

SAFETY DATA SHEET

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 01-02-2015

Section 1 – Identification of the Substance/Mixture and of the Company/Undertaking

Product Name: Water-Base Urethane (Clear) **PART A**
Product Codes: Series No. 8142-06
Recommended Use: Concrete coating.
Sold By: Gabriel First Corp.
Street Address: 233 West Commercial Street
City, State, Zip: East Rochester, NY 14445-0191
Telephone: 585-381-7000
Emergency Phone: 800-424-9300
Date Revised: 01-02-15
Chemical Name or Class: Polyurethane dispersion

Section 2 – Hazards Identification

Hazard Overview

GHS Classification:

Serious Eye Damage/Eye Irritation: Category 2A
Acute Hazard to Aquatic Environment: Category 3

GHS Label Elements and Precautionary Statements:

Label Elements:



Hazard Statements:

Warning: Causes serious eye irritation.
Harmful to aquatic life.

Precautionary Statements:

P102 Keep out of reach of children.
P103 Read label before use.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.

Response:

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.

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: Corneal damage may occur but this effect is usually reversible as long as treatment is administered.

Skin: Irritation to the skin can occur.

Ingestion: Ingestion of material can cause nausea and other similar responses.

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 response.

Carcinogenicity:

OSHA: Yes **NTP:** Yes **IARC:** Yes

Additional Carcinogenicity Information:

This product contains very small amounts of substances that are regulated by OSHA as anticipated human carcinogens.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Section 3 – Composition/Information on Ingredients

Ingredient	CAS No.	OSHA PEL	ACGIH TLV	OSHA STEL	Weight %
Polyurethane Dispersion NJTSR# (31765300002)-5228P		None	None	None	30-60
*Triethylamine (Component of Polyurethane Dispersion)	121-44-8	10ppm	10ppm	15ppm	<0.06
*N-Methyl-2-Pyrrolidone (Component of Polyurethane Dispersion)	872-50-4	100ppm	100ppm	100ppm	9
Adipic Acid (Component of Polyurethane Dispersion)	124-04-9	None	5mg/m3	None	0.1-1
Ethylenediamine	107-15-3	10ppm	10ppm	None	0.1-1
Acrylic Polymer	Non Hazardous	None	None	None	10-30
Water	7732-18-5	None	None	None	30-60
Individual Residual Monomers	Not Required	None	None	None	<0.1%
Antifoam Emulsion	Non Hazardous	None	None	None	0.1-1
Propylene Glycol Monomethyl Ether	107-98-2	100ppm	100ppm	150ppm	1-5
2,5,8,11 Tetramethyl 6 Dodecyn-5,8 Diol Ethoxylate	169117-72-0	None	None	None	0.1-1
Polyether and Polyethersiloxane Emulsion	Not Available	None	None	None	0.1-1
Butylated Hydroxytoluene (Component of Polyether and Polyethersiloxane Emulsion)	128-37-0	10mg/m3	10mg/m3	None	<0.00001
Ethanol, 2-Amino- (Component of Polyether and Polyethersiloxane Emulsion)	141-43-5	3ppm	None	None	<0.005
*Cyclohexane (Component of Polyether and Polyethersiloxane Emulsion)	110-82-7	300ppm	300ppm	None	<0.00001
Ethanol (Component of Polyether and Polyethersiloxane Emulsion)	64-17-5	1000ppm	1000ppm	None	<0.0001
Poly (Oxy-1,2-Ethanediy), A-Octadecyl-W-W-Hydroxy- (Component of Polyether and Polyethersiloxane Emulsion)	9005-00-9	None	None	None	<0.1

SECTION 3 NOTES:

*** Indicates toxic chemical(s) subject to reporting requirements of Section 313 of Title III and of 40 CFR 372.

Triethylamine (ACGIH) STEL=15PPM. N-Methyl Pyrrolidone (As Recommended by the Manufacturer) TWA=100PPM.

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.
Notes to Physicians or First Aid Providers:	

Section 5 – Fire-Fighting Measures

Flammable Limits in Air, (% by volume):	Upper: Not available. Lower: Not available.
Flash Point: 200+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 fighters. Cool 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:	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.
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Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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 SDS 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.

