EG)	0,00 %
· 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.
- **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** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

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- **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.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL) 10: Kan in het aquatisch milieu op lange termijn schadelijke effecten veroorzaken.
Geen gevaar voor water bekend.
- **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 terecht komen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- | | |
|---|---------------------|
| · 14.5 Milieugevaren: | Niet bruikbaar. |
| · 14.6 Bijzondere voorzorgen voor de gebruiker | Niet bruikbaar. |
| · 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code | Niet bruikbaar. |
| · VN "Model Regulation": | Niet van toepassing |

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**
geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

· **Richtlijn 2012/18/EU**

· **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** geen der bestanddelen staat op de lijst.

· **Nationale voorschriften:**

· **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 10: Saneringsinspanning A

· **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**

H272 Kan brand bevorderen; oxiderend.

H302 Schadelijk bij inslikken.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

H317 Kan een allergische huidreactie veroorzaken.

H332 Schadelijk bij inademing.

· **Afkortingen en acroniemen:**

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Liq. 3: Oxidising Liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

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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:** COLLOIDAL ALUMINA
- **Code du produit:** 50365-05, 50365-06
- **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**



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**



GHS07

- **Mention d'avertissement** Attention
- **Composants dangereux déterminants pour l'étiquetage:**
ALUMINUM HYDROXIDE OXIDE
- **Mentions de danger**
H315 Provoque une irritation cutanée.
H319 Provoque une sévère irritation des yeux.
H317 Peut provoquer une allergie cutanée.
- **Conseils de prudence**
P261 Éviter de respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols.

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- P280 Porter des gants de protection/des vêtements de protection/un équipement de protection des yeux/du visage.
- 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.
- P321 Traitement spécifique (voir sur cette étiquette).
- P333+P313 En cas d'irritation ou d'éruption cutanée: consulter un médecin.
- 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: 24623-77-6	ALUMINUM HYDROXIDE OXIDE ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317	10-25%
CAS: 7697-37-2 EINECS: 231-714-2	acide nitrique ⚠ Ox. Liq. 3, H272; ⚠ Skin Corr. 1A, H314	≤ 2,5%

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

RUBRIQUE 4: Premiers secours

- **4.1 Description des premiers secours**
- **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.

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- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.
- **6.2 Précautions pour la protection de l'environnement:** Diluer avec beaucoup d'eau.
- **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).
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.
- **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **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:**

7697-37-2 acide nitrique	
---------------------------------	--

VME	Valeur momentané: 2,6 mg/m ³ , 1 ppm
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- **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

· 8.2 Contrôles de l'exposition

- **Équipement 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.

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· **Protection des mains:**



Gants de protection

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

· **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.

· **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:	Blanchâtre
Odeur:	Inodore
Seuil olfactif:	Non déterminé.

· **valeur du pH à 20 °C:** 4

· **Changement d'état**

Point de fusion:	Non déterminé.
Point d'ébullition:	100 °C

· **Point d'éclair** Non applicable.

· **Inflammabilité (solide, gazeux):** Non applicable.

· **Température d'inflammation:**

Température de décomposition: Non déterminé.

· **Auto-inflammation:** Le produit ne s'enflamme pas spontanément.

· **Danger d'explosion:** Le produit n'est pas explosif.

· **Limites d'explosion:**

Inférieure:	Non déterminé.
Supérieure:	Non déterminé.

· **Pression de vapeur:** Non déterminé.

· **Densité:** Non déterminée.

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· Densité relative	Non déterminé.
· Densité de vapeur.	Non déterminé.
· Vitesse 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:	0,0 %
VOC (CE)	0,00 %
· 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.
- **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**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **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**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

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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.
- **Autres indications écologiques:**
- **Indications générales:** Aucune pollution des eaux connue.
- **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

- | | |
|--|-----------------|
| · 14.5 Dangers pour l'environnement: | Non applicable. |
| · 14.6 Précautions particulières à prendre par l'utilisateur | Non applicable. |
| · 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC | Non applicable. |
| · "Règlement type" de l'ONU: | néant |

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.
- **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**
- H272 Peut aggraver un incendie; comburant.
- H302 Nocif en cas d'ingestion.
- H314 Provoque des brûlures de la peau et des lésions oculaires graves.

