Printing date 07/11/2019 Reviewed on 07/11/2019

### 1 Identification

- · Product identifier
- · Trade name: MILBOND TYPE 1 PRIMER CURING PART B
- · Article number: S12800(Pt.B)
- · Application of the substance / the mixture Laboratory chemicals
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

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

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

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

### 2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

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



GHS08 Health hazard

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

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

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

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

STOT SE 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)

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#### Trade name: MILBOND TYPE 1 PRIMER CURING PART B

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### · Hazard pictograms









· Signal word Danger

### · Hazard-determining components of labeling:

toluene

propan-2-ol

*N-(3-(trimethoxysilyl)propyl)ethylenediamine* 

#### · Hazard statements

Highly flammable liquid and vapor.

Causes skin irritation.

Causes serious eye damage.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

May cause drowsiness or dizziness.

May cause damage to organs 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.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

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 contaminated clothing and wash it before reuse.* 

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

Wash contaminated clothing before reuse.

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

Store in a well-ventilated place. Keep 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.

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#### Trade name: MILBOND TYPE 1 PRIMER CURING PART B

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- · 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:		
67-63-0	propan-2-ol	>50-≤100%
108-88-3	toluene	>10-≤25%
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	>2.5- <i>≤</i> 10%
90-72-2	`2,4,6-tris(dimethylaminomethyl)phenol	>2.5- <i>≤</i> 10%

### 4 First-aid measures

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

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

· After inhalation:

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

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

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then 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.

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(Contd. of page 3)

- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

### 6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

- · Environmental precautions: 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

· <i>PAC-1</i> :		
67-63-0	propan-2-ol	400 ppm
108-88-3	toluene	67 ppm
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	23 mg/m <sup>3</sup>
90-72-2	2 `2,4,6-tris(dimethylaminomethyl)phenol 6	
· PAC-2:		
67-63-0	propan-2-ol	2000* ppn
108-88-3	toluene	560 ppm
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	250 mg/m³
90-72-2	0-72-2 `2,4,6-tris(dimethylaminomethyl)phenol	
· PAC-3:		
67-63-0	propan-2-ol	12000** ppn
108-88-3	toluene	3700* ppm
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	$1,500 \text{ mg/m}^3$
90-72-2	`2,4,6-tris(dimethylaminomethyl)phenol	$430 \text{ mg/m}^3$

# 7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect from heat.

Protect against electrostatic charges.

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

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### · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

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

### 8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

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

# 67-63-0 propan-2-ol PEL Long-term value: 980 mg/m³, 400 ppm REL Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm

TLV Short-term value: 984 mg/m³, 400 ppm Long-term value: 492 mg/m³, 200 ppm

BEI

### 108-88-3 toluene

PEL Long-term value: 200 ppm Ceiling limit value: 300; 500\* ppm

\*10-min peak per 8-hr shift

REL Short-term value: 560 mg/m³, 150 ppm Long-term value: 375 mg/m³, 100 ppm

TLV Long-term value: 75 mg/m³, 20 ppm

BEI

### · Ingredients with biological limit values:

### 67-63-0 propan-2-ol

BEI 40 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: Acetone (background, nonspecific)

### 108-88-3 toluene

BEI 0.02 mg/L

Medium: blood

Time: prior to last shift of workweek

Parameter: Toluene

0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene

0.3 mg/g creatinine Medium: urine Time: end of shift

Parameter: o-Cresol with hydrolysis (background)

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

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

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: Clear

Odor: CharacteristicOdor threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:Undetermined.Boiling point/Boiling range:82 °C (179.6 °F)

• Flash point:  $16 \, ^{\circ}C \, (60.8 \, ^{\circ}F)$ 

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	(Contd. of page
Flammability (solid, gaseous):	Not flammable.
Ignition temperature:	425 °C (797 °F)
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapo mixtures are possible.
Explosion limits:	
Lower:	1.2 Vol %
Upper:	12 Vol %
Vapor pressure at 20 $^{\circ}$ C (68 $^{\circ}$ F):	43 hPa (32.3 mm Hg)
Density:	Not determined.
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/wate	e <b>r</b> ): Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	92.3 %
VOC content:	92.31 %
	923.1 g/l / 7.70 lb/gal
Solids content:	0.0 %
Other information	No further relevant information available.

