

**SAFETY DATA SHEET**  
Regulation (EC) No 1907/2006 (REACH) and 2015/830

**Section 1. Identification of the Substance/Mixture and of the Company/Undertaking**

**1.1 Product Identifier**

Product Name: Equi-Pak™ Soft 47118 Part A

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**

Product Use: Adhesive

**1.3 Details of the Supplier of the Safety Data Sheet**

Supplier: METREX® RESEARCH  
28210 Wick Rd  
Romulus, MI 48174  
U.S.A.

**1.4 Emergency Telephone Number**

CHEMTREC: 1-703-527-3887 (Outside the US)

**Information Phone Number:** 1-800-841-1428 (Customer Service)

**SDS Date of Preparation/Revision:** March 26, 2018

**Section 2. Hazards Identification**

**2.1 Classification of the Substance or Mixture**

**GHS Classification:**

Acute Toxicity Category 4 H332  
Skin corrosion Category 1B H314  
Skin Sensitization Category 1 H317  
Eye Damage Category 1 H318  
Respiratory Sensitization Category 1 H334  
Specific Target Organ Toxicity – Single Exposure Category 3 H335  
Carcinogen Category 2 H351  
Specific Target Organ Toxicity – Repeated Exposure Category 2 H373

**2.2 Label Elements**

**Danger!**



Contains Dicyclohexylmethane-4,4'-diisocyanate (HMDI), 1,1'-Methylenebis (isocyanatobenzene), silane ester derivative

## Hazard Phrases

H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H332 Harmful if inhaled.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 May cause respiratory Irritation.  
 H351 Suspected of causing cancer.  
 H373 May cause damage to respiratory tract through prolonged or repeated exposure by inhalation.

## Prevention:

P260 Do not breathe vapors or dust.  
 P280 Wear protective gloves, protective clothing, eye protection and face protection.

## Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with soap and water.  
 P304 + P340 IF INHALED: remove person to fresh air and keep comfortable for breathing.  
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER or doctor.

**2.3 Other Hazards:** This product contains isocyanates. Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

## Section 3. Composition/Information On Ingredients

### 3.2 Mixture

Component	CAS No./ EC No.	Amount	GHS Classification
Dicyclohexylmethane-4,4'-diisocyanate prepolymer	9042-82-4	40-70	Not hazardous
1,1'-Methylenebis (isocyanatobenzene)	26447-40-5/ 247-714-0	1-20	Acute Tox. 4 H332 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Resp. Sens. 1 H334 Skin Sens. 1B H317 Carc. 2 H351 STOT SE 3 H335 STOT RE 2 H373
Dicyclohexylmethane-4,4'-diisocyanate (HMDI)	5124-30-1 / 225-863-2	1-20	Acute Tox. 2 H330 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Resp. Sens. 1 H334 Skin Sens. 1B H317 STOT SE 3 H335
Silane Ester Derivative	24801-88-5 / 246-467-6	1-10	Acute Tox 1 H330 Acute Tox. 4 H302, H312 Skin Corr 1B H314 Eye Dam 1 H318 Resp. Sens. 1 H334

Component	CAS No./ EC No.	Amount	GHS Classification
Dicyclohexylmethane-4,4'- diisocyanate prepolymer	9042-82-4	40-70	Not hazardous
			Skin Sens. 1B H317
1,1'- methylenebis(isocyanatobenzene), homopolymer	39310-05-9	1-10	Not hazardous

## Section 4. First Aid Measures

### 4.1 Description of First Aid Measures

**Eyes:** Immediately flush eyes with water for 20 minutes while lifting the upper and lower lids. Get immediate medical attention.

**Skin:** Immediately remove contaminated clothing. Flush skin with water for 15 minutes. Wash with soap and water. Get immediate medical attention. Launder clothing before re-use. Decontaminate or discard contaminated shoes.

**Inhalation:** Immediately remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get immediate medical attention. Asthma-like symptoms may develop immediately or delayed up to several hours.

**Ingestion:** If conscious, rinse mouth with water. Never give anything by mouth to a person who is unconscious or convulsing. Do not induce vomiting. Get immediate medical attention.

