



SAFETY DATA SHEET

Version: 1.1 Revision date: 17th June 2020
ACCORDING TO OSHA HCS (29 CFR 1910.1200)

S1009 Adhesive - Part B

SECTION 1: IDENTIFICATION

Product identifier

Product Name S1009 Adhesive – Part B

Other Means of Identification

Product type None
Mixture

Recommended use and restrictions

Identified Use(s) Adhesive. Epoxy Resin: Hardener
Uses Advised Against None known.

Details of the supplier of the safety data sheet

Address of Supplier TE Connectivity Corporation
Aerospace, Defense & Marine
6900 Paseo Padre Parkway
Fremont, CA 94555
USA
Telephone North America: 1-650-361-7000
E-Mail (competent person) msdsmaterialsuk@te.com

Emergency telephone number

Emergency Phone No. US: CHEMTREC 1-800-424-9300 Operational 24 hours, 7 days
CN: CHEMTREC 1-800-424-9300
Outside North America: 1-703-527-3887 (Collect calls accepted)
English

Languages spoken

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200**Physical hazards**

Health hazards Not classified
Skin Corrosion/Irritation, Category 1A
Skin Sensitisation, Category 1
Eye Damage, Category 1
Reproductive toxicity, Category 2
Specific target organ toxicity — repeated exposure, Category 2

Label elements**Product Name****Contains:**

S1009 Adhesive – Part B
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether; 2-piperazin-1-ylethylamine; Fatty acids, C-18-unsatd., dimers, reaction products with polyethylenepolyamines

Hazard Symbol



Signal Word(s)

Hazard Statement(s)

Danger
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.



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Precautionary Statement(s)

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe mist/vapours/spray.
 Wash hands and exposed skin thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Contaminated work clothing should not be allowed out of the workplace.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
 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.
 Immediately call a POISON CENTER/doctor.
 IF exposed or concerned: Get medical advice/attention.

Store locked up.
 Dispose of contents in accordance with local, state or national legislation.

Other hazards

Environmental hazards

Hazardous to the aquatic environment, Chronic, Category 3; Harmful to aquatic life with long lasting effects. Avoid release to the environment.

Percent of the mixture consists of ingredient(s) of unknown acute toxicity:

0% of the mixture consists of ingredients of unknown acute oral toxicity.
 0% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Not applicable

Mixtures Substances in preparations / mixtures.

| Chemical Name | CAS No. | Concentration (%W/W) | Common name(s), synonym(s) of the substance | Hazard classification |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether | 72244-98-5 | 50 - 100 | epoxy resin (number average molecular weight ≤ 700); reaction product: bisphenol-A-(epichlorhydrin); Reaction product: bisphenol-A-(epichlorhydrin),epoxy resin (number average molecular weight ≤ 700) | Skin corrosion/irritation, Category 2 Skin Sensitisation, Category 1 Eye Irritation, Category 2 Hazardous to the aquatic environment, Chronic, Category 2 |
| 2-piperazin-1-ylethylamine | 140-31-8 | 5 - 10 | 1-(2-Aminoethyl) piperazine; 1-Piperazineethanamine(AEP) | Acute toxicity, Category 4 - Oral Acute toxicity, Category 3 - Dermal Skin Corrosion/Irritation, Category 1B Eye Damage, Category 1 Skin Sensitisation, Category 1 Reproductive toxicity, Category 2 Specific target organ toxicity — repeated exposure, Category 1 Hazardous to the aquatic environment, Chronic, Category 3 |
| Fatty acids, C-18-unsatd., dimers, reaction products with polyethylenepolyamines | 68410-23-1 | <3 | Amines, polyethylenepoly-, reaction products with C18-unsatd. fatty acid dimers; Fatty Acid Polyamide Resin | Skin Corrosion/Irritation, Category 2 Eye Damage, Category 1 Skin Sensitisation, Category 1A Hazardous to the aquatic environment, Chronic, Category 2 |



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| | | | | |
|-----------------------|----------|----------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Triethylene tetramine | 112-24-3 | 0.1 - <1 | 3,6-diazaoctanethylenediamin; Trientine; 1,2 Ethanediamine, N,N'-Bis(2-aminoethyl)- | Acute toxicity, Category 4 - Dermal Skin Corrosion/Irritation, Category 1B Skin Sensitisation, Category 1 Hazardous to the aquatic environment, Chronic, Category 3 |
|-----------------------|----------|----------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Notes: For full text of H phrases see section 16.