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*H317 Peut provoquer une allergie cutanée.**H332 Nocif par inhalation.***· Acronymes et abréviations:***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)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Ox. Liq. 3: Oxidising Liquids, Hazard Category 3**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1*

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

- **1.1 Produktidentifikator**
- **Handelsname:** COLLOIDAL ALUMINA
- **Artikelnummer:** 50365-05, 50365-06
- **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

24h Giftnotruf Munchen: +49 (0)89 19240
Toxikologische Abteilung der II. Medizinischen Klinik
rechts der Isar, Munchen. - www.toxinfo.org
- **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**



Skin Irrit. 2 H315 Verursacht Hautreizungen.
Eye Irrit. 2 H319 Verursacht schwere Augenreizung.
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**



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· **Signalwort** Achtung· **Gefahrbestimmende Komponenten zur Etikettierung:**

ALUMINUM HYDROXIDE OXIDE

· **Gefahrenhinweise**

H315 Verursacht Hautreizungen.

H319 Verursacht schwere Augenreizung.

H317 Kann allergische Hautreaktionen verursachen.

· **Sicherheitshinweise**

P261 Einatmen von Staub/Rauch/Gas/Nebel/Dampf/Aerosol vermeiden.

P280 Schutzhandschuhe/Schutzkleidung/Augenschutz/Gesichtsschutz tragen.

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

P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).

P333+P313 Bei Hautreizung oder -ausschlag: Ärztlichen Rat einholen/ärztliche Hilfe hinzuziehen.

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: 24623-77-6	ALUMINUM HYDROXIDE OXIDE ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317	10-25%
CAS: 7697-37-2 EINECS: 231-714-2	Salpetersäure ⚠ Ox. Liq. 3, H272; ⚠ Skin Corr. 1A, H314	≤ 2,5%

· **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**· **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.

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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:** Keine besonderen Maßnahmen erforderlich.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Nicht erforderlich.
- **6.2 Umweltschutzmaßnahmen:** Mit viel Wasser verdünnen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.
Für ausreichende Lüftung sorgen.
- **6.4 Verweis auf andere Abschnitte**
Informationen zur sicheren Handhabung siehe Abschnitt 7.
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
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:** Keine besonderen Maßnahmen erforderlich.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **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:	
7697-37-2 Salpetersäure	
AGW	Langzeitwert: 2,6 mg/m ³ , 1 ml/m ³ EU, 13, 16

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· **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.

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: Weißlich

· **Geruch:** Geruchlos

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert bei 20 °C:** 4

· **Zustandsänderung**

Schmelzpunkt/Schmelzbereich: Nicht bestimmt.

Siedepunkt/Siedebereich: 100 °C

· **Flammpunkt:** Nicht anwendbar.

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· Entzündlichkeit (fest, gasförmig):	Nicht anwendbar.
· Zündtemperatur:	
Zersetzungstemperatur:	Nicht bestimmt.
· Selbstentzündlichkeit:	Das Produkt ist nicht selbstentzündlich.
· Explosionsgefahr:	Das Produkt ist nicht explosionsgefährlich.
· Explosionsgrenzen:	
Untere:	Nicht bestimmt.
Obere:	Nicht bestimmt.
· Dampfdruck:	Nicht bestimmt.
· Dichte:	Nicht bestimmt.
· 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:	0.0 %
VOC (EU)	0,00 %
· 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.
- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**
Verursacht Hautreizungen.
- **Schwere Augenschädigung/-reizung**
Verursacht schwere Augenreizung.