**4.2 Most Important symptoms and effects, both acute and delayed:** Corrosive to the eye and skin. Permanent eye damage may occur. May cause allergic skin and respiratory reaction. Harmful if inhaled. Symptoms include respiratory irritation, breathlessness, and chest discomfort and reduced pulmonary function, bronchitis, bronchial spasms and pulmonary edema. Symptoms may be delayed. Individuals sensitized to isocyanates may have a life-threatening allergic reaction. Harmful if inhaled. Swallowing may cause burns to the mouth, throat and stomach, nausea, vomiting and diarrhea. Prolonged or repeated exposure may cause damage to the lungs by inhalation. May cause cancer based on animal data.

**4.3 Indication of any immediate medical attention and special treatment needed:** Immediate medical attention is required for all routes of exposure.

## Section 5. Firefighting Measures

**5.1 Extinguishing Media:** Use any extinguishing media that is appropriate for the surrounding fire. Cool fire exposed containers with water.

**5.2 Special Hazards arising from the Substance or Mixture:** Combustion may produce carbon and nitrogen oxides and other toxic gases.

**5.3 Advice for Firefighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored. Do not allow run-off from firefighting to enter drains or water courses. Decontaminate equipment and protective clothing before reuse.

## Section 6: Accidental Release Measures

**6.1 Personal Precautions, Protective Equipment and Emergency Procedures:** Wear appropriate protective clothing as described in Section 8. Isolate the area and prevent access. Ventilate the area. Evacuate area. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice.

**6.2 Environmental Precautions:** Avoid release to the environment. Report spill as required by local and federal regulations.

**6.3 Methods and Material for Containment and Cleaning Up:** Contain spill. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Place in an approved container for disposal. Do not seal the container for 48 hours to avoid pressure build-up. Clean up residue with an appropriate solvent. Ventilate the area with fresh air.

**6.4 Reference to Other Sections:**

Refer to Section 8 for personal protective equipment and Section 13 for disposal information.

## Section 7. Handling and Storage

**7.1 Precautions for Safe Handling:** Do not breathe vapors or mists. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

**7.2 Conditions for Safe Storage, Including any Incompatibilities:** Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids and other incompatible materials.

**7.3 Specific end use(s):** Adhesive

## Section 8. Exposure Controls/Personal Protection

**8.1 Control Parameters:**

Chemical	Exposure Limit
Dicyclohexylmethane-4,4'-diisocyanate prepolymer	None Established
1,1'-Methylenebis(isocyanatobenzene)	0.02 mg/m <sup>3</sup> TWA UK OEL (as isocyanates)
Dicyclohexylmethane-4,4'-diisocyanate (HMDI)	0.02 mg/m <sup>3</sup> TWA UK OEL (as isocyanates)
Silane Ester Derivative	None Established
1,1'-methylenebis(isocyanatobenzene), homopolymer	None Established

## 8.2 Exposure Controls:

**Recommended Monitoring Procedures:** Contact professional occupational hygienist for monitoring.

**Appropriate Engineering Controls:** Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits. If ventilation is not adequate, use respiratory protection equipment.

### Personal Protective Measurers

**Respiratory Protection:** If the exposure limits are exceeded or if exposure levels are unknown, an approved positive pressure air supplied respirator with a full facepiece or air supplied hood should be used. Based on the results of the exposure assessment, a half-face full facepiece air-purifying respirator suitable for organic vapors and particulates should be used with A & P filters. Select in accordance with EU standard EN 140 or EN 136, other applicable regulations and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus

**Hand protection:** Impervious gloves such as butyl rubber or polymer laminate are recommended. Select in accordance with EU standard EN 374

**Eye Protection:** Indirect vented goggles and faceshield are recommended. Select in accordance with EU standard EN 166.

**Skin Protection:** Wear protective clothing as needed to avoid skin contact.

**Other protection:** Wash contaminated clothing or dispose of properly. A safety shower and eye wash should be available in the immediate work area.