Ventilation:

Avoid breathing vapors, ventilation must be sufficient to control vapors.

Protective Gloves:

Impervious gloves, neoprene or rubber.

Eye Protection:

Splash proof goggles or safety glasses with side shields

Other Protective Clothing or Equipment:

Clean body covering clothing as well as apron, footwear or other equipment should be used as deemed necessary to avoid contact with the 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 – clear.

Boiling Point or Range:

° F - 192 to 396

Vapor Density (Air = 1):

N/A

Specific Gravity (H₂O = 1):

1.0

Evaporation Rate:

N/A

Solubility in Water:

Emulsifiable dispersion.

Odor Threshold:

N/A

pH:

N/A

Melting Point/Freezing Point:

N/A

Vapor Pressure:

N/A

Autoignition 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 contact with open flames and all sources of ignitions and sparks. Avoid temperatures below 35 degrees F.

Incompatibility (Material to Avoid):

Avoid contact with strong oxidizing agents, and mineral acids.

Hazardous Decomposition or By-Products:

CO, CO₂, NO_x.

Hazardous Polymerization:

Will not occur.

Section 11 – Toxicological Information

No data for the product itself.

Component Data:

Component Polyurethane Dispersion:

No data available for this product

Component n-Methyl-2-Pyrrolidone:

Acute oral toxicity: LD50: 3,600 - 7,900 mg/kg (Rat). Acute inhalation toxicity: LC50: > 5.1 mg/l, 4 h (rabbit). Acute dermal toxicity: LD50: > 5,000 mg/kg (rabbit). Skin irritation: rabbit, Draize, Slightly irritating. Eye irritation: rabbit, Moderately irritating. Sensitization dermal: non-sensitizer, (Guinea pig, Other method), dermal: non-sensitizer (Human, Patch Test). Repeated dose toxicity: 90 Days, inhalation: NOAEL: 0.5 mg/l, (Rat, Male/Female, 6 hrs/day 5 days/week), Irritation to lungs and nasal cavity. Reduced body weight gain. Reduced testicular weights, testicular atrophy. 4 weeks, oral: NOAEL: 277 mg/kg, (mouse, Male/Female, ad libitum). Changes in: liver. Mutagenicity: Genetic Toxicity in Vitro: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without). Genetic Toxicity in Vivo: Micronucleus Assay: negative (mouse), negative.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Carcinogenicity Rat, inhalation, 2 Years, negative Toxicity to Reproduction/Fertility. Two generation study, inhalation, 6 hrs/day 7 days/week, (Rat) NOAEL (parental): 130 ppm, NOAEL (F1): 50 ppm, NOAEL (F2): 50 ppm, No toxicity to reproduction, The only adverse effect was a decrease in fetal weights. Two generation study, oral, (Rat) NOAEL (parental): 160 mg/kg, NOAEL (F1): 160 mg/kg. Fertility and mating indices were decreased. The survival and growth rates were reduced. Developmental Toxicity/Teratogenicity: Rat, inhalation, 6 hrs/day 7 days/week, NOAEL (teratogenicity): 0.36 mg/l. No Teratogenic effects observed at doses tested. Rat, oral, NOAEL (teratogenicity): 125 mg/kg. Oral administration of Methylpyrrolidone at 500 mg/kg/d in pregnant rats resulted in embryonic loss and fetal malformations, including anasarca, anal atresia, cardiovascular, and skeletal defects. There was a single malformed fetus at 250 mg/kg/d with abnormalities similar to those observed in the 500 mg/kg/d group, and no increase in developmental effects at a maternal dose of 125 mg/kg/d.

Component Adipic Acid:

Acute oral toxicity LD50: > 5,000 mg/kg (Rat). Acute inhalation toxicity: LC50: > 7.7 mg/l, 1 h (Rat). Skin irritation: rabbit, Slightly irritating. Eye irritation: rabbit, Moderate eye irritation. Sensitization: non-sensitizer (Guinea pig). Repeated dose toxicity: 4 w, Oral: NOAEL: 40 mg/d, (Rat, female). Mutagenicity: Genetic Toxicity in Vitro: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without). Genetic Toxicity in Vivo: Cytogenetic assay: (mouse). Carcinogenicity: Rat, Male/Female, oral, 2 y, Negative: Developmental Toxicity/Teratogenicity: Rat, female, oral, NOAEL (teratogenicity): 288 mg/kg, NOAEL (maternal): 288 mg/kg, No fetotoxicity observed at doses tested.