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- **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** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **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:** Keine Wassergefährdung bekannt.
- **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

- | | |
|---|------------------|
| · 14.5 Umweltgefahren: | Nicht anwendbar. |
| · 14.6 Besondere Vorsichtsmaßnahmen für den Verwender | Nicht anwendbar. |
| · 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code | Nicht anwendbar. |
| · UN "Model Regulation": | entfällt |

DE

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 11.01.2016

überarbeitet am: 11.01.2016

Handelsname: COLLOIDAL ALUMINA

(Fortsetzung von Seite 6)

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.
- **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**
- H272 Kann Brand verstärken; Oxidationsmittel.
- H302 Gesundheitsschädlich bei Verschlucken.
- H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
- H317 Kann allergische Hautreaktionen verursachen.
- H332 Gesundheitsschädlich bei Einatmen.
- **Abkürzungen und Akronyme:**
- 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)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Ox. Liq. 3: Oxidising Liquids, Hazard Category 3
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

DE

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

Stampato il: 11.01.2016

Revisione: 11.01.2016

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

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** COLLOIDAL ALUMINA
- **Articolo numero:** 50365-05, 50365-06
- **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

Societa 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**



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- 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.
- **Pittogrammi di pericolo**



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- **Avvertenza** Attenzione
- **Componenti pericolosi che ne determinano l'etichettatura:**
ALUMINUM HYDROXIDE OXIDE
- **Indicazioni di pericolo**
H315 Provoca irritazione cutanea.

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(Segue da pagina 1)

H319 Provoca grave irritazione oculare.

H317 Può provocare una reazione allergica cutanea.

Consigli di prudenza

P261 Evitare di respirare la polvere/i fumi/i gas/la nebbia/i vapori/gli aerosol.

P280 Indossare guanti/indumenti protettivi/Proteggere gli occhi/il viso.

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.

P321 Trattamento specifico (vedere su questa etichetta).

P333+P313 In caso di irritazione o eruzione della pelle: consultare un medico.

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: 24623-77-6	ALUMINUM HYDROXIDE OXIDE ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317	10-25%
CAS: 7697-37-2 EINECS: 231-714-2	acido nitrico ⚠ Ox. Liq. 3, H272; ⚠ Skin Corr. 1A, H314	≤ 2,5%

· **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****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.

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- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

SEZIONE 6: Misure in caso di rilascio accidentale

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** Non necessario.
- **6.2 Precauzioni ambientali:** Diluire abbondantemente con acqua.
- **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).
Provvedere ad una sufficiente areazione.
- **6.4 Riferimento ad altre sezioni**
Per informazioni relative ad un 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.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **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:**

7697-37-2 acido nitrico

TWA	Valore a breve termine: 10,3 mg/m ³ , 4 ppm Valore a lungo termine: 5.2 mg/m ³ , 2 ppm
VL	Valore a breve termine: 2,6 mg/m ³ , 1 ppm

- **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.

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· Guanti protettivi:

Guanti protettivi

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:	Biancastro
· Odore:	Inodore
· Soglia olfattiva:	Non definito.

· valori di pH a 20 °C:	4
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· Cambiamento di stato

Temperatura di fusione/ambito di fusione:	Non definito.
Temperatura di ebollizione/ambito di ebollizione:	100 °C

· Punto di infiammabilità:	Non applicabile.
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· Infiammabilità (solido, gassoso):	Non applicabile.
--	------------------

· Temperatura di accensione:

Temperatura di decomposizione:	Non definito.
---------------------------------------	---------------

· Autoaccensione:	Prodotto non autoinfiammabile.
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· Pericolo di esplosione:	Prodotto non esplosivo.
----------------------------------	-------------------------

· Limiti di infiammabilità:

Inferiore:	Non definito.
Superiore:	Non definito.

· Tensione di vapore:	Non definito.
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· Densità:	Non definito.
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(continua a pagina 5)

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· Densità relativa	Non definito.
· Densità del vapore	Non definito.
· Velocità di evaporazione	Non definito.
· Solubilità in/Miscibilità con acqua:	Completamente miscibile.
· Coefficiente di distribuzione (n-Octanol/acqua):	Non definito.
· Viscosità:	
Dinamica:	Non definito.
Cinematica:	Non definito.
· Tenore del solvente:	
Solventi organici:	0.0 %
VOC (CE)	0,00 %
· 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.
- **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** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **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**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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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:** Non si conoscono dati di pericolosità per le acque.
- **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

- | | |
|---|------------------|
| · 14.5 Pericoli per l'ambiente: | Non applicabile. |
| · 14.6 Precauzioni speciali per gli utilizzatori | Non applicabile. |
| · 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC | Non applicabile. |
| · UN "Model Regulation": | non applicabile |

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.
- **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**
- H272 Può aggravare un incendio; comburente.
- H302 Nocivo se ingerito.
- H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
- H317 Può provocare una reazione allergica cutanea.