## Section 9. Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties:

Appearance:	Viscous liquid	Vapor Pressure:	Not available
Odor:	No detectable odor.	Vapor Density:	>1 (air = 1)
Odor Threshold:	Not available	Relative Density /Specific Gravity:	1.04
pH:	Not applicable	Solubility in Water:	Negligible
Melting/Freezing Point:	Not available	Partition Coefficient: (n-octanol/water)	Not applicable
Initial Boiling Point/Range:	>204.4°C / >399.9°F	Auto-ignition Temperature:	Not applicable
Flash Point:	>143.3°C (289.94°F) TCC	Decomposition Temperature:	Not applicable
Evaporation Rate:	Gels with exposure to humidity	Viscosity:	Not determined
Flammability: (solid/gas)	Not applicable	Explosive Properties:	None
Flammable/ Explosive Limits:	Not applicable	Oxidizing Properties:	None

9.2 Other Information: None

## Section 10. Stability and Reactivity

**10.1 Reactivity:** Reacts with water to form carbon dioxide.

**10.2 Chemical Stability:** Stable under normal storage and handling conditions.

**10.3 Possibility of Hazardous Reactions:** Polymerization will occur when exposure to water or moisture.

**10.4 Conditions to Avoid:** Avoid contamination with moisture.

**10.5 Incompatible Materials:** Water, strong acids, strong bases and strong oxidizing agents.

**10.6 Hazardous Decomposition Products:** Thermal decomposition will produce oxides of carbon and nitrogen and other highly toxic gases.

## Section 11. Toxicological Information

### 11.1 Information on Toxicological Effects:

#### Potential Health Effects:

**Inhalation:** Harmful if inhaled. May cause respiratory irritation with coughing, sneezing, nasal discharge, headache, hoarseness and nose and throat pain. May cause allergic respiratory reaction with difficulty in breathing, wheezing, cough and tightness of the chest. Symptoms may be delayed for several hours after exposure. The allergic respiratory reaction may be life threatening.

**Skin Contact:** Causes skin irritation with localized redness, swelling, itching, dryness, cracking, blistering, and pain. May cause allergic skin reaction with redness, swelling, blistering, and itching.

**Eye Contact:** Causes eye irritation with severe pain, tearing, ulcerations, cloudy appearance of the cornea, and impaired vision and loss of vision.

**Ingestion:** Swallowing may cause burns to the mouth, throat and stomach, abdominal pain, nausea, vomiting and diarrhea.

**Acute Toxicity Values:** No toxicity data is available for the product.

Acute Toxicity Estimate (ATE): Oral: >5,000 mg/kg Inhalation 1.13 mg/L/4 hr, Dermal >5000 mg/kg

1,1'-Methylenebis (isocyanatobenzene): Oral rat LD50 31,600 mg/kg; Inhalation rat LC50 0.368 mg/L/4 hr; Dermal rabbit LD50 >5,000 mg/kg.

Dicyclohexylmethane-4,4'-diisocyanate (HMDI): Oral rat LD50 9900 mg/kg, Inhalation rat LC50 0.434 mg/L, Dermal rabbit LD50 >10,000 mg/kg

Silane Ester Derivative: Oral rat LD50 706 mg/kg, Inhalation rat LC50 0.36 mg/L/4 hr, Dermal rabbit LD50 1259 mg/kg

**Skin corrosion/irritation:** Isocyanates are known to cause skin irritation in studies with laboratory animals. Silane ester derivative is corrosive to rabbit skin.

**Eye damage/ irritation:** Isocyanates are known to cause eye irritation in studies with laboratory animals. Silane ester derivative is corrosive to rabbit eyes.

**Skin Sensitization:** Isocyanates are known to cause skin sensitization in studies with laboratory animals. Silane ester derivative is classified as a skin sensitizer based in data from a similar product.

**Respiratory Sensitization:** Isocyanates are known to cause respiratory sensitization in humans. Animal tests have indicated that respiratory sensitization can result from skin contact with isocyanates.

**Germ Cell Mutagenicity:** None of the components have been shown to cause germ cell mutagenicity.

**Carcinogenicity:** 1,1'-Methylenebis (isocyanatobenzene) is classified as a "Suspected of causing cancer" (Carcinogen Category 2) by the EU CLP.

