

SAFETY DATA SHEET

PRODUCT CODE: SPE-VAPOR-PRO

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: VAPOR PRO PART A
PRODUCT CODES: SPE-VAPOR-PRO A

MANUFACTURER: Spartan Epoxies Ltd.
STREET ADDRESS: 39 Valley View Road
CITY, STATE, ZIP: Scenery Hill, PA 15360

INFORMATION PHONE: 1-877-288-1952
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 724-765-0606

PREPARED BY: Jeffrey L. Doyle Jr.

DATE REVISED: 11/9/19

Chemical Name or Class: Epoxy mixture

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Serious eye damage/Eye irritation category 2A, Skin irritation category 2, skin sensitizer category 1, Long term hazards to aquatic environment Category 2

GHS Label Elements and Precautionary Statements:

Label Elements: Exclamation Mark, Aquatic Toxicity



Hazard Statements:

Warning: Causes serious eye irritation.

Warning: Causes skin irritation

Warning: May cause an allergic skin reaction

Toxic to aquatic life with long lasting effects

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

Response

P302 + P352 IF ON SKIN: wash with plenty of soap and water.

P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

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

P337 + P313 IF eye irritation persists: Get medical advice/attention.

P391 Collect spillage.

P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws

HMIS HAZARD CLASSIFICATION

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

MAY CAUSE IRRITATION BUT NO CORNEAL INJURY IS LIKELY.

SKIN:

MAY CAUSE IRRITATION OR ALLERGIC SKIN RESPONSE.

INGESTION:

INGESTION MAY CAUSE IRRITATION

INHALATION:

NO GUIDE FOR CONTROL KNOWN, HOWEVER, EXPOSURE TO HEATED VAPORS CAN CAUSE IRRITATION TO THE NOSE, THROAT, OR MUCOUS MEMBRANES.

HEALTH HAZARDS (ACUTE AND CHRONIC):

EPOXY RESINS CAN CAUSE SENSITIZATION BY EXPOSURE THROUGH CONTACT OR HIGH CONCENTRATIONS OF VAPOR.

EYES: INJURY IS UNLIKELY BUT STAIN FOR EVIDENCE OF CORNEAL INJURY

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC RESPONSE.

SAFETY DATA SHEET

PRODUCT CODE: SPE-VAPOR-PRO

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

ADDITIONAL CARCINOGENICITY INFORMATION:

None Available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
MODIFIED DIGLUCIDYL ETHER OF BISPHENOL A	25068-38-6	NONE	NONE	NONE	30-60
BISPHENOL F/EPICHLOROHYDRIN EPOXY RESIN	9003-36-5	NONE	NONE	NONE	10-30
ALKYL GLYCIDYL ETHER	68609-97-2	NONE	NONE	NONE	5-10
NONYL PHENOL	25154-52-3	NONE	NONE	NONE	1-5
Glycidoxypropyl trimethoxysilane	2530-83-8	**5ppm	NONE	**10ppm	<1.0%

“***INDICATES TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III AND OF 40 CRF 372 ARE PRESENT.”** **Manufacturer guideline for Glycidoxypropyl trimethoxysilane as Methyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 200 ppm and ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm.

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4: FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO MORE THAN IRRITATION BUT WASH AFFECTED AREA WITH SOAP AND WATER AND REMOVE CONTAMINATED CLOTHING PROMPTLY.

INGESTION:

LOW IN TOXICITY, INDUCE VOMITING ONLY IF LARGE AMOUNTS OF MATERIALS ARE INGESTED, OTHERWISE DO NOT INDUCE VOMITING. IN EITHER CASE IMMEDIATELY CONSULT WITH A PHYSICIAN.

INHALATION:

REMOVE VICTIM TO FRESH AIR AREA AND ADMINISTER OXYGEN IF NECESSARY.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: not available
(% by volume) LOWER: not available

FLASH POINT: 200+F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

DO NOT ENTER CONFINED AREA WITHOUT FULL BUNKER GEAR INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL ALL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NO UNUSUAL FIRE HAZARDS KNOWN.