Component Triethylamine (TEA):

Acute oral toxicity: LD50: 460 mg/kg (Rat). Acute inhalation toxicity: LC50: 4.2 - 8.4 mg/l, 4 h (Rat). Acute dermal toxicity: LD50: 416 - 420 mg/kg (rabbit). Skin irritation: rabbit, Corrosive. Eye irritation: rabbit, Corrosive. Sensitisation: Did not cause sensitization on laboratory animals. Repeated dose toxicity: 28 wks, inhalation: NOAEL: 1 mg/l, (rat, Male/Female, daily). Mutagenicity: Genetic Toxicity in Vitro: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without). Carcinogenicity: Rat, female, oral, 1 year, daily, Did not show carcinogenic effects in animal experiments.

Component Ethylenediamine:

Acute oral toxicity: LD50: 1,160 mg/kg (rat). Acute inhalation toxicity: LC50: 5 - 10 mg/l, 8 h (rat). Acute dermal toxicity: LD50: 730 mg/kg (rabbit). Skin irritation: rabbit, Severely irritating. Eye irritation: rabbit, Severely irritating. Repeated dose toxicity: 90 d, oral: NOAEL: 100 mg/kg, (mouse). Mutagenicity: Genetic Toxicity in Vitro: Ames: negative. Negative results were reported in various in vitro studies. Carcinogenicity: negative. Developmental Toxicity/Teratogenicity: mouse, female, oral, daily, NOAEL (teratogenicity): Not established, NOAEL (maternal): 400 mg/kg.

Components 2,5,8,11 Tetramethyl 6 Dodecyn-5,8 Diol Ethoxylate CAS# 169117-72-0:

LD50 Ingestion >2000 mg/kg – rat; Dermal LD 50 >2000 mg/kg – rabbit; severe eye irritant; mild skin irritant; Not mutagenic in Ames test.

Component CAS# 107-98-2:

Ingestion: LD50 rat 4016 mg/kg. Dermal: LD50 rabbit >2000 mg/kg. Inhalation: LC50 6 hr Vapor, rat >25.8 mg/l. May cause eye or skin irritation. May effect Kidney or liver. Has been reported to be toxic to fetus in laboratory animals.

Section 12 – Ecological Information

No data for the product itself.

Component Data:**Component Polyurethane Dispersion:**

No data available for this product.

Component n-Methyl-2-Pyrrolidone:

Biodegradation: Aerobic, 90 %, Exposure time: 8 Days, Readily biodegradable. Acute and Prolonged Toxicity to Fish: LC50: Approximately 832 mg/l (Bluegill (Lepomis macrochirus), 96 h). Acute Toxicity to Aquatic Invertebrates: EC50: Approximately 4,897 mg/l (Water flea (Daphnia magna), 48 h). Toxicity to Aquatic Plants: EC50: > 500 mg/l, (Green algae (Selenastrum capricornutum).

Component Adipic Acid:

Biodegradation: aerobic, > 90 %, Exposure time: 5 d, 100 %, Exposure time: 28 d, i.e. readily biodegradable. Biochemical Oxygen Demand (BOD): 598 mg/g; Theoretical Biological Oxygen Demand (ThBOD): 1,423 mg/g. Bioaccumulation: Does not bioaccumulate. Acute and Prolonged Toxicity to Fish: EC50: 230 mg/l (Golden orfe (Leuciscus idus), 96 h). Acute Toxicity to Aquatic Invertebrates: EC50: 85.7 mg/l (Water flea (Daphnia magna), 48 h). Toxicity to Aquatic Plants: 31.3 mg/l, End Point: growth (Green algae (Scenedesmus subspicatus), 72 h). Toxicity to Microorganisms; EC0: 10,000 mg/l, (Pseudomonas fluorescens, 16 h).