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Scheda di dati di sicurezza
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*H332 Nocivo se inalato.***· Abbreviazioni e acronimi:***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)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Ox. Liq. 3: Oxidising Liquids, Hazard Category 3**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1*

IT

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2016.01.11

개정: 2016.01.11

1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명: COLLOIDAL ALUMINA**
- **상품번호: 50365-05, 50365-06**
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실 화학품
- **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
- **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**



피부 부식성/자극성 구분2 H315 피부에 자극을 일으킴
 심한 눈 손상/자극성 구분2 H319 눈에 심한 자극을 일으킴
 피부과민성 구분1 H317 알레르기성 피부 반응을 일으킬 수 있음

- **라벨표기 요소**
- **GHS 라벨 요소**
 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- **그림문자**



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- **신호어 경고**
- **상표상에명확히위험성이표시된성분:**
 ALUMINUM HYDROXIDE OXIDE
- **유해.위험 문구**
 피부에 자극을 일으킴
 눈에 심한 자극을 일으킴
 알레르기성 피부 반응을 일으킬 수 있음

(2 쪽에 계속)

안전지침서

제31조의 1907/2006/EC에 따라

기압점: 2016.01.11

개정: 2016.01.11

제품명: COLLOIDAL ALUMINA

(1 쪽부터 계속)

· 예방조치 문구

- (분진·흙·가스·미스트·증기·스프레이)의 흡입을 피하십시오.
- (보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.
- 눈에 묻으면 몇 분간 물로 조심해서 씻으십시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으십시오.
- (라벨 참조) 처치를 하십시오.
- 피부 자극성 또는 홍반이 나타나면 의학적인 조치·조언을 구하십시오.
- 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 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.

· 위험요소:

24623-77-6	ALUMINUM HYDROXIDE OXIDE	10-25%
	⚠ 심한 눈 손상/자극성 구분2, H319; 피부과민성 구분1, H317	
7697-37-2	nitric acid	≤ 2,5%
	⚠ 산화성 액체 구분3, H272; ⚠ 피부 부식성/자극성 구분1, H314	

4 응급조치 요령

· 응급조치요령 내용

- **흡입했을 때:**
신선한 공기를 쐬고 나서 반드시 의 료진의 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 의료처치 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:** 특별한 조치가 필요없음.

6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급처치 절차** 필요없음.
- **환경 관련 예방조치:** 많은 물로 희석시킨다.

(3 쪽에 계속)

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- **밀폐 및 정화 방법과 소재:**
액체가 혼합된 물질(모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.
충분한 환기가 되도록 한다.
- **타 섹션 참조**
안전관리에 대한 정보는 제7 장 을 참고하시오.
개인보호장비에 대한 정보는 제8 장 을 참고하시오.
쓰레기처리에 대한 정보는 제13 장 을 참고하시오.

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:** 특별한 조치가 필요없음.
- **혼합위험성 등 안전 저장 조건**
- **보관:**
- **안전한 저장 방법:** 특별한 요구사항이 없음.
- **하나의 공동 보관 시설에 대한 보관 관련 정보:** 필요없음
- **보관 조건에 관한 추가적인 정보:** 용기를 새지 않게 밀폐한 채 보관한다.
- **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없음. 항 목 7 을 참고하시오.
- **통제 변수**

· **화학물질의 노출기준, 생물학적 노출기준 등:**

7697-37-2 nitric acid

TLV (KR)	단기간의값: 10 mg/m ³ , 4 ppm 장기간의값: 5 mg/m ³ , 2 ppm
IOELV (EU)	단기간의값: 2.6 mg/m ³ , 1 ppm
PEL (US)	장기간의값: 5 mg/m ³ , 2 ppm
REL (US)	단기간의값: 10 mg/m ³ , 4 ppm 장기간의값: 5 mg/m ³ , 2 ppm
TLV (US)	단기간의값: 10 mg/m ³ , 4 ppm 장기간의값: 5.2 mg/m ³ , 2 ppm

- **추 가 정보:** 제 조 할 당 시 에 유 효 한 목 록 을 기 초 로 사 용 했 다.