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF THE SOURCE AT THE LEAK. REMOVE EXCESS WITH VACUUM TRUCK AND TAKE UP THE REMAINDER WITH AN ABSORBANT SUCH AS CLAY AND PLACE IN DISPOSAL CONTAINERS. FLUSH AREA WITH WATER TO REMOVE RESIDUE.

SECTION 8 NOTES:

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

STORE IN COOL DRY PLACE. SEAL ALL PARTIALLY USED CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS'S OF ALL THE COMPONENTS PRIOR TO USING MATERIAL. PROPERLY LABEL ALL CONTAINERS.

SAFETY DATA SHEET

PRODUCT CODE: SPE-VAPOR-PRO

OTHER PRECAUTIONS:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS GENERATED FROM THE MATERIAL. OBSERVE CONDITIONS OF GOOD GENERAL HYGIENE AND SAFE WORKING PRACTICES. CONTAMINATED LEATHER ARTICLES CANNOT BE CLEANED AND MUST BE DISCARDED IF CONTAMINATED WITH THIS PRODUCT. WASH ALL CONTAMINATED CLOTHING PRIOR TO THE REUSE THEREOF.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVER-EXPOSURE TO VAPOR IN ACCORDANCE WITH 29 CFR 1910.134. GENERAL EXHAUST IS USUALLY SUFFICIENT IN LIEU OF NIOSH RESPIRATOR.

VENTILATION:

GENERAL EXHAUST IS USUALLY SUFFICIENT TO CONTROL VAPORS AND EXPOSURE HAZARDS.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER.

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERINGS AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCUPATIONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: **LOW VISCOSITY LIQUID – AMBER CLEAR**

BOILING POINT OR RANGE °F: **200 TO 560 DEG F**

VAPOR DENSITY (AIR = 1): **N/A**

SPECIFIC GRAVITY (H₂O = 1): **1.1**

EVAPORATION RATE: **N/A**

SOLUBILITY IN WATER: **NEGLIGIBLE**

Odor Threshold: **N/A**

pH: **N/A**

Melting point/freezing point: **N/A**

Vapor Pressure: **N/A**

Auto Ignition Temperature: **N/A**

Partition Coefficient: n-octanol/water: **N/A**

Decomposition Temperature: **N/A**

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID EXCESSIVE HEAT OR OPEN FLAMES.

INCOMPATIBILITY (MATERIAL TO AVOID):

CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS ACIDS OR MINERAL ACIDS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO₂, ALDEHYDES, ACIDS. REACTION WITH SOME CURING AGENTS CAN GENERATE LARGE AMOUNTS OF HEAT.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

SECTION 11: TOXICOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 25068-38-6: Moderate sensitizer, slight eye irritant, moderate skin irritant, Oral LD50 >5000 mg/kg (rat), Dermal LD50 >6000 mg/kg (rabbit)

Component CAS# 68609-97-2: possible sensitizer, eye and skin irritant, Oral LD50 >10000 mg/kg (rat), Inhalation LD50 – no microscopic changes

Component Nonyl Phenol: Median Lethal Dose Oral: LD50 0.58g/kg (rat) moderately toxic. Dermal LD50 2.14g/kg (rabbit) slightly toxic. Skin Draize Test, rabbit: 500 mg/m³ 24hr – corrosive. Eyes Draize test rabbit, 57.00/110 – extremely irritating. Component is a possible risk of impaired fertility.

Component BISPHENOL F/EPICHLOROHYDRIN EPOXY RESIN CAS# 9003-36-5: Acute Oral Effects: LD50 (rat) >5000 mg/kg. Acute Dermal Toxicity (rabbit) >3000 mg/kg. Inhalation toxicity LC50 (rat) >1.7 mg/l air for a 4-hr aerosol exposure (maximum concentration

obtained). Sensitization (guinea pig) causes sensitization. Skin Irritation (rabbit) Causes moderate irritation. Eye irritation (rabbit) Causes slight irritation.