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Self-protection of the first aider

Inhalation

Skin Contact

Eye Contact

Ingestion

Most important symptoms and effects, both acute and delayed

Indication of any immediate medical attention and special treatment needed

Notes to a physician:

No action should be taken involving personal risk. Wear appropriate personal protective equipment, avoid direct contact. Remove contaminated clothing immediately. If unconscious, place in recovery position and get medical attention immediately. Apply artificial respiration if necessary. Check the vital functions. Keep cool.

IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Get medical advice/attention.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Obtain immediate medical attention.

IF IN EYES: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Obtain immediate medical attention.

Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Treat symptomatically. No antidotes known.

IF IN EYES: Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required.

Following severe exposure the patient should be kept under medical review for at least 48 hours.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing media

Unsuitable extinguishing media

Special hazards arising from the substance or mixture

Special protective equipment and precautions for fire fighters

Combustible. Not flammable. In case of fire use extinguishing media appropriate to surrounding conditions. Water spray, foam, dry powder or CO₂.

Do not use water jet. Direct water jet may spread the fire.

May give off noxious and toxic fumes in a fire. Combustion products: Carbon monoxide, Carbon dioxide, Oxides of nitrogen.

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Chemical protection suit. Keep containers cool by spraying with water if exposed to fire. Evacuate if necessary. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

No action should be taken involving personal risk. Wear appropriate personal protective equipment, avoid direct contact. Remove contaminated clothing and wash all affected areas with plenty of water.



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Environmental precautions

Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into soil must be alerted to the appropriate regulatory body.

Methods and material for containment and cleaning up

Contain spillages. Cover spills with inert absorbent material. Recover the product where possible. Ventilate the area and wash spill site after material pick-up is complete.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

When using do not eat or drink. Provide adequate ventilation when using the material and follow the principles of good occupational hygiene to control personal exposures. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not eat, drink or smoke when using this product. Avoid all contact. Remove contaminated clothing and wash clothing before reuse. Keep only in original packaging. Keep in a well ventilated place. Keep container closed.

Conditions for safe storage, including any incompatibilities

Storage temperature

Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources.

Storage life

Stable at ambient temperatures.

Incompatible materials

Keep away from oxidising substances. Avoid contact with acids and alkalis.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits

No Occupational Exposure Limit assigned.

No OSHA permissible exposure limit (PEL).

No American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV)

Biological limit value

Not established

Exposure controls

Appropriate engineering controls

Provide adequate ventilation when using the material and follow the principles of good occupational hygiene to control personal exposures. Take action to prevent static discharges. Keep away from fire, sparks and heated surfaces.

Personal protection equipment

Use personal protective equipment as required. Take care for general good hygiene and housekeeping. Avoid all contact. Avoid inhalation of vapours that may be evolved at elevated temperatures.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/ face protection



Wear eye protection with side protection (EN166). Eyewash bottles should be available.

Skin protection (Hand protection/ Other)



Hand protection

Wear impervious gloves (EN374). Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374. Nitrile rubber (0.4 mm), Polychloroprene - CR (0.5 mm), Butyl rubber (0.7 mm).

Body protection Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Recommended: EN 14387 Type A-P2



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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|----------------------------------------------|--------------------|
| Appearance | Viscous tan liquid |
| Odour | Mercaptan odor |
| Odour threshold | Not available |
| pH | 4 |
| Melting point/freezing point | Not determined |
| Initial boiling point and boiling range | > 260 °C |
| Flash point | Not determined |
| Evaporation rate | Not determined |
| Flammability (solid, gas) | Not applicable |
| Upper/lower flammability or explosive limits | Not applicable |
| Vapour pressure | Not determined |
| Vapour density | Not determined |
| Relative density | 1.15 |
| Solubility(ies) | Water: Insoluble |
| Partition coefficient: n-octanol/water | Not determined |
| Auto-ignition temperature | Not determined |
| Decomposition Temperature | Not determined |
| Viscosity (mPa. s) | Not determined |

Other information

| | |
|----------------------|---------------|
| Explosive properties | Not explosive |
| Oxidising properties | Not oxidising |

SECTION 10: STABILITY AND REACTIVITY

| | |
|-------------------------------------------|----------------------------------------------------------------------------|
| Reactivity | Stable under normal conditions. |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerisation will not occur. |
| Conditions to avoid | Avoid prolonged storage at elevated temperature. |
| Incompatible materials | Keep away from oxidising substances. Avoid contact with acids and alkalis. |
| Hazardous decomposition product(s) | Combustion products: Carbon monoxide, Carbon dioxide, Oxides of nitrogen |