**Developmental / Reproductive Toxicity:** None of the components are classified as reproductive or developmental toxins.

**Specific Target Organ Toxicity (Single Exposure):** Isocyanates are known to cause respiratory irritation.

**Specific Target Organ Toxicity (Repeated Exposure):** Prolonged exposure to isocyanates may cause chronic irritation, decreased lung function and lung damage and conjunctivitis.

**Aspiration Toxicity:** None of the components are aspiration hazards.

## Section 12. Ecological Information

**12.1 Toxicity:** No toxicity data available for product

1,1'-Methylenebis (isocyanatobenzene): No data available

Dicyclohexylmethane-4,4'-diisocyanate (HMDI): 96 hr LC50 zebra fish 1.2 mg/L, 48 hr EC50 daphnia magna 7.07 mg/L,

Silane Ester Derivative: 96 hr LC50 zebra fish >934 mg/L, 48 hr EC50 daphnia magna 331 mg/L, 72 hr EC50 green algae >1000 mg/L

**12.2 Persistence and Degradability:** 1,1'-Methylenebis (isocyanatobenzene) and dicyclohexylmethane-4,4'-diisocyanate are not readily biodegradable.

**12.3 Bioaccumulative Potential:** Isocyanates hydrolyze rapidly in aqueous solutions, therefore bioconcentration is not an important environmental fate process.

**12.4 Mobility in Soil:** Isocyanates hydrolyze rapidly in aqueous solutions, therefore leaching and adsorption to moist soil and sediment will not be an important environmental fate process.

**12.5 Results of PBT and vPvB assessment:** This product is not a PBT and vPvB.

**12.6 Other Adverse Effects:** None known.

## Section 13. Disposal Considerations

### 13.1 Waste Treatment Methods:

Dispose of contents and container in accordance with all local and national regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration. Polymerized material may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations.

Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

## Section 14. Transport Information

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Transport Hazard Class(es)	14.4 Packing Group	14.5 Environmental Hazards
<b>US DOT</b>	1760	Corrosive liquid n.o.s. (Silane Ester Derivative)	8	PGII	
<b>EU ADR/RID</b>	1760	Corrosive liquid n.o.s. (Silane Ester Derivative)	8	PGII	
<b>IMDG</b>	1760	Corrosive liquid n.o.s. (Silane Ester Derivative)	8	PGII	
<b>IATA/ICAO</b>	1760	Corrosive liquid n.o.s. (Silane Ester Derivative)	8	PGII	

**14.6 Special Precautions for User:** None identified

**14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code:** Not applicable

## Section 15. Regulatory Information

**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

## 16. Other Information

### GHS Classification for Reference (See Sections 2 and 3):

Acute Tox 1 Acute Toxicity Category 1  
 Acute Tox. 2 Acute Toxicity Category 2  
 Acute Tox. 4 Acute Toxicity Category 4  
 Skin Corr 1B Skin Corrosion Category 1B  
 Skin Irrit. 2 Skin Irritation Category 2  
 Skin Sens. 1B Skin Sensitization Category 1  
 Eye Dam 1 Eye Damage Category 1  
 Eye Irrit. 2 Eye Irritation Category 2  
 Resp. Sens. 1 Respiratory Sensitization Category 1  
 Carc. 2 Carcinogen Category 2  
 STOT SE 3 Specific Target Organ Toxicity – Single Exposure Category 3  
 STOT RE 2 Specific Target Organ Toxicity – Repeated Exposure Category 2

H302 Harmful if swallowed  
 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.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H330 Fatal if inhaled.





**Equi-Pak™ Soft 47118 Part A**  
**Date Prepared: 3/26/18**

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory Irritation.

H351 Suspected of causing cancer.

H373 May cause damage to respiratory tract through prolonged or repeated exposure by inhalation.

**Effective Date:** March 9, 2018

**Supersedes Date:** New SDS

**Revision Summary:** New SDS

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date of preparation, however, METREX® RESEARCH makes no warranty with respect to the accuracy or suitability of the recommendations, and assumes no liability to any use thereof.