SAFETY DATA SHEET

PRODUCT CODE: SPE-VAPOR-PRO

Components Glycidoxypopyl trimethoxysilane CAS# 2530-83-8: Glycidoxypopyltrimethoxysilane (GPTMS) was weakly mutagenic in the Ames test, mouse lymphoma assay, and an in vitro sister chromatid exchange test; however results of in vivo genotoxicity studies have shown mixed results. Repeated exposure of rats or rabbits to this material did not result in an increase in sister chromatid exchange, while single exposures of mice to a hydrolyzate of this material resulted in a significant increase in micronucleated polychromatic erythrocytes. The potential relevance to humans is not known; however, it is unlikely that this material presents a significant genotoxic hazard, in that it lacks any local tumorigenic response to the chronic recurrent application to mouse skin. This material may liberate methanol upon exposure to moisture or humid air. Overexposure to methanol can result in blindness and nervous system effects. Genetically active in somatic cells in IN VIVO assay(s). Genetically active in IN VITRO and IN VIVO assay(s).

SECTION 12: ECOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 25068-38-6: Biodegradability (Modified Sturm Method) 12%, Fish toxicity: Rainbow trout (96hr) LC50 1.5mg/l, Zebra Fish (96hr) LC50 2.4 mg/l. Invertebrate Toxicity: Daphnia Toxicity (24hr) EC 50 3.6 mg/l

Component Nonyl Phenol: Ecotoxicity: Daphnia EC50: 0.14-0.44 mg/l, 48 hr. Component is not readily biodegradable, log Pow: 3-4. Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.. Aquatic Toxicity LC50 96 hr, toxicity rating is <0.10 ppm – extremely toxic

Components Glycidoxypopyl trimethoxysilane CAS# 2530-83-8: No data available

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:

DISPOSE OF MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.

SECTION 14: Transport Information

DOT: Not Regulated

IMO/IMDG: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (CONTAINS Bisphenol A Diglycidyl Ether Polymer) , 9, PGIII, MARINE POLLUTANT

SECTION 15: REGULATORY INFORMATION

No data for the product itself.

Component data:

Component CAS# 25068-38-6: Considered a hazardous chemical; is on the TSCA list; is on the DSL Canada, WHMIS class D2B; Is on the New Jersey Right to Know list; is on the PA Right to Know List;

Component CAS# 68609-97-2: Considered a hazardous chemical; is on the TSCA list; is on the DSL Canada, Is on the New Jersey Right to Know list; is on the PA Right to Know List.

EPA SARA Title III Section 313 components above the de minimus level: none

Component Nonyl Phenol: This component is listed on TSCA, EINECS, ACIS, MITI and Canada DSL lists.

Component BISPHENOL F/EPICHLOROHYDRIN EPOXY RESIN CAS# 9003-36-5: Component is on the TSCA and Canada DSL lists. Component is on the New Jersey and Pennsylvania right to know lists

Components Glycidoxypopyl trimethoxysilane CAS# 2530-83-8: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances and on the Canada DSL list. This component is on the Pennsylvania and New Jersey right to know lists.

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation

SAFETY DATA SHEET

PRODUCT CODE: SPE-VAPOR-PRO

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: VAPOR PRO PART B
PRODUCT CODES: SPE-VAPOR-PRO B

MANUFACTURER: Spartan Epoxies Ltd.
STREET ADDRESS: 39 Valley View Road
CITY, STATE, ZIP: Scenery Hill, PA 15360

INFORMATION PHONE: 1-877-288-1952
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 724-765-0606
PREPARED BY: Jeffrey L. Doyle Jr.

DATE REVISED: 11/9/19

Chemical Name or Class: Polyamine mixture

SECTION 2: HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Acute oral toxicity category 4, Acute dermal toxicity category 4, Skin corrosion/irritation category 1B, skin sensitizer category 1B, Serious eye damage category 1, Acute toxicity inhalation category 4, Acute hazard to aquatic environment category 3, Chronic hazards to aquatic environment category 2

GHS Label Elements and Precautionary Statements:

Label Elements: Exclamation Mark, Corrosion, Aquatic Toxicity



Hazard Statements:

Warning: Harmful if swallowed

Warning: Harmful in contact with skin

Danger: Causes severe skin burns and eye damage.

