Printing date 02/01/2023 Reviewed on 02/01/2023

1 Identification

- · Product identifier
- · Trade name: CURED EPOXY REMOVER SOLUTION B
- · Article number: 14942B
- · Application of the substance / the mixture Laboratory chemicals
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: sgkcck@aol.com www.emsdiasum.com

- · Information department: Product safety department
- · Emergency telephone number:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Toxicity - Dermal 2

H310 Fatal in contact with skin.



GHS08 Health hazard

Germ Cell Mutagenicity 1B

H340 May cause genetic defects.

Carcinogenicity 1A

H350 May cause cancer.

Specific Target Organ Toxicity - Repeated Exposure 1 H372 Causes damage to the central nervous system and

2 Causes damage to the central nervous system and the hematopoietic system through prolonged or

repeated exposure.

Aspiration Hazard 1

H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irritation 2

H315 Causes skin irritation.

Eye Irritation 2A H319 Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness.

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

 (Contd. on page 2)

US

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

(Contd. of page 1)

· Hazard pictograms









GHS06

GHS07

Signal word Danger

· Hazard-determining components of labeling:

benzene

Acetone, Reagent Grade

· Hazard statements

Highly flammable liquid and vapor.

Fatal in contact with skin.

Causes skin irritation.

Causes serious eve irritation.

May cause genetic defects.

May cause cancer.

May cause drowsiness or dizziness.

Causes damage to the central nervous system and the hematopoietic system through prolonged or repeated exposure.

May be fatal if swallowed and enters airways.

· Precautionary statements

Obtain special instructions before use.

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

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

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

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

Do not get in eyes, on skin, or on clothing.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

If swallowed: Immediately call a poison center/doctor.

Specific treatment (see on this label).

Do NOT induce vomiting.

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

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Take off immediately all contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

(Contd. on page 3)

(Contd. of page 2)

Safety Data Sheet acc. to OSHA HCS

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 3 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



- · 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:			
ſ	67-64-1	Acetone, Reagent Grade	>25-≤50%
		benzene	>25- <i>≤</i> 50%

4 First-aid measures

- · Description of first aid measures
- · General information:

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

- · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:

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

- · After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 4)

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

(Contd. of page 3)

- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

· PAC-1:		
67-64-1	Acetone, Reagent Grade	200 ppm
	benzene	52 ppm
· <i>PAC-2:</i>		
67-64-1	Acetone, Reagent Grade	3200* ppm
	benzene	800 ppm
· <i>PAC-3</i> :		
67-64-1	Acetone, Reagent Grade	5700* ppm
	benzene	4000* ppm

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

(Contd. of page 4)

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:

67-64-1 Acetone, Reagent Grade

PEL Long-term value: 2400 mg/m³, 1000 ppm

REL Long-term value: 590 mg/m³, 250 ppm

TLV Short-term value: 500 ppm Long-term value: 250 ppm

A4, BEI

benzene

PEL Short-term value: 15* mg/m³, 5* ppm

Long-term value: $3* mg/m^3$, 1* ppm

*table Z-2 for exclusions in 29CFR1910.1028(d)

REL Short-term value: 1 ppm

Long-term value: 0.1 ppm See Pocket Guide App. A

TLV Short-term value: (2.5) NIC-0.1 ppm

Long-term value: (0.5) NIC-0.02 ppm

Skin; BEI, A1

· Ingredients with biological limit values:

67-64-1 Acetone, Reagent Grade

BEI 25 mg/L

Medium: urine Time: end of shift

Parameter: Acetone (nonspecific)

benzene

BEI 25 μg/g creatinine

Medium: urine

Time: end of shift Parameter

Parameter: S-Phenylmercapturic acid (background

500 μg/g creatinine Medium: urine Time: end of shift

Parameter: t,t-Muconic acid (background)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

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.

(Contd. on page 6)

(Contd. of page 5)

Safety Data Sheet acc. to OSHA HCS

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

· 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:

· Explosion limits:

· Vapor pressure at 20 °C (68 °F):

Lower:

Upper:



Tightly sealed goggles

$\alpha \mathbf{p}_{1} \cdot \mathbf{p}_{2}$		•	
u Paneteal	anaci	anmarcai	properties
		i kalinkatin	

· Information on basic physical and chemical properties · General Information			
· Appearance:			
Form:	Liquid		
Color:	According to product specification		
· Odor:	Characteristic		
· Odor threshold:	Not determined.		
· pH-value:	Not determined.		
· Change in condition Melting point/Melting range: Boiling point/Boiling range:	Undetermined. 56.5 °C (133.7 °F)		
· Flash point:	-20 °C (-4 °F)		
· Flammability (solid, gaseous):	Highly flammable.		
· Ignition temperature:	465 °C (869 °F)		
· Decomposition temperature:	Not determined.		
· Auto igniting:	Product is not selfigniting.		
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.		