Component Triethylamine (TEA):

Biodegradation: aerobic, 96 %, Exposure time: 21 d, Readily biodegradable. Bioaccumulation: Oryzias latipes (Orange-red killifish), Exposure time: 42 d, < 0.5 BCF. Acute and Prolonged Toxicity to Fish: LC50: 43.7 mg/l (Fathead minnow (Pimephales promelas), 96 h). Harmful to aquatic organisms. Acute Toxicity to Aquatic Invertebrates; EC50: 200 mg/l (Daphnia magna (Water flea), 48 h). Toxicity to Aquatic Plants; EC50: 1 mg/l, (other: algae, 96 h); Toxicity to Microorganisms: EC50: 95 mg/l, (Pseudomonas putida, 17 h).

Component Ethylenediamine:

Biodegradation: Readily biodegradable. > 60 %, Exposure time: 28 d, i.e. readily biodegradable. Bioaccumulation: ca. 0.07 BCF. Does not bioaccumulate. Acute and Prolonged Toxicity to Fish: LC50: Approximately 405 mg/l (Golden orfe (Leuciscus idus). Acute Toxicity to Aquatic Invertebrates: EC50: 19 mg/l (Water flea (Daphnia magna), 24 h). Toxicity to Aquatic Plants: EC0: 20 mg/l, (other: algae).

Component Antifoam Emulsion:

Silicone content Biologically not degradable. Behaviour in environmental compartments: Mobility – Absorbed by floating particles, separation by sedimentation. Bioaccumulation is not expected to occur. According to past experience, toxicity to fish is improbable. BOD5 Value = 20 mg/g O2/g. COD Value = 280 mg/g O2/g.

Components 2,5,8,11 Tetramethyl 6 Dodecyn-5,8 Diol Ethoxylate CAS# 169117-72-0:

This product is anticipated to be harmful to aquatic organisms based on data from similar product.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Component CAS@ 107-98-2: Bioconcentration potential is low (BCF less than 100). Potential for mobility in soil is high (KOC between 0 and 50). Material is readily biodegradable and is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100mg/l in the most sensitive species tested. LC50 fathead minnow 96 hr 20800 mg/l, LC50 water flea 48 hr lethally 23300 mg/l, EbC50 green algae biomass growth inhibition 7 d >1000 mg/l. Toxicity to microorganisms IC50 activated sludge > 1000 mg/l.

Component Polyether and Polysiloxane Emulsion:

Product is considered a weak water pollutant (German Law)

Section 13 – Waste Disposal

Waste Disposal Method: Dispose of the 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 Triethylamine) , 9, PGIII.

Section 15 – Regulatory Information

No data for the product itself.

Component Data:**Component Polyurethane Dispersion:**

OSHA Hazcom Standard Rating: Hazardous. US. Toxic Substances Control Act: Listed on the TSCA Inventory. US. EPA CERCLA Hazardous Substances (40 CFR 302).

Polyurethane Dispersion Component information:

Adipic Acid Reportable quantity: 5000 lbs. Triethylamine (TEA) Reportable quantity: 5000 lbs. SARA Section 311/312 Hazard Categories: Acute Health Hazard, Chronic Health Hazard. US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A): Components None. US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required: Components n-Methyl-2-Pyrrolidone, Triethylamine (TEA), US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261). Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

State Right-To-Know Information: The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Weight Percent Components CAS-No.:

>=1% Water 7732-18-5. >=1% Polyurethane Resin CAS# is a trade secret. 10 - 20% n-Methyl-2-Pyrrolidone 872-50-4.

5 - 10% Adipic Acid 124-04-9. 1 - 5% Triethylamine (TEA) 121-44-8.

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

Weight Percent Components CAS-No.:

10 - 20% n-Methyl-2-Pyrrolidone 872-50-4. 1 - 5% Triethylamine (TEA) 121-44-8. 0.1 - 1% Ethylenediamine 107-15-3.

MA Right to Know Extraordinarily Hazardous Substance List:

Weight Percent Components CAS-No.:

0.1 - 1% Ethylenediamine 107-15-3

California Prop. 65: Warning! This product contains chemical(s) known to the State of California to be – Developmental toxin.

