FREEMAN Manufacturing & Supply Company

Safety Data Sheet

Freeman 2065 Part A (Resin)

Section 1 Identification

Product identifiers

Freeman 2065 Part A (Resin)

Relevant identified uses of the substance or mixture and uses advised against

Isocyanate component of polyurethane system. For industrial and professional use only.

Details of the supplier of the safety data sheet

Freeman Manufacturing & Supply Company
1101 Moore Road
Avon, OH 44011-4043 USA
Telephone: (440) 934-1902
Email: contactus@freemansupply.com

24 Hour emergency telephone number:
CHEMTREC (800) 424-9300
Customer Number 8849

Section 2 Hazards Identification

GHS Classification of product in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute Toxicity (inhalation), Category 4
Skin Irritation, Category 2
Eye Irritation, Category 2A
Respiratory Sensitization, Category 1
Skin Sensitization, Category 1
Specific Target Organ Toxicity – Single Exposure, Category 3 (Respiratory system)
Reproductive Toxicity, Category 2

GHS Label elements

Danger

Hazard Statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H361 Suspected of damaging fertility or the unborn child.

Precautionary Statements

Prevention: P261 Avoid breathing mist or vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.
P285 In case of inadequate ventilation wear respiratory protection.
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 Take off contaminated clothing and wash before reuse.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

Section 2 Hazards Identification

P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes.
P338 Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
Storage: P403 + P233 Store in a well-ventilated place. Keep containers tightly closed. P405 Store locked up.
Disposal: P501 Dispose of contents/container to an approved waste disposal plant.

Section 3 Composition/Information on Ingredients

Ingredient	CAS Number	EC / List Number	Concentration (%)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	229-934-9	30 - 55
Diphenylmethanediisocyanate, polymeric	9016-87-9	618-498-9	25 - 45
4,4'-methylenediphenyl diisocyanate	101-68-8	202-966-0	15 - 30
2,4'-methylenediphenyl diisocyanate	5873-54-1	227-534-9	1 - 10

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4 First Aid Measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. Consult a physician immediately if symptoms such as shortness of breath or asthma are observed. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitized persons. The exposed person may need to be kept under medical surveillance for 48 hours.

In case of skin contact

Wash off immediately with plenty of soap and water for at least 15 minutes. Take off all contaminated clothing immediately. Call a physician or poison control center immediately.

In case of eye contact

Flush eyes with water for at least 15 minutes. Get medical attention immediately.

If swallowed

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Severe allergic skin reactions, bronchiospasm and anaphylactic shock This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons.

Indication of any immediate medical attention and special treatment required

Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Following severe exposure medical follow-up should be monitored for at least 48 hours.

Section 5 Fire-Fighting Measures

Extinguishing Media

Suitable agents: Dry chemical, PFAS-free foam, carbon dioxide (CO_2). Cool containers/tanks with water spray.

Unsuitable agents: Water may be used if no other available and then in copious quantities.

Reaction between water and hot isocyanate may be vigorous.

Specific hazards arising from the chemical

Do not allow run-off from fire fighting to enter drains or water courses.

In a fire or if heated, a pressure increase will occur and the container may burst. Following severe exposure medical follow-up should be monitored for at least 48 hours.

Hazardous thermal decomposition products

Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN.

In the event of extreme heat (>500 degrees C), aniline is suspected of being formed.

Special protective actions and equipment for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For personal protection see section 8.

Environmental precautions

Avoid release to the environment.

Methods and materials for containment and cleaning up

Use appropriate personal protective equipment during clean up. Evacuate and keep unnecessary people out of spill area. Move containers from spill area. Absorb with an inert dry material until it appears dry. Neutralize small spillages with decontaminant. Place in an appropriate waste disposal container. See Section 13 for disposal guidance.

Liquid decontaminants (percentages by weight or volume):

Decontaminant 1: *- sodium carbonate: 5 - 10 % *- liquid detergent: 0.2 - 2 % *- water: to make up to 100 %.

Decontaminant 2: *- concentrated ammonia solution: 3 - 8 % *- liquid detergent: 0.2 - 2 % *-water: to make up to 100 %. Decontaminant 1 reacts slower with diisocyanates but is more environmentally friendly than decontaminant 2. Decontaminant 2 contains ammonia. Ammonia presents health hazards.

Section 7 Handling and Storage

Precautions for safe handling

For industrial/occupational use only. Ensure thorough ventilation of stores and work areas. Avoid breathing vapors or fumes. 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. Wash contaminated clothing before reuse. Avoid release to the environment. For personal protection see section 8. Keep container closed when not in use. Open drum carefully as content may be under pressure.

Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in closed containers.

Protect against moisture. Do not heat this material above 40°C.

Incompatible with acids, amines, bases, metals, and water.

Section 8 Exposure Controls/Personal Protection

Components with workplace control parameters

Components	CAS Number	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Diphenylmethanediisocyanate, polymeric	9016-87-9	TWA	0.005 ppm 0.05 mg/m³	NIOSH REL
4,4'-methylenediphenyl diisocyanate	101-68-8	TWA	0.005 ppm 0.05 mg/m³	NIOSH REL
2,4'-methylenediphenyl diisocyanate	5873-54-1	TWA	0.005 ppm 0.05 mg/m³	NIOSH REL

Appropriate engineering controls

Provide local exhaust ventilation to control mists/vapours.

Individual protection measures

Eye/face protection: Safety glasses equipped with side shields or goggles.

Hand protection: Chemical-resistant, impervious gloves. Consult glove manufacturer for suitability. Contaminated gloves should be replaced. Protective gloves should be worn when handling freshly made polyurethane products to avoid contact with trace residual materials which may be hazardous in contact with skin.

Body protection: Impervious clothing, prevent skin contact when handling material.

Respiratory protection: The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If airborne concentrations are elevated or adequate ventilation is not provided, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

Safety stations

Make emergency eyewash stations and washing facilities available in work area.

General hygienic practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

Appearance	Amber liquid
Odor	Slight, musty
Odor threshold	No data available
pH	Not applicable
Freezing point	<10°C (<50°F)
Boiling point/boiling range	No data available
Flash point	>93°C (>200°F)
Evaporation rate	No data available
Flammability (solid, gas)	Not applicable
Self-ignition	>300°C (>572°F)
Upper/lower flammability limits	No data available
Vapor pressure	<1.5 mmHg (25°C)
Vapor density	No data available
Relative density (g/cm³)	1.05 – 1.15
Water solubility	No data available
Coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	30 – 150 cP at room temperature

Section 10 Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.
Corrosion to metals: No corrosive effect on metal.
Oxidizing properties: Not an oxidizer.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Reaction with water (moisture) produces carbon dioxide gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents. MDI is insoluble with, and heavier than water and sinks to the bottom but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas.

Conditions to avoid

Avoid extreme temperature, direct sunlight, and exposure to moisture

Incompatible materials

Acids. amines, bases, metals and water

Hazardous decomposition products

Combustion products may include carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN.
In the event of extreme heat (>500°C), aniline is suspected of being formed.

Section 11 Toxicological Information

Acute oral toxicity:	LD50 Oral (Rat): >6,000 mg/kg (calculated)
Acute inhalation toxicity:	LC50 Inhalation (Rat): >7 mg/l (calculated) Exposure time: 4 hours Test atmosphere: vapor
Acute dermal toxicity:	LD50 Oral (Rat): >5,000 mg/kg (calculated)
Skin corrosion/irritation:	Irritating to skin
Serious eye damage/irritation	Irritating to eyes
Respiratory/skin sensitization:	May cause an allergic skin reaction., May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity:	Not expected to be mutagenic in humans.
Carcinogenicity:	No carcinogenic component of this product present at levels greater than or equal to 0.1% as defined by IARC, NTP and/or OSHA
Reproductive toxicity:	Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity (STOT)	
- Single Exposure:	May cause respiratory irritation.
- Repeated Exposure:	Not classified based on available information.
Aspiration hazard:	Not expected to be a hazard

Section 12 Ecological Information

Ecotoxicity: No data available for this product.

Component	Toxicity to fish	Toxicity to aquatic invertebrates	Toxicity to algae/aquatic plants	Chronic toxicity to aquatic invertebrates
2,2,4-trimethyl-1,3-pentanediol diisobutyrate (6846-50-0)	NOEC (Fish): >= 6 mg/l Exposure time: 96 h Remarks: (limit of solubility in fresh water)	NOEC: (Daphnia): >= 1.46 mg/l Exposure time: 48 h Remarks: (limit of solubility in fresh water)	EC50 (Chlorella pyrenoidosa): > 7.49 mg/l Exposure time: 72 h Remarks: (limit of solubility in fresh water)	EC50 (Daphnia): > 1.3 mg/l Exposure time: 21 d Remarks: (limit of solubility in fresh water)
Diphenylmethanediisocyanate, polymeric (9016-87-9)	LC50 (Brachydanio rerio (zebrafish)): > 1,000 mg/l End point: mortality Exposure time: 96 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 203	EL50 (Daphnia magna (Water flea)): 31.7 mg/l End point: Immobilization Exposure time: 48 h Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 202 GLP: yes	EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Test substance: Fresh water Method: OECD Test Guideline 201 Remarks: Information given is based on data obtained from similar substances.	NOEC (Daphnia magna (Water flea)): >= 10 mg/l Exposure time: 21 d Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 211
4,4'-methylenediphenyl diisocyanate (101-68-8)	LC50 (Brachydanio rerio (zebrafish)): > 100 mg/l End point: mortality Exposure time: 96 h Test substance: Fresh water Method: OECD Test Guideline 203	EL50 (Daphnia magna (Water flea)): 9 mg/l End point: Immobilization Exposure time: 48 h Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 202	EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 201 GLP: yes	NOEC (Daphnia magna (Water flea)): >= 10 mg/l Exposure time: 21 d Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 211
2,4'-methylenediphenyl diisocyanate (5873-54-1)	LL50 (Danio rerio (zebra fish)): > 100 mg/l End point: mortality Exposure time: 96 h Test substance: Fresh water Method: OECD Test Guideline 203	EL50 (Daphnia magna (Water flea)): 3.7 mg/l End point: Immobilization Exposure time: 48 h Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 202	EL10 (algae): > 100 mg/l Exposure time: 72 h Test substance: Fresh water Method: OECD Test Guideline 201	NOEC (Daphnia magna (Water flea)): >= 10 mg/l Exposure time: 21 d Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 211

Section 12 Ecological Information

Persistence and degradability: No data available for this product.

Component	Biodegradability
2,2,4-trimethyl-1,3-pentanediol diisobutyrate (6846-50-0)	Biodegradation: 70.73 % Exposure time: 28 d Method: Ready Biodegradability: CO2 Evolution Test
Diphenylmethanediisocyanate, polymeric (9016-87-9)	Biodegradability: aerobic Inoculum: Domestic sewage Concentration: 30 mg/l Result: Not biodegradable Biodegradation: 0 % Exposure time: 28 d Method: Inherent Biodegradability: Modified MITI Test (II) Test substance: Fresh water
4,4'-methylenediphenyl diisocyanate (101-68-8)	Biodegradability: aerobic Inoculum: activated sludge, non-adapted Result: Not readily biodegradable. Biodegradation: 0 % Exposure time: 28 d Method: OECD Test Guideline
2,4'-methylenediphenyl diisocyanate (5873-54-1)	Inoculum: Domestic sewage Concentration: 30 mg/l Result: Not biodegradable Biodegradation: 0 % Exposure time: 28 d Method: Inherent Biodegradability: Modified MITI Test (II) Remarks: Information given is based on data on the components and the ecotoxicology of similar products.

Bioaccumulative potential: No data available for this product.

Component	Bioaccumulation
2,2,4-trimethyl-1,3-pentanediol diisobutyrate (6846-50-0)	Species: Fish Bioconcentration factor (BCF): 1.95 Bioconcentration factor (BCF): 183 - 194
Diphenylmethanediisocyanate, polymeric (9016-87-9)	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 200 Exposure time: 28 d Concentration: 0.08 mg/l Test substance: Fresh water Remarks: Based on data from similar materials
4,4'-methylenediphenyl diisocyanate (101-68-8)	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 200 Exposure time: 28 d Concentration: 0.08 µg/l Method: OECD Test Guideline 305 Remarks: Bioaccumulation is unlikely.
2,4'-methylenediphenyl diisocyanate (5873-54-1)	Species: Fish Bioconcentration factor (BCF): 200 Concentration: 0.08 µg/l Method: OECD Test Guideline 305 GLP: yes Remarks: Bioaccumulation is unlikely.

Section 12 Ecological Information

Mobility in soil: No data available for this product

Component	Assessment transport between environmental compartments
2,2,4-trimethyl-1,3-pentanediol diisobutyrate (6846-50-0)	log Koc: 2.69 - 3.6 Method: QSAR model
Diphenylmethanediisocyanate, polymeric (9016-87-9)	No data available
4,4'-methylenediphenyl diisocyanate (101-68-8)	log Koc: 4.5 Method: QSAR
2,4'-methylenediphenyl diisocyanate (5873-54-1)	Koc: 4.5 Method: QSAR

Section 13 Disposal Considerations

EPA Hazardous Waste Code(s): None
Do not dispose of waste into sewer. Do not contaminate waterways. Contact a licensed contractor for detailed recommendations. Follow applicable federal, state, and local regulations.

Section 14 Transport Information

DOT / IATA / IMDG Not classified as a dangerous good in non-bulk packaging

Section 15 Regulatory Information

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components
4,4'-methylenediphenyl diisocyanate (101-68-8) RQ 5000 lb.
Superfund Amendments and Reauthorization Act of 1986 Title III (SARA)
Section 302 Extremely Hazardous Substances: No components with a section 302 EHS TPQ.
Section 313 Toxic Chemicals (40 CFR 372.65): Diphenylmethanediisocyanate, polymeric (9016-87-9) 25-45%, 4,4'-methylenediphenyl diisocyanate (101-68-8) 15-30%
HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61)
4,4'-methylenediphenyl diisocyanate (101-68-8)
The ingredients of this product are reported in the following inventories
DSL (