Equi-Pak Soft 46118 Part B  
Date Prepared: 8/2/19

**SAFETY DATA SHEET**  
**Regulation (EC) No 1907/2006 (REACH) and 2015/830**

**Section 1. Identification of the Substance/Mixture and of the Company/Undertaking**

**1.1 Product Identifier**

Product Name: Equi-Pak Soft 46118 Part B

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**

Product Use: Adhesive

**1.3 Details of the Supplier of the Safety Data Sheet**

Supplier: METREX® RESEARCH  
28210 Wick Rd  
Romulus, MI 48174  
U.S.A.

**1.4 Emergency Telephone Number**

CHEMTREC: 1-703-527-3887 (Outside the US)

**Information Phone Number:** 1-800-841-1428 (Customer Service)

**SDS Date of Preparation/Revision:** August 2, 2019

**Section 2. Hazards Identification**

**2.1 Classification of the Substance or Mixture**

**GHS Classification:**

Skin Sensitization Category 1 H317

Serious Eye Damage/Irritation Category 2A H319

**2.2 Label Elements**

**Warning!**



Contains Polymeric Benzotriazole Derivative, Polymeric Benzotriazole, Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

**Hazard Phrases:**

H317 May cause an allergic skin reaction.

H318 Causes serious eye irritation.

**Prevention:**

P260 Do not breathe dust/fumes/gas/mist/vapors/spray.



P264 Wash hands thoroughly after handling.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

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

P363 Wash contaminated clothing before reuse.

**Disposal:**

P501 Dispose of contents and container in accordance with local and national regulations.

**2.3 Other Hazards:** Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

<b>Section 3. Composition/Information On Ingredients</b>
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**3.2 Mixture**

Component	CAS No./ EC No.	Amount	GHS Classification
Glycerol Poly(Oxyethylene, Oxypropylene) Ether	9082-00-2	40-70	Not hazardous
Trimethylolpropane Poly(Oxypropylene) Triether	25723-16-4 / 500-041-9	10-30	Not hazardous
Polypropylene Glycol	25322-69-4 / 500-039-8	10-30	Not hazardous
Tetrakis(2-hydroxypropyl)ethylenediamine	102-60-3 / 203-041-4	1-<10	Eye Irrit 2 H319
1,4 Butanediol	110-63-4 / 302-786-5	1-10	Acute Tox 4 H302 STOT SE 3 H336
Bismuth Trineodecanoate	34364-26-6 / 251-964-6	1-10	Not hazardous
Neodecanoic Acid	26896-20-8 / 248-093-9	1-10	Not hazardous
Bis(1,2,2,6,6-pentamethyl-4-piperidiny)l sebacate	41556-26-7 / 255-437-1	≤0.5	Skin Sens 1 H317 Aquatic Acute 1 H400 Aquatic Chronic 1 H410
Polymeric Benzotriazole Derivative	104810-48-2	≤0.5	Skin Sens 1 H317
Polymeric Benzotriazole	104810-47-1	≤0.5	Skin Sens 1 H317
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	82919-37-7 / 280-060-4	≤0.5	Skin Sens 1 H317 Aquatic Acute 1 H400

<b>Section 4. First Aid Measures</b>
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**4.1 Description of First Aid Measures**

**Eyes:** Immediately flush eyes with water for several minutes while lifting the upper and lower lids. Get medical attention if irritation persists.



**Skin:** Remove contaminated clothing. Wash skin thoroughly with soap and water. If irritation or rash develop, get medical attention. Launder clothing before re-use.

**Inhalation:** Immediately remove to fresh air. If breathing is difficult or other symptoms develop, get medical attention.

**Ingestion:** If conscious, rinse mouth with water. Never give anything by mouth to a person who is unconscious or convulsing. Do not induce vomiting. Get medical attention.

**4.2 Most Important symptoms and effects, both acute and delayed:** May cause mild eye irritation. Prolonged skin contact may cause irritation. May cause allergic skin reaction.

**4.3 Indication of any immediate medical attention and special treatment needed:** None needed under normal conditions of use.