### 10 Stability and reactivity

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

# 11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

LD/LC50 values that are relevant for classification:	
67-63-0 propan-2-ol	

Oral LD50 5,045 mg/kg (rat)

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		(Contd. of page 7)
Dermal	LD50	12,800 mg/kg (rabbit)
Inhalative	LC50/4 h	30 mg/l (rat)
108-88-3 to	oluene	
Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4 h	5,320 mg/l (mouse)

- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: Strong irritant with the danger of severe eye injury.
- · Sensitization: Sensitization possible through skin contact.
- · Additional toxicological information:

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

Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)	
67-63-0 propan-2-ol	3
108-88-3 toluene	3
· 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:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even 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.

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Trade name: MILBOND TYPE 1 PRIMER CURING PART B

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- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information		
· UN-Number · DOT, ADR, IMDG, IATA	UN1263	
· UN proper shipping name · DOT · ADR · IMDG, IATA	Paint 1263 PAINT PAINT	
· Transport hazard class(es)		
· DOT		
· Class · Label	3 Flammable liquids 3	
· ADR, IMDG, IATA		
· Class · Label	3 Flammable liquids 3	
· Packing group · DOT, ADR, IMDG, IATA	II	
· Environmental hazards:	Not applicable.	
<ul> <li>Special precautions for user</li> <li>Danger code (Kemler):</li> <li>EMS Number:</li> <li>Stowage Category</li> </ul>	Warning: Flammable liquids 33 F-E, <u>S-E</u> B	
· Transport in bulk according to Annex II MARPOL73/78 and the IBC Code	of Not applicable.	
<ul> <li>Transport/Additional information:</li> <li>DOT</li> <li>Quantity limitations</li> </ul>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L	
· ADR · Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml	
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· IMDG
· Limited quantities (LQ)
· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1263 PAINT, 3, II

Regulatory information	
Safety, health and environmental regulations/legislation specific Sara	for the substance or mixture
Section 355 (extremely hazardous substances):	
None of the ingredients is listed.	
Section 313 (Specific toxic chemical listings):	
67-63-0 propan-2-ol	
108-88-3 toluene	
TSCA (Toxic Substances Control Act):	
67-63-0 propan-2-ol	ACTIV
108-88-3 toluene	ACTIV.
1760-24-3 N-(3-(trimethoxysilyl)propyl)ethylenediamine	ACTIV.
90-72-2 `2,4,6-tris(dimethylaminomethyl)phenol	ACTIV.
Hazardous Air Pollutants	
108-88-3 toluene	
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:	
108-88-3 toluene	
Carcinogenic categories	
EPA (Environmental Protection Agency)	
108-88-3 toluene	
TLV (Threshold Limit Value established by ACGIH)	
67-63-0 propan-2-ol	A
	A
108-88-3 toluene	71

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

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### · Hazard pictograms









· Signal word Danger

### · Hazard-determining components of labeling:

toluene

propan-2-ol

*N-*(*3-*(*trimethoxysilyl*)*propyl*)*ethylenediamine* 

· Hazard statements

Highly flammable liquid and vapor.

Causes skin irritation.

Causes serious eye damage.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

May cause drowsiness or dizziness.

May cause damage to organs 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.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

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 contaminated clothing and wash it before reuse.* 

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

Wash contaminated clothing before reuse.

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

Store in a well-ventilated place. Keep 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.

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· 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 07/11/2019 / -

#### · Abbreviations and acronyms:

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids - Category 2

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

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

Skin Sens. 1: Skin sensitisation - Category 1

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

Asp. Tox. 1: Aspiration hazard - Category 1

-US