Warning: May cause an allergic skin reaction

Danger: Causes serious eye damage

Warning: Harmful if inhaled

Harmful to aquatic life

Toxic to aquatic life with long lasting effects

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P260 Do not breathe dust/fume/gas/mist/vapours/spray P264 Wash hands thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P271 Use only outdoors or in a well-ventilated area

P273 Avoid release to the environment.

Response:

P301 + P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.

P330 Rinse mouth

P302 + P352 IF ON SKIN: wash with plenty of soap and water

P312 Call a POISON CENTER or doctor/physician if you feel unwell

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P363 Wash contaminated clothing before reuse.

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P310 Immediately call a POISON CENTER or doctor/physician.

P321 If skin irritation or burns develop, Call a doctor/physician .

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

P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P310 If in eyes, immediately call a POISON CENTER or doctor/physician.

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing

SAFETY DATA SHEET

PRODUCT CODE: SPE-VAPOR-PRO

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P391 Collect spillage.

Storage: P405 Store locked up.

Disposal: P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws.

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

WILL CAUSE BURNS TO THE EYES. HIGH VAPOR CONCENTRATIONS CAN CAUSE SEVERE IRRITATION TO THE EYES.

SKIN:

CAN CAUSE SKIN IRRITATION OR POSSIBLE BURNS TO THE SKIN

INGESTION:

LIQUID CAN CAUSE SEVERE DAMAGE TO MUCOUS MEMBRANES IF SWALLOWED.

INHALATION:

HIGH CONCENTRATIONS OF VAPOR CAN CAUSE IRRITATION TO THE RESPIRATORY TRACT, NAUSEA, AND DIZZINESS.

HEALTH HAZARDS (ACUTE AND CHRONIC):

PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA AND SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

ADDITIONAL CARCINOGENICITY INFORMATION:

NO LISTED INGREDIENTS OF THIS PRODUCT ARE REGULATED AS CARCINOGENS.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
Polyoxypropylene diamine	9046-10-0	NONE	NONE	NONE	10-30
Parateritarybutylphenol	98-54-4	NONE	NONE	NONE	5-10
Benzene-1,3-dimethaneamine (MXDA)	1477-55-0	NONE	0.1mg/m3(skin)	NONE	7-13
TRIS-2,4,6-dimethylaminomethylphenol	90-72-2	NONE	NONE	NONE	1-5
BENZYL ALCOHOL 3-AMINOMETHYL-3,5,5-TRIMETHYL	100-51-6	NONE	NONE	NONE	10-30
CYCLOHEXANE	2855-13-2	NONE	NONE	NONE	10-30
2-HYDROXYBENZOIC ACID	69-72-7	NONE	NONE	NONE	1-5
TRIMETHYLHEXAMETHYLENEDIAMINE	25620-58-0	NONE	NONE	NONE	3-7

*INDICATES TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III AND OF 40 CFR 372. Benzene-1,3-dimethaneamine (MXDA) ACGIH Ceiling = 0.1mg/m3 (skin) A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4: FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE LIFTING UPPER AND LOWER LIDS. GET IMMEDIATE MEDICAL ASSISTANCE.

SKIN:

FLUSH SKIN WITH WATER FOR AT LEAST 15 MINUTES AND REMOVE ALL CONTAMINATED CLOTHING IMMEDIATELY. GET MEDICAL ATTENTION IF REDDENING OR SWELLING OCCURS.

INGESTION:

DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER OR MILK TO DRINK IF VICTIM IS CONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY.

INHALATION:

REMOVE TO FRESH AIR IF EFFECTS PERSIST AND ADMINISTER OXYGEN IF NECESSARY.