## Section 5. Firefighting Measures

**5.1 Extinguishing Media:** Use any extinguishing media that is appropriate for the surrounding fire. Cool fire exposed containers with water.

**5.2 Special Hazards arising from the Substance or Mixture:** Combustion may produce carbon and nitrogen oxides and aldehydes.

**5.3 Advice for Firefighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

## Section 6: Accidental Release Measures

**6.1 Personal Precautions, Protective Equipment and Emergency Procedures:** Wear appropriate protective clothing as described in Section 8. Ventilate the area. Evacuate area. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice.

**6.2 Environmental Precautions:** Avoid release to the environment. Report spill as required by local and federal regulations.

**6.3 Methods and Material for Containment and Cleaning Up:** Contain spill. Cover with absorbent material. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Place in an approved container for disposal. Seal container.

**6.4 Reference to Other Sections:**

Refer to Section 8 for personal protective equipment and Section 13 for disposal information.

## Section 7. Handling and Storage

**7.1 Precautions for Safe Handling:** Avoid breathing vapors or mists. Avoid contact with eyes, skin, or clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.



**7.2 Conditions for Safe Storage, Including any Incompatibilities:** Store in a well-ventilated place. Store away from oxidizing agents and other incompatible materials.

**7.3 Specific end use(s):** Adhesive

<b>Section 8. Exposure Controls/Personal Protection</b>
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**8.1 Control Parameters:**

Chemical	Exposure Limit
Glycerol Poly(Oxyethylene, Oxypropylene) Ether	None Established
Trimethylolpropane Poly(Oxypropylene) Triether	None Established
Polypropylene Glycol	10 mg/m <sup>3</sup> TWA AIHA (as aerosol)
Tetrakis(2-hydroxypropyl)ethylenediamine	None Established
1,4 Butanediol	None Established
Bismuth Trineodecanoate	None Established
Neodecanoic Acid	None Established
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	None Established
Polymeric Benzotriazole Dervivative	None Established
Polymeric Benzotriazole	None Established
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	None Established

**8.2 Exposure Controls:**

**Recommended Monitoring Procedures:** Contact professional occupational hygienist for monitoring.

**Appropriate Engineering Controls:** Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits. If ventilation is not adequate, use respiratory protection equipment.

**Personal Protective Measurers**

**Respiratory Protection:** Based on the results of the exposure assessment, a half-face air-purifying respirator suitable for organic vapors and particulates should be used with A & P filters. Select in accordance with EU standard EN 140 or EN 136, other applicable regulations and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

**Hand protection:** Impervious gloves such as polymer laminate are recommended. Select in accordance with EU standard EN 374

**Eye Protection:** Indirect vented goggles are recommended. Select in accordance with EU standard EN 166.

**Skin Protection:** Wear protective clothing as needed to avoid skin contact.

**Other protection:** Wash contaminated clothing or dispose of properly. A safety shower and eye wash should be available in the immediate work area.



**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties:**

<b>Appearance:</b>	Clear, viscous liquid	<b>Vapor Pressure:</b>	Not available
<b>Odor:</b>	None	<b>Vapor Density:</b>	>1 (air = 1)
<b>Odor Threshold:</b>	Not available	<b>Relative Density /Specific Gravity:</b>	1.03
<b>pH:</b>	Not applicable	<b>Solubility in Water:</b>	Negligible
<b>Melting/Freezing Point:</b>	Not available	<b>Partition Coefficient: (n-octanol/water)</b>	Not applicable
<b>Initial Boiling Point/Range:</b>	Not available	<b>Auto-ignition Temperature:</b>	Not applicable
<b>Flash Point:</b>	>143.3°C (>289.94°F) TCC	<b>Decomposition Temperature:</b>	Not applicable
<b>Evaporation Rate:</b>	<1 (water = 1)	<b>Viscosity:</b>	800-1,200 mPas
<b>Flammability: (solid/gas)</b>	Not applicable	<b>Explosive Properties:</b>	None
<b>Flammable/ Explosive Limits:</b>	Not applicable	<b>Oxidizing Properties:</b>	None

**9.2 Other Information:** None

**Section 10. Stability and Reactivity**

**10.1 Reactivity:** Not expected to react under normal handling.

**10.2 Chemical Stability:** Stable under normal storage and handling conditions.

**10.3 Possibility of Hazardous Reactions:** None known.

**10.4 Conditions to Avoid:** None known.

**10.5 Incompatible Materials:** Strong acids and strong oxidizing agents. .

**10.6 Hazardous Decomposition Products:** Thermal decomposition will produce oxides of carbon and nitrogen and aldehydes.