1.2 Vol %

13 Vol %

233 hPa (174.8 mm Hg)

(Contd. on page 7)

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

		(Contd. of page
Density at 20 °C (68 °F):	0.835 g/cm³ (6.96808 lbs/gal)	
· Relative density	Not determined.	
· Vapor density	Not determined.	
· Evaporation rate	Not determined.	
· Solubility in / Miscibility with		
Water:	Not miscible or difficult to mix.	
Partition coefficient (n-octanol/wa	t ter): Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
· Solvent content:		
Organic solvents:	100.0 %	
VOC content:	50.00 %	
	885.4 g/l / 7.39 lb/gal	
Solids content:	0.0 %	
· Other information	No further relevant information available.	

10 Stability and reactivity

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

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50 v	· LD/LC50 values that are relevant for classification:		
benzene			
Oral	LD50	4,894 mg/kg (rat)	
Dermal	LD50	48 mg/kg (mouse)	
Inhalative	LC50/4 h	9,980 mg/l (mouse)	

- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

Carcinogenic.

The product can cause inheritable damage.

(Contd. on page 8)

Reviewed on 02/01/2023 Printing date 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

(Contd. of page 7)

· Carcinogenic categories	
· IARC (International Agency for Research on Cancer)	
benzene	1
· NTP (National Toxicology Program)	
benzene	K
· OSHA-Ca (Occupational Safety Health Administration)	
benzene	

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- · 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.

14 Transport information		
· UN-Number · DOT, ADR, IMDG, IATA	UN1992	
· UN proper shipping name		
$\cdot DOT$	Flammable liquids, toxic, n.o.s. (Acetone, Benzene)	
$\cdot ADR$	1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONE BENZENE)	
· IMDG, IATA	FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONE, BENZENE)	

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

(Contd. of page 8) · Transport hazard class(es) $\cdot DOT$ 3 Flammable liquids · Class · Label 3, 6.1 $\cdot ADR$ · Class 3 Flammable liquids · Label 3+6.1· IMDG 3 Flammable liquids · Class · Label 3/6.1 \cdot IATA · Class 3 Flammable liquids · Label 3 (6.1) · Packing group · DOT, ADR, IMDG, IATA II· Environmental hazards: Not applicable. Warning: Flammable liquids · Special precautions for user · Hazard identification number (Kemler code): 336 · EMS Number: F-E,S-D· Stowage Category · Stowage Code SW2 Clear of living quarters. · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. · Transport/Additional information: $\cdot DOT$ · Quantity limitations On passenger aircraft/rail: 1 L On cargo aircraft only: 60 L (Contd. on page 10)

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

(Contd. of page 9) $\cdot ADR$ Code: E2 · Excepted quantities (EQ) Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml · IMDG · Limited quantities (LQ) 1L· Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (ACETONE, · UN "Model Regulation": BENZENE), 3 (6.1), II

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

Carcino	senic eurogories				
· EPA (Environmental Protection Agency)					
67-64-1	Acetone, Reagent Grade	I			
	benzene	A, K/L			
· TLV (Threshold Limit Value)					
67-64-1	Acetone, Reagent Grade	A4			
	benzene	A1			

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

benzene

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

(Contd. on page 11)

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

· Hazard pictograms

(Contd. of page 10)









GHS02

GHS06 C

06 GHS07

· Signal word Danger

· Hazard-determining components of labeling:

benzene

Acetone, Reagent Grade

· Hazard statements

Highly flammable liquid and vapor.

Fatal in contact with skin.

Causes skin irritation.

Causes serious eve irritation.

May cause genetic defects.

May cause cancer.

May cause drowsiness or dizziness.

Causes damage to the central nervous system and the hematopoietic system through prolonged or repeated exposure.

May be fatal if swallowed and enters airways.

· Precautionary statements

Obtain special instructions before use.

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

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

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

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

Do not get in eyes, on skin, or on clothing.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

If swallowed: Immediately call a poison center/doctor.

Specific treatment (see on this label).

Do NOT induce vomiting.

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

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Take off immediately all contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

(Contd. on page 12)

Printing date 02/01/2023 Reviewed on 02/01/2023

Trade name: CURED EPOXY REMOVER - SOLUTION B

(Contd. of page 11)

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

- · National regulations:
- · Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· 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.

- · Contact:
- · Date of preparation / last revision 02/01/2023
- · Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable Liquids 2: Flammable liquids - Category 2

Acute Toxicity - Dermal 2: Acute toxicity - Category 2

Skin Irritation 2: Skin corrosion/irritation – Category 2 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B

Carcinogenicity 1A: Carcinogenicity – Category 1A

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) - Category 3

Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) - Category 1

Aspiration Hazard 1: Aspiration hazard - Category 1

US ·