Weight Percent Components CAS-No.

10 - 20% n-Methyl-2-pyrrolidone 872-50-4.

Component Antifoam Emulsion:

Is on TSCA list. This component may contain trace amounts of Proposition 65 Carcinogens such as Formaldehyde CAS# 50-00-0 and Acetaldehyde CAS# 75-07-0. This component contains Amorphous Precipitated Silica CAS# 112926-00-8 which is on the Massachusetts, New Jersey and Pennsylvania Right to know hazardous substance list. Component is listed on the Canada DSL., IECSC, EINECS, TSCA, PICCS, ENCS, ECL, and AICS lists.

Components 2,5,8,11 Tetramethyl 6 Dodecyn-5,8 Diol Ethoxylate CAS# 169117-72-0:

WHMIS Hazard classification – Toxic material causing other toxic effects. Product is on TSCA, EINECS, AICS, ENCS, ECL, SEPA, PICCS, DSL inventory lists.

Component CAS# 107-98-2;

On the PA Right to Know list. Product is on the TSCA list and DSL Canada.

Component Polyether and Polysiloxane emulsion:

Component Cyclohexane CAS# 110-82-7 is a SARA Section 313 Chemical. Product is on the Pennsylvania, Rhode Island, New Jersey WHMIS and Massachusetts Right to Know Lists. Product is on the TSCA and Canada DSL lists.



Water Based Urethane (clear)

Item Series No. 8142-06

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

Revision Date: 01/02/15

Section 1 – Identification of the Substance/Mixture and of the Company/Undertaking

Product Name: Water-Base Urethane (Clear) **PART B**
Product Codes: Series No. 8142-06
Recommended Use: Concrete coating.
Sold By: Gabriel First Corp.
Street Address: 233 West Commercial Street
City, State, Zip: East Rochester, NY 14445-0191
Telephone: 585-381-7000
Emergency Phone: 800-424-9300
Date Revised: 01-02-15
Chemical Name or Class: Aziridine polymer

Section 2 – Hazards Identification**Hazard Overview****GHS Classification:**

Serious Eye Irritation: Category 1
Germ Cell Mutagenicity: Category 2
Skin Sensitization: Category 1
**Specific Target Organ Toxicity
Repeated Exposure:** Category 2

GHS Label Elements and Precautionary Statements**Label Elements:****Hazard Statements:**

Danger: Causes serious eye damage.
Warning: Suspected of causing genetic defects.
Warning: May cause an allergic skin reaction.
Warning: May cause damage to organs through prolonged or repeated exposure (oral).

Precautionary Statements:

P102 Keep out of reach of children.
P103 Read label before use.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P272 Contaminated work clothing should not be allowed out of the workplace.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.

Response:

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 If in eyes, immediately call a POISON CENTER or doctor/physician.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
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.
P314 Get medical advice/attention if you feel unwell.

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 as well as reddening or tearing.
Skin: This product is a mild skin irritant that may cause skin irritation.
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.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Health Hazards (Acute and Chronic): Prolonged or repeated exposure may cause asthma and skin sensitization or other allergic responses. Effects of chronic exposure has shown in testing, a mildly positive response in the Ames Mutagenicity Screening Tests (Ames Salmonella Test).

Medical Conditions Generally Aggravated by Exposure:
Respiratory conditions or other allergic ailments as well as pre-existing skin and eye disorders may be aggravated.

Carcinogenicity: OSHA: No NTP: No IARC: No

Additional Carcinogenicity Information:
See chronic health hazards above for information on effects of chronic exposure and the possible health effects.

Section 3 – Composition/Information on Ingredients

Ingredient	CAS No.	OSHA PEL	ACGIH TLV	OSHA STEL	Weight %
Polyfunctional Aziridine Crosslinker	64265-57-2	None	None	None	60-100

Section 3 Notes:

No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present.

The actual chemical name of the Polyfunctional Aziridine Crosslinker is: 2-ethyl-2-[[[(3-(2-methylaziridin-1-yl)propionnyl)methyl]propane-1,3-diyl bis(2-methylaziridine-1-propionate).