- **노출 통제**
- **개인 보호구**
- **일반적보호조치및위생조치:**
식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
휴식 전 이 나 작업이 끝날 때 마다 손 을 씻 는 다.
눈 과 피 부 와 의 접 촉 은 피 한 다.
- **호흡기 보호:**
단 시간 또는 경 미 한 오 염 의 경 우 에 는 호 흡 여 과 기 를 사 용 한 다. 심 각 한 또는 장 기 간 노 출 시 에 는 호 흡 보 호 장 비 를 사 용 한 다.

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(3 쪽부터계속)

· 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.

· 장갑 의재료

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

· 장갑 재료 의 투과 시간 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· 눈 보호:



확조이는보안경

9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보

· 일반정보

· 외형

· 물리적 상태:	액체
· 색:	하얀색의
· 냄새:	무취의
· 후각역치	알맞지않다.

· pH 의경우 20 °C: 4

· 상태변화

· 녹는점/어는점:	맞지않는
· 초기 끓는점과 끓는점 범위:	100 °C

· 인화점: 해당사항 없음.

· 인화성(고체, 기체): 해당사항 없음.

· 점화온도:

· 분해 온도: 알맞지않다.

· 자기점화: 이제품은자연발화성이없다.

· 폭발위험: 이제품은폭발위험성이없다

· 인화 또는 폭발 범위의 상한/하한

· 아래로:	알맞지않다.
· 위로:	알맞지않다.

· 증기압: 알맞지않다.

· 밀도: 맞지않는다.

· 비중: 알맞지않다.

· 증기밀도: 알맞지않다.

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· 증발 속도:	알맞지않다.
· 용해도: · 물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도: · 역학성: · 등점성:	알맞지않다. 알맞지않다.
· 용매내용물 · 유기용매: · VOC (EU) · 기타 정보	0.0 % 0.00 % 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 위험한 반응으로는알려지지않았다.
- 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:
- 입차적 자극 효과:
- 피부 부식성 또는 자극성: 피부와점막을자극한다.
- 심한 눈 손상 또는 자극성: 자극
- 감각화: 피부접촉을통하여감각화가가능성이있다.
- 추가적인 독성에 관한 정보:
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전준비에대하여제시하고있다.
자극적인

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: 수질오염이알려져있지않다.
- 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.

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· 기타 부작용 추가적인 정보가 존재하지 않습니다.

(5 쪽부터계속)

13 폐기시 주의사항

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

14 운송에 필요한 정보

- 환경적 유해물질: 해당사항 없음.
- 이용자 특별 예방조치 해당사항 없음.
- MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송 해당사항 없음.
- UN "모범 규제": 누락되다

15 법적 규제현황

· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률

· Korean Existing Chemical Inventory

24623-77-6	ALUMINUM HYDROXIDE OXIDE	KE-00981
7697-37-2	nitric acid	KE-25911

· GHS 라벨 요소

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

· 그림문자



GHS07

· 신호어 경고

· 상표상에명확히위험성이표시된성분:

ALUMINUM HYDROXIDE OXIDE

· 유해.위험 문구

피부에 자극을 일으킴

눈에 심한 자극을 일으킴

알레르기성 피부 반응을 일으킬 수 있음

· 예방조치 문구

(분진·흙·가스·미스트·증기·스프레이)의 흡입을 피하십시오.

(보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.

눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하십시오. 계속 씻으시오.

(라벨 참조) 처치를 하시오.

피부자극성 또는 홍반이 나타나면 의학적인 조치·조언을 구하십시오.