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:**

**Potential Health Effects:**

**Inhalation:** May cause respiratory irritation with coughing, sneezing, nasal discharge, headache, hoarseness and nose and throat pain.

**Skin Contact:** May cause mild skin irritation. May cause allergic skin reaction with redness, swelling, blistering, and itching.

**Eye Contact:** May cause mild eye irritation.

**Ingestion:** Swallowing may cause gastrointestinal irritation, abdominal pain, nausea, vomiting and diarrhea.

**Acute Toxicity Values:** No toxicity data is available for the product.



Acute Toxicity Estimate (ATE): Oral: >5,000 mg/kg, Inhalation >5 mg/L/4hr, Dermal >2000 mg/L  
Glycerol Poly(Oxyethylene,Oxypropylene) Ether: Oral rat LD50 >10,000 mg/kg, Dermal rabbit LD50 >5,000  
Trimethylolpropane Poly(Oxypropylene) Triether: Oral rat LD50>2,500 mg/kg, Dermal rabbit LD50 >2,000 mg/kg  
Polypropylene Glycol: Oral rat LD50 22,000 mg/kg, Dermal rabbit LD50 >2000 mg/kg (no mortalities),  
Inhalation rat LC50 >2.34 mg/L/4 hr (no mortalities)  
Tetrakis(2-hydroxypropyl)ethylenediamine: Oral rat LD50 2890 mg/kg, Dermal rabbit LD50 >2,000 mg/kg  
1,4 Butanediol: Oral rat LD50 1500 mg/kg, Inhalation rat LC50 >5.14 mg/L/4 hr, Dermal rat LD50 >2000 mg/kg  
Bismuth Trineodecanoate: No toxicity data available  
Neodecanoic Acid: Oral rat LD50 2066 mg/kg, Inhalation rat LC50 >3 mg/L/6 hr, Dermal rat LD50 >3640 mg/L  
Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate: LD50 Dermal rat: 2000 – 5000 mg/kg,  
LD50 Inhalation rat: 3125 mg/kg  
Polymeric Benzotriazole Dervivative: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >5.8 mg/L/4 hr, Dermal rat  
LD50 >2000 mg/kg  
Polymeric Benzotriazole: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >5.8 mg/L/4 hr, Dermal rat LD50 >2000  
mg/kg  
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate: LD50 Dermal rat: 2000 – 5000 mg/kg,  
LD50 Inhalation rat: 3125 mg/kg

**Skin corrosion/irritation:** None of the components have been shown to cause skin corrosion or irritation.

**Eye damage/ irritation:** Tetrakis(2-hydroxypropyl)ethylenediamine is irritating to rabbit eyes. This product is not classified as an eye irritant.

**Skin Sensitization:** Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate, Polymeric benzotriazole dervivative, Polymeric benzotriazole, and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate have been shown to cause skin sensitization in studies with laboratory animals.

**Respiratory Sensitization:** No data available. This product is not expected to cause respiratory sensitization. .

**Germ Cell Mutagenicity:** None of the components have been shown to cause gem cell mutagenicity.

**Carcinogenicity:** None of the components are classified as a carcinogen by the EU CLP.

**Developmental / Reproductive Toxicity:** None of the components are classified as reproductive or developmental toxins.

**Specific Target Organ Toxicity (Single Exposure):** No data available.

**Specific Target Organ Toxicity (Repeated Exposure):** This product is not expected to cause adverse effects from chronic exposure.