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acute toxicity - Oral | Mixture: Based upon the available data, the classification criteria are not met. Calculated acute toxicity estimate (ATE) >2,000 mg/kg. Not classified - No data |
| Poly[oxy(methyl-1,2-ethanediy)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine | Acute Tox. 4; H302 EU Harmonised Classification Not classified |
| Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids | LD50 (oral,rat) mg/kg: >2000 (OECD 423) |
| Triethylenetetramine | Acute Tox. 4; H302: Harmful if swallowed. EU Harmonised Classification No data |
| Acute toxicity - Dermal | Mixture: Based upon the available data, the classification criteria are not met. Calculated acute toxicity estimate (ATE) >2,000 mg/kg. |



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Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Not classified - No data

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids
Triethylenetetramine

Acute Tox. 4; H312 EU Harmonised Classification
LD50 (skin,rabbit) mg/kg: 866 (Unnamed, 1956)
Not classified
LD50 > 2000 mg/kg bw/day (rat) OECD 402

Acute toxicity - Inhalation

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Acute Tox. 4; H312: Harmful in contact with skin. EU Harmonised Classification
No data
Mixture: Based upon the available data, the classification criteria are not met.
Calculated acute toxicity estimate (ATE) > 5 mg/l

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids
Triethylenetetramine

Not classified - No data

Not classified - No data
Not classified
No data

Skin corrosion/irritation

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Not classified
No data
Mixture: Skin Corr. 1; H314: Causes severe skin burns and eye damage.
Not classified - No data

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids
Triethylenetetramine

Skin Corr. 1B; H314 EU Harmonised Classification
Corrosive to skin. (rabbit) (Unnamed, 1958)
Skin Irrit. 2; H315
Irritating to skin. (in vitro) (OECD 439)

Serious eye damage/irritation

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Skin Corr. 1; H314 EU Harmonised Classification
No data
Mixture: Eye Dam. 1; H318: Causes serious eye damage.
Not classified - No data

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids
Triethylenetetramine

Eye Dam. 1; H318
Corrosive to eyes. (rabbit) (Unnamed, 1958)
Eye Dam. 1; H318
Severely irritating to eyes. (rabbit) (OECD 405)

Respiratory or skin sensitization

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Skin Corr. 1; H314 EU Harmonised Classification
No data
Mixture: Skin Sens. 1; H317: May cause an allergic skin reaction.
Skin Sens. 1B; H317
No data

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids
Triethylenetetramine

Skin Sens. 1; H317 EU Harmonised Classification
Sensitisation (guinea pig) - Positive (OECD 406)
Skin Sens. 1; H317
Sensitisation (mouse): Positive (OECD 429)

Germ cell mutagenicity

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Skin Sens. 1; H317 EU Harmonised Classification
No data
Mixture: Based upon the available data, the classification criteria are not met.
Not classified - No data

Not classified
In vitro: Negative (OECD 471)
In vivo: Negative (mouse) (Unnamed, 1987)



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Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids

Not classified
In vitro: Negative (OECD 487)
In vivo: No data

Triethylenetetramine

Not classified
In vitro: No data
In vivo: No data

Carcinogenicity

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Mixture: Based upon the available data, the classification criteria are not met.
Not classified - No data

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids

Not classified - No data
Not classified
No data

Triethylenetetramine

Not classified
No data

Reproductive toxicity

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Mixture: Repr. 2; Suspected of damaging fertility or the unborn child.
Not classified - No data

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids

Repr. 2; H361
Reproductive toxicity: No adverse effect observed (rat) (OECD 422)
Developmental toxicity: NOEL 75 mg/kg bw/day Developmental impairment (rabbit) (OECD 414)
Not classified
Reproductive toxicity: NOAEL (rat) mg/kg bw/day 1000. No effects observed (OECD 422)

Triethylenetetramine

Developmental Toxicity: No data
Not classified
Reproductive toxicity: No effects observed (rat) (OECD 422)
Developmental Toxicity: No data

STOT - single exposure

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Mixture: Based upon the available data, the classification criteria are not met.
Not classified - No data

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids

Not classified - No data
Not classified
No data

Triethylenetetramine

Not classified
No data

STOT - repeated exposure

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Mixture: STOT RE 2; May cause damage to organs through prolonged or repeated exposure.
Not classified - No data

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids

STOT RE 1; H372
Oral: NOAEL 2000ppm (rat) (OECD 422)
Inhalation: NOEC 53.5 mg/m³ (rat) (OECD 413)
Dermal: NOEL >1000 mg/kg bw/day No adverse effect observed (rat) (OECD 410)