SAFETY DATA SHEET

PRODUCT CODE: SPE-VAPOR-PRO

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR,
(% by volume)

UPPER: not available
LOWER: not available

FLASH POINT: 230+F

METHOD USED:

SETA-FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

TOXIC FUMES WILL BE EVOLVED WHEN THIS MATERIAL IS INVOLVED IN A FIRE. A SELF-CONTAINED BREATHING APPARATUS SHOULD BE AVAILABLE FOR FIRE FIGHTING. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE KNOWN.

SECTION 6: RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

AVOID CONTACT WITH MATERIAL. WEAR THE APPROPRIATE SAFETY EQUIPMENT. STOP SPILL AT SOURCE, DYKE AREA TO PREVENT SPREADING. PUMP LIQUID TO SALVAGE TANK. TAKE UP REMAINDER WITH CLAY OR OTHER ABSORBENT AND PLACE IN DISPOSAL CONTAINERS.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS. RESEAL PARTIALLY USED CONTAINERS. PROPERLY LABEL ALL CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. OBSERVE CONDITIONS OF GOOD INDUSTRIAL HYGIENE AND SAFE WORKING PRACTICES.

OTHER PRECAUTIONS:

MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS OF ALL COMPONENTS TO BECOME FAMILIAR WITH ALL HAZARDS PRIOR TO USING THIS PRODUCT.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

NIOSH APPROVED RESPIRATOR PROTECTION REQUIRED IN THE ABSENCE OF PROPER ENVIRONMENTAL CONTROLS. FOR EMERGENCIES A SELF-CONTAINED BREATHING APPARATUS OR A FULL FACE RESPIRATOR IS RECOMMENDED.

VENTILATION:

AVOID BREATHING VAPORS. VENTILATION MUST BE SUFFICIENT TO CONTROL VAPORS.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERINGS AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCUPATIONAL EXPOSURE LIMIT VALUES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: AMBER CLEAR LIQUID WITH AMINE ODOR.

BOILING POINT OR RANGE: >200C

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H2O = 1): 1.05

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: Soluble

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: <5 ghPa @ 50C

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

Decomposition Temperature: N/A

SECTION 10: STABILITY AND REACTIVITY**STABILITY: STABLE****CONDITIONS TO AVOID (STABILITY): AVOID EXCESSIVE HEAT OR OPEN FLAMES.****INCOMPATIBILITY (MATERIAL TO AVOID):****CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS ACIDS OR MINERAL ACIDS.****HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:****CO₂, ALDEHYDES, ACIDS. REACTION WITH SOME CURING AGENTS CAN GENERATE LARGE AMOUNTS OF HEAT.****HAZARDOUS POLYMERIZATION:****WILL NOT OCCUR****SECTION 11: TOXICOLOGICAL INFORMATION**

For the components: AMINO TERMINATED POLYETHER CAS# 9046-10-0, 3-Aminomethyl -3,5,5-Trimethyl Cyclohexane CAS# 2855-13-2, Parateritarybutylphenol, CAS# 98-54-4, Benzene-1,3-dimethanamine (MXDA) CAS# 1477-55-0, TRIS-2,4,6-dimethylaminomethylphenol CAS# 90-72-2: Ingestion: As product: Single dose oral LD50 has not been determined. For the component(s) tested: Estimated. LD50, Rat > 2,000 mg/kg. Dermal: As product: The dermal LD50 has not been determined. For component(s) tested: Estimated. LD50, Rabbit > 2,000 mg/kg. Inhalation: The LC50 has not been determined. Eye damage/eye irritation: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Skin corrosion/irritation: Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage. Sensitization Skin: A component in this mixture has caused allergic skin reactions in humans. Contains component(s) which have caused allergic skin sensitization in guinea pigs. Respiratory: No relevant data found. Repeated Dose Toxicity: For the component(s) tested: In animals, effects have been reported on the following organs: Respiratory tract. Lung. Chronic Toxicity and Carcinogenicity: No relevant information found. Developmental Toxicity: Contains component(s) which did not cause birth defects in laboratory animals. Reproductive Toxicity: In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals. Genetic Toxicology: Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.