**Aspiration Toxicity:** None of the components are aspiration hazards.

## Section 12. Ecological Information

**12.1 Toxicity:** No toxicity data available for product

Glycerol Poly(Oxyethylene, Oxypropylene) Ether: 96 hr LC50 Danio rerio >100 mg/L, 48 hr EC50 daphnia magna >100 mg/L, 72 hr EC50 green algae >100 mg/L

Trimethylolpropane Poly(Oxypropylene) Triether: 96 hr LC50 Danio rerio >100 mg/L, 48 hr EC50 daphnia magna >100 mg/L, 72 hr EC0 Desmodemus subspicatus >100 mg/L (read across)



Polypropylene Glycol: 96 hr LC50 Oryzias latipes >1000 mg/L, 48 hr EC50 daphnia magna >100 mg/L, 72 hr EC50 Desmodesmus subspicatus >100 mg/L  
 Tetrakis(2-hydroxypropyl)ethylenediamine: 96 hr EC50 Leuciscus idus 4600 mg/L, 48 hr EC50 daphnia magna >100 mg/L, 72 hr EC50 Desmodesmus subspicatus 150.67 mg/L (read across)  
 1,4 Butanediol: 96 hr LC50 Pimephales promelas >30,000 mg/L, 48 hr EC50 daphnia magna 819 mg/L, 72 hr EC50 Desmodesmus subspicatus >500 mg/L  
 Bismuth Trineodecanoate: No data available  
 Neodecanoic Acid: 96 hr LL50 Oncorhynchus mykiss 100-300 mg/L, 48 hr EL50 daphnia magna >1000 mg/L, 72 hr EC50 Pseudokirchneriella subcapitata >100 mg/L  
 Polymeric Benzotriazole Dervivative: 96 hr LC50 Lepomis macrochirus 3.6 mg/L  
 Polymeric Benzotriazole: 96 hr LC50 Lepomis macrochirus 3.6 mg/L

**12.2 Persistence and Degradability:** Trimethylolpropane poly(oxypropylene) triether is readily biodegradable. Polypropylene glycol, Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate are inherently biodegradable. Tetrakis(2-hydroxypropyl)ethylenediamine, neodecanoic acid, polymeric benzotriazole dervivative and polymeric benzotriazole are not readily biodegradable.

**12.3 Bioaccumulative Potential:** Tetrakis(2-hydroxypropyl)ethylenediamine and trimethylolpropane poly(oxypropylene) triether have a BCF <3.

**12.4 Mobility in Soil:** No data available.

**12.5 Results of PBT and vPvB assessment:** This product is not a PBT and vPvB.

**12.6 Other Adverse Effects:** None known.

**Section 13. Disposal Considerations**

**13.1 Waste Treatment Methods:**

Dispose of contents and container in accordance with all local and national regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incine polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations.

Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

**Section 14. Transport Information**

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Transport Hazard Class(es)	14.4 Packing Group	14.5 Environmental Hazards
US DOT		Not Regulated			
EU ADR/RID		Not Regulated			
IMDG		Not Regulated			





IATA/ICAO		Not Regulated			
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14.6 Special Precautions for User: None identified

14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code: Not applicable

**Section 15. Regulatory Information**

**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

**Other EU Regulations:** This product is classified and labeled in accordance with CLP Regulation. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH)

**16. Other Information**

**GHS Classification for Reference (See Sections 2 and 3):**

- Acute Tox. 4 Acute Toxicity Category 4
- Skin Sens. 1 Skin Sensitization Category 1
- Skin Sens. 1A Skin Sensitization Category 1A
- STOT SE 3 Specific Target Organ Toxicity Single Exposure Category 3
- Aquatic Acute 1 Hazardous to the Aquatic Environment Acute Hazard Category 1
- Aquatic Chronic 1 Hazardous to the Aquatic Environment Chronic Hazard Category 1
- H302 Harmful if swallowed
- H317 May cause an allergic skin reaction.
- H336 May cause drowsiness or dizziness.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

**Effective Date:** August 2, 2019

**Supersedes Date:** April 2, 2018

**Revision Summary:** Section 2 – Updated Classification  
Section 3 – Updated Composition  
Section 8, 11, 12 – Updated exposure limits, toxicological, and ecological information

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