Triethylenetetramine

Not classified
Oral: NOAEL (rat) mg/kg bw/day 1000 (OECD 422)
Inhalation: No data
Dermal: [Click or tap here to enter text.](#)No data
Not classified
Oral: No data
Inhalation: No data
Dermal: [Click or tap here to enter text.](#)No data



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Aspiration hazard

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids
Triethylenetetramine

Mixture: Based upon the available data, the classification criteria are not met.
Not classified - No data

Not classified - No data
Not classified
No data
Not classified
No data

Information on likely routes of exposure

Inhalation
Ingestion
Skin Contact
Eye Contact

Unlikely – accidental exposure
Unlikely – accidental exposure
Possible – accidental exposure
Unlikely – accidental exposure

Early onset symptoms related to exposure

Causes severe skin burns and eye damage. May cause an allergic skin reaction.

Delayed health effects from exposure

Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Other information

NTP Report on Carcinogens
IARC Monographs
OSHA Designated Carcinogen
NIOSH Occupational Carcinogen List

All chemicals are not listed
All chemicals are not listed
All chemicals are not listed
All chemicals are not listed

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids

Triethylenetetramine

Mixture: Aquatic Chronic 3; H412: Harmful to aquatic life with long lasting effects.
Aquatic Chronic 3; H412: Harmful to aquatic life with long lasting effects.
No data

Aquatic Chronic 3; H412 EU Harmonised Classification
Short term: Not classified LC50 (fish) mg/l 2190 (Unnamed, 1986)
Long Term: No data

Aquatic Chronic 2; H411
Acute Toxicity: LC50 (fish) mg/l 7.07 (96 hour) (OECD 203)
Chronic Toxicity: No data

Aquatic Chronic 3; H412 EU Harmonised Classification
Acute Toxicity: No data
Chronic Toxicity: No data

The product is likely to persist in the environment.
No data

Persistence and degradability

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids

Triethylenetetramine

Little or no biodegradation has been observed (OECD 301F)
Inherently biodegradable, not fulfilling criteria. EU ECHA registration dossier

No data.

Bioaccumulative potential

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

The product has low potential for bioaccumulation.
No data

The substance has low potential for bioaccumulation.
BCF < 3.9 L/kg
Log Kow -1.48



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Triethylenetetramine

Mobility in soil

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids

Triethylenetetramine

Results of PBT and vPvB assessment

Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether 2-piperazin-1-ylethylamine

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids

Triethylenetetramine

Other adverse effects

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and

Triethylenetetramine:

Bioconcentration factor (BCF) : 77.4 The substance has high potential for bioaccumulation. ECHA registration dossier

BCF = 2.0 - The substance has low potential for bioaccumulation. EU ECHA registration dossier

The product is predicted to have low mobility in soil.

No data

The substance is predicted to have low mobility in soil. EU ECHA registration dossier

No data.

No data.

No data for the mixture as a whole.

No data

Not classified as PBT or vPvB. EU ECHA registration dossier

Not classified as PBT or vPvB.

No data.

Regulation (EC) N° 2037/2000 on substances that deplete the ozone layer: No components of the mixture are listed

Regulation (EC) No 517/2014: No components of the mixture are listed

This chemical has properties and characteristics associated with chemicals detected in ground water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Dispose of wastes in an approved waste disposal facility. Recover or recycle if possible.

SECTION 14: TRANSPORT INFORMATION

| | Road/Rail (ADR/RID) | Sea transport (IMDG) | Air (ICAO/IATA) |
|---------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|
| UN number | UN 1760 | UN 1760 | UN 1760 |
| UN proper shipping name | CORROSIVE LIQUID, N.O.S (2-piperazin-1-ylethylamine) | CORROSIVE LIQUID, N.O.S (2-piperazin-1-ylethylamine) | CORROSIVE LIQUID, N.O.S (2-piperazin-1-ylethylamine) |
| Transport hazard class(es) | 8 | 8 | 8 |
| Hazard Identification Number | 80 | Not applicable | Not applicable |
| Classification code: | C9 | Not applicable | Not applicable |
| Packing group | III | III | III |
| Environmental hazards | Not classified | Not classified as a Marine Pollutant. | Not classified |
| Special precautions for user | | | |
| Special Provisions | 274, 335, 601 | 274, 335 | A97, A158 |
| Limited Quantities | 30kg | 30kg | 30kg |
| Excepted Quantities | Unknown | Unknown | Not applicable |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable | | |
| Additional Information | None known | | |