Component Benzyl Alcohol: Inhalation LC50 (4hr) >4178 mg/l (rat), Dermal LD50 2000 mg/kg (rabbit) Rats exposed to 800 mg/kg for thirteen weeks exhibited CNS depression and histopathological changes in the brain, thymus and skeletal muscles. The No observed Adverse effect level (NOAEL) was 400 mg/kg. No evidence of carcinogenicity was seen in two year study with rats and mice.

Component CAS# 2855-13-2: Oral LD50 rat 1030 mg/kg, Skin irritation – Corrosive sucategory 1C where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days. Eye irritation – Risk of serious damage to eyes. Product Sensitization (Magnusson- Kingman test) guinea pig: may cause sensitization by skin contact. Product Teratogenicity oral rat NOEL (no observed effect level) 250 mg/kg

Component CAS# 69-72-7: Acute Oral Toxicity LD50 (rat) = 891 mg/kg (behavioral somnolence (general depressed activity, Behavioral muscle weakness)). Acute Inhalation LC50 (rat) >900 mg/m³, 1 hr. Acute Dermal LD50 (rabbit) >10,000 mg/kg. Skin Irritation (rabbit) – mild skin irritation -24hr. Eye Irritation (rabbit) – severe eye irritation.

Component Trimethylhexamethylenediamine: Acute oral toxicity LD50 = 910 mg/kg (rat); Component is a serious eye irritant and can cause damage to the eyes.

SECTION 12: ECOLOGICAL INFORMATION**Toxicity**

Component: Polyoxopropylene diamine: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). Fish Acute & Prolonged Toxicity: LC50, golden orfe (*Leuciscus idus*), 48 h: > 220 mg/l

Component: 3-Aminomethyl-3,5,5-trimethylcyclohexylamine (isophoronediamine): Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested). Fish Acute & Prolonged Toxicity: LC50, golden orfe (*Leuciscus idus*), static renewal, 96 h: 110 mg/l. Aquatic Invertebrate Acute Toxicity: EC50, water flea *Daphnia magna*, 48 h, immobilization: 23 mg/l. Aquatic Plant Toxicity: EbC50, alga *Scenedesmus* sp., biomass growth inhibition, 72 h: 37 mg/l. Toxicity to Micro-organisms EC10; bacteria, 18 h: 1,120 mg/l. Aquatic Invertebrates Chronic Toxicity Value: water flea *Daphnia magna*, 21 d, number of offspring, NOEC: 3 mg/l, LOEC: 10 mg/l.

Component: P-tert-butylphenol Product Name: Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested). Fish Acute & Prolonged Toxicity: LC50, golden orfe (*Leuciscus idus*), 48 h: 1.6 mg/l. Aquatic Invertebrate Acute Toxicity: EC50, water flea *Daphnia magna*, 48 h, immobilization: 3.9 - 6.7 mg/l. Aquatic Plant Toxicity: EC50, green alga *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum*), biomass growth inhibition, 72 h: 14 - 22.7 mg/l. Toxicity to Micro-organisms: EC50; bacteria, 16 h: 227 mg/l. Aquatic Invertebrates Chronic Toxicity Value: water flea *Daphnia magna*, static renewal, 21 d, number of offspring, NOEC: 0.73 mg/l

Component: 1,3-Benzenedimethanamine: Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested). Fish Acute & Prolonged Toxicity: LC50, golden orfe (*Leuciscus idus*), 96 h: 75 mg/l. Aquatic Invertebrate Acute Toxicity: EC50, water flea *Daphnia magna*, static, 48 h, immobilization: 15.2 mg/l. Aquatic Plant Toxicity: EC50, alga *Scenedesmus* sp., static, biomass growth inhibition, 72 h: 12 mg/l

Component: 2,4,6-Tris[(dimethylamino)methyl]phenol: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms. Fish Acute & Prolonged Toxicity: LC50, rainbow trout (*Oncorhynchus mykiss*), static, 96 h: 180 - 240 mg/l.

Component Benzyl Alcohol: EC50 (48hr) 400 mg/l *Daphnia Magna*, EC50 (72hr) 2600 mg/l Algae, Biodegradation BOD₂ 62. Slightly or not bioaccumulative. Toxicity to fish: LC50 (96 hr) 10 mg/l Bluegill sunfish (*Lepomis macrochirus*), LC50 (96hr) 460 mg/l Fathead minnow (*Pimephales promelas*), Toxicity to Algae: IC50 (72hr) 700 mg/l

Component CAS# 2855-13-2: Biodegradability 42% and is not readily biodegradable. Bioaccumulation: - no significant accumulation of the substance in organisms is to be expected. Mobility: The soil mobility of the substance is only minimally affected by adsorption to soil components. Toxicity to fish: LC50 *Leuciscus idus* 110 mg/l (96hr). Toxicity to *Daphnia* NOEC 3 mg/l (504hr). EC50 *Daphnia magna* 23 mg/l (48 hr). EC50 *scenedesmus subspicatus* 50 mg/l (72 hr). NOEC *scenedesmus subspicatus* 1.5 mg/l (72 hr). Toxicity to bacteria: EC10 *Pseudomonas putida* 1120 mg/l (18 hr).

SAFETY DATA SHEET

PRODUCT CODE: SPE-VAPOR-PRO

Component CAS# 69-72-7: Toxicity to Fish LC50 (Leuciscus idus – 96 mg/l. Toxicity to Daphnia magna – 105mg/l, 24 hr. Component Mutagenic Effects: Mutagenic for bacteria and/or yeast. Developmental toxicity: Classified reproductive system toxin/female, development toxin possible.

Component Trimethylhexamethylenediamine: Biodegradability: not readily biodegradable (7% method EC79/831). Toxicity to fish LC50 = 174mg/l (48h) (Leuciscus idus melanotus). Toxicity to Daphnia EC50 – 31.5 mg/l (24h). Toxicity to algae EC50 = 29.5 mg/l (72hr) (scenedesmus subpictus). Toxicity to bacteria EC10 = 72 mg/l (16hr) (Pseudomonas putida).

SECTION 13: WASTE DISPOSAL

WASTE DISPOSAL METHOD:

DISPOSE OF MATERIAL AS A HAZARDOUS WASTE ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 14: Transport Information

DOT: UN1760, CORROSIVE LIQUID N.O.S. (CONTAINS Polyoxypropylene Diamine, 1,3-Benzenedimethanamine), 8, PG III,
IMO/IMDG : UN1760, CORROSIVE LIQUID N.O.S. (CONTAINS Polyoxypropylene Diamine, 1,3-Benzenedimethanamine), 8, PG III, MARINE POLLUTANT

SECTION 15: REGULATORY INFORMATION

For the components: AMINO TERMINATED POLYETHER CAS# 9046-10-0, 3-Aminomethyl -3,5,5-Trimethyl Cyclohexane CAS# 2855-13-2, Paratertiarybutylphenol, CAS# 98-54-4, Benzene-1,3-dimethanamine (MXDA) CAS# 1477-55-0, TRIS-2,4,6-dimethylaminomethylphenol CAS# 90-72-2: OSHA Hazard Communication Standard: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 Immediate (Acute) Health Hazard – Yes. California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute. US. Toxic Substances Control Act: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30. All Components are on the Canadian DSL list.

Component Benzyl Alcohol: E20/22 Harmful by inhalation and if swallowed. On TSCA list, on DSL Canada

Component CAS# 2855-13-2: Acute health hazard. Ingredients on TSCA. International Chemical status listed/registered – EINECS/ELINCS, DSL, AICS, MITI, TCOL, PICCS, China, New Zealand.

Component CAS# 69-72-7: Component is on the Pennsylvania and New Jersey right to know lists. Component is on the TSCA and Canada DSL lists.

COMPONENT TRIMETHYLHEXAMETHYLENEDIAMINE: Component is on the TSCA list as well as the Canada DSL, EINECS, AICS, EINCS, ECL, SEPA, PICCS lists

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation

For more information visit www.spartanepoxies.com