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- 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한 오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

- **최초 작성일자:** 2016.01.11
- **개정 횟수 및 최종 개정일자:** 1 / 2016.01.11
- **약어와 두문자어:**
 - 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)
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - 산화성 액체 구분3: Oxidising Liquids, Hazard Category 3
 - 피부 부식성/자극성 구분1: Skin corrosion/irritation, Hazard Category 1
 - 피부 부식성/자극성 구분2: Skin corrosion/irritation, Hazard Category 2
 - 심한 눈 손상/자극성 구분2: Serious eye damage/eye irritation, Hazard Category 2
 - 피부과민성 구분1: Sensitisation - Skin, Hazard Category 1

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

- **1.1 Identificador del producto**
- **Nombre comercial:** COLLOIDAL ALUMINA
- **Número del artículo:** 50365-05, 50365-06
- **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**



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.
- **Pictogramas de peligro**



GHS07

- **Palabra de advertencia** Atención
- **Componentes peligrosos a indicar en el etiquetaje:**
ALUMINUM HYDROXIDE OXIDE

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· **Indicaciones de peligro**

- H315 Provoca irritación cutánea.
 H319 Provoca irritación ocular grave.
 H317 Puede provocar una reacción alérgica en la piel.

· **Consejos de prudencia**

- P261 Evitar respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.
 P280 Llevar guantes/prendas/gafas/máscara de protección.
 P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.
 P321 Se necesita un tratamiento específico (ver en esta etiqueta).
 P333+P313 En caso de irritación o erupción cutánea: Consultar a un médico.
 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: 24623-77-6	ALUMINUM HYDROXIDE OXIDE ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317	10-25%
CAS: 7697-37-2 EINECS: 231-714-2	ácido nítrico ⚠ Ox. Liq. 3, H272; ⚠ Skin Corr. 1A, H314	≤ 2,5%

- **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**

· **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.

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- **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:** No se requieren medidas especiales.

SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia** No es necesario.
- **6.2 Precauciones relativas al medio ambiente:** Diluir con mucha agua.
- **6.3 Métodos y material de contención y de limpieza:**
Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).
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.
- **Prevención de incendios y explosiones:** No se requieren medidas especiales.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
- **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:**

7697-37-2 ácido nítrico

LEP	Valor de corta duración: 2,6 mg/m ³ , 1 ppm
VLI	

- **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.

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· **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.

· **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:	Blanquecino
· Olor:	Inodoro
· Umbral olfativo:	No determinado.

· **valor pH a 20 °C:** 4

· **Cambio de estado**

· Punto de fusión /campo de fusión:	Indeterminado.
· Punto de ebullición /campo de ebullición:	100 °C

· **Punto de inflamación:** No aplicable.

· **Inflamabilidad (sólido, gaseiforme):** No aplicable.

· **Temperatura de ignición:**

· **Temperatura de descomposición:** No determinado.

· **Autoinflamabilidad:** El producto no es autoinflamable.

· **Peligro de explosión:** El producto no es explosivo.

· **Límites de explosión:**

· **Inferior:** No determinado.

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Superior:	No determinado.
· Presión de vapor:	No determinado.
· Densidad:	Indeterminado.
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Velocidad de evaporación	No determinado.
· Solubilidad en / miscibilidad con agua:	Completamente mezclable.
· Coefficiente de reparto (n-octanol/agua):	No determinado.
· Viscosidad:	
Dinámica:	No determinado.
Cinemática:	No determinado.
· Concentración del disolvente:	
Disolventes orgánicos:	0,0 %
VOC (CE)	0,00 %
· 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.
- **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.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **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**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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· **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:** No se tiene conocimiento de que represente un peligro para el agua.
- **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

- | | |
|---|---------------|
| · 14.5 Peligros para el medio ambiente: | No aplicable. |
| · 14.6 Precauciones particulares para los usuarios | No aplicable. |
| · 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC | No aplicable. |
| · "Reglamentación Modelo" de la UNECE: | suprimido |

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
- **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**
- H272 Puede agravar un incendio; comburente.

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*H302 Nocivo en caso de ingestión.**H314 Provoca quemaduras graves en la piel y lesiones oculares graves.**H317 Puede provocar una reacción alérgica en la piel.**H332 Nocivo en caso de inhalación.***· Abreviaturas y acrónimos:***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)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Ox. Liq. 3: Oxidising Liquids, Hazard Category 3**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1*

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