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SECTION 15: REGULATORY INFORMATION

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

US Federal Regulations

| | |
|----------------------------------------------------|------------------------------|
| TSCA Inventory | All chemicals are not listed |
| TSCA Inventory Notification (Active-Inactive) Rule | All chemicals are not listed |
| TSCA Chemical Data Reporting (CDR) Rule | All chemicals are not listed |

US State Regulations

Proposition 65 (California) All chemicals are not listed

EU regulations

| | |
|----------------------------------------|---------------------------------------------|
| Wassergefährdungsklasse (Germany) | Water hazard class: 1 (Self classification) |
| Volatile Organic Compound Content (%): | 0% |

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New format has been issued, all sections have been updated to include new information. Review SDS with care.

Section 1 – Updated 'Details of the supplier of the safety data sheet' and Emergency Information.

| | |
|-----------------------------|----------------------------|
| Version | 1.1 |
| Revision Date | 17 th June 2020 |
| Date Previous Issue: | 21-August-2018 |

References:

Existing Safety Data Sheet (SDS). Existing ECHA registration(s) for Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids (CAS No. 68082-29-1); 2-piperazin-1-ylethylamine (CAS No. 140-31-8). EU EU Harmonised Classification(s) for 2-piperazin-1-ylethylamine (CAS No. 140-31-8); Triethylenetetramine (CAS No. 112-24-3). EU classification and labelling inventory Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptopropyl ether (CAS No. 72244-98-5).

| Classification of the substance or mixture | Classification Procedure |
|----------------------------------------------------------------|--------------------------|
| Skin Corrosion/Irritation, Category 1A | Threshold Calculation |
| Skin Sensitisation, Category 1 | Threshold Calculation |
| Eye Damage, Category 1 | Threshold Calculation |
| Reproductive toxicity, Category 2 | Threshold Calculation |
| Specific target organ toxicity — repeated exposure, Category 2 | Threshold Calculation |
| Hazardous to the aquatic environment, Chronic, Category 3 | Summation Calculation |

LEGEND

| | |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADR/RID | ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road / RID: Regulations concerning the international railway transport of dangerous goods |
| BCF | Bioconcentration factor (BCF) |
| CAS | CAS: Chemical Abstracts Service |
| DNEL | Derived No Effect Level |
| EC | EC: European Community |
| EU | European Union |
| IATA | IATA: International Air Transport Association |
| ICAO/IATA | ICAO: International Civil Aviation Organization / IATA: International Air Transport Association |
| IMDG | IMDG: International Maritime Dangerous Goods |
| LTEL | Long Term Exposure Limit |
| NOEC | No Observed Effect Concentration |
| OECD | Organisation for Economic Cooperation and Development |



SAFETY DATA SHEET

Version: 1.1 Revision date: 17th June 2020
ACCORDING TO OSHA HCS (29 CFR 1910.1200)

S1009 Adhesive - Part B

PBT PBT: Persistent, Bioaccumulative and Toxic
PNEC Predicted No Effect Concentration
STEL Short Term Exposure Limit
UN United Nations
vPvB vPvT: very Persistent and very Toxic

Hazard classification / Classification code:

Acute Tox. 4; Acute toxicity, Category 4
Acute Tox. 3; Acute toxicity, Category 3
Acute Tox. 4; Acute toxicity, Category 4
Skin Corr. 1A/B/C ; Skin corrosion/irritation, Category 1A/B/C
Skin Irrit. 2; Skin corrosion/irritation, Category 2
Skin Sens. 1; Skin Sensitisation, Category 1
Skin Sens. 1A; Skin Sensitisation, Category 1A
Skin Sens. 1B; Skin Sensitisation, Category 1B
Eye Dam. 1; Eye damage, category 1
STOT SE 3; Specific target organ toxicity — single exposure, Category 3

Repr. 2; Reproductive toxicity, Category 2
STOT RE 1; Specific target organ toxicity — repeated exposure, Category 1
STOT RE 2; Specific target organ toxicity — repeated exposure, Category 2
Aquatic Chronic 2; Hazardous to the aquatic environment, Chronic , Category 2
Aquatic Chronic 3; Hazardous to the aquatic environment, Chronic , Category 3

Hazard Statement(s)

H302: Harmful if swallowed.
H311: Toxic in contact with skin.
H312: Harmful in contact with skin.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H317: May cause an allergic skin reaction.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.
H361d: Suspected of damaging the unborn child.
H372: Causes damage to organs through prolonged or repeated exposure.
H373: May cause damage to organs through prolonged or repeated exposure.
H411: Toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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