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: Dilute by giving water or milk to drink if victim is conscious and induce vomiting. Get medical attention immediately.

Inhalation: Remove to fresh air if effects persist and administer oxygen if necessary.

Notes to Physicians or First Aid Providers:

Section 5 – Fire-Fighting Measures

Flammable Limits in Air, (% by volume): Upper: Not available
Lower: Not available

Flash Point: 267+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: Wear the appropriate safety equipment. Stop spill at source, dyke area to prevent spreading. Neutralize with 5% acetic acid. 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 SDS 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.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ventilation:	Avoid breathing vapors. Ventilation must be sufficient to control vapors.
Protective Gloves:	Impervious gloves – neoprene or rubber.
Eye Protection:	Splash proof 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.
Boiling Point or Range:	N/A
Vapor Density (Air = 1):	N/A
Specific Gravity (H₂O = 1):	1.1
Evaporation Rate:	N/A
Solubility in Water:	Partially soluble.
Odor Threshold:	N/A
pH:	N/A
Melting Point/Freezing Point:	N/A
Vapor Pressure:	N/A
Autoignition Temperature:	N/A
Partition Coefficient: n-Octanol/water:	N/A
Decomposition Temperature:	N/A

Section 10 – Stability and Reactivity

Stability:	Stable.
Conditions to Avoid:	Avoid contact with open flames and all sources of ignitions and sparks. Avoid contact with moisture or acidic materials.
Incompatibility (Material to Avoid):	Avoid contact with strong oxidizing agents and acidic materials.
Hazardous Decomposition or By-Products:	CO, CO ₂ , NOX.
Hazardous Polymerization:	Will not occur.

Section 11 – Toxicological Information

Component Data:

Polyfunctional Aziridine Crosslinker:

LD50 Oral Rat 3038 mg/kg; LDLo Dermal Rabbit 2 g/kg. Skin Mammal – species unspecified: Sensitizing. Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: Chromosomal Abberation Chinese Hamster – Positive. Micronucleus test Experiment: In vivo Subject: Mammalian- Animal Metabolic activation: Chromosomal Abberation Mouse Micronucleus – Positive. Ames test Subject: Bacteria -Positive.

Section 12 – Ecological Information

Persistence and Degradability:	Not available.
Bioaccumulative Potential:	Not available.
Mobility in Soil - Soil/water Partition Coefficient (Koc):	Not available.
Mobility:	Not available.

Results of PBT and vPvB Assessment

PBT: Not applicable. P: Not available. B: Not available. T: Not available.
vPvB: Not applicable. vP: Not available. vB: Not available.

Section 13 – Waste Disposal

Waste Disposal Method:	Dispose of material according to federal, state, and local regulations.
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Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Section 14 – Transport Information

DOT: Not Regulated.

IMO/IMDG: Not Regulated.

Section 15 – Regulatory Information

Component Data:

Polyfunctional Aziridine Crosslinker:

Safety, Health and Environmental Regulations/Legislation Specific for the Substance Or Mixture.

EU Regulation (EC) No. 1907/2006 (REACH)

Substances of Very High Concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

Not applicable.

Mutagenic Effects

Muta. 2, H341 - -

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification Justification

Skin Irrit. 2, H315 Calculation method

Eye Dam. 1, H318 Calculation method

Skin Sens. 1, H317 Calculation method

Muta. 2, H341 Calculation method

Full text of abbreviated R phrases

R68- Possible risk of irreversible effects.

R41- Risk of serious damage to eyes.

R38- Irritating to skin.

R43- May cause sensitization by skin contact.

Full text of abbreviated H statements

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H341 Suspected of causing genetic defects.

Full text of classifications [CLP/GHS]

Eye Dam. 1, H318: Serious Eye Damage/ Eye Irritation - Category 1

Muta. 2, H341: Germ Cell Mutagenicity - Category 2

Skin Irrit. 2, H315: Skin Corrosion/Irritation - Category 2

Skin Sens. 1, H317: Skin Sensitization - Category 1

Full text of classifications [DSD/DPD]

Muta. Cat. 3 - Mutagen Category 3

Xi - Irritant

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

Revision Date: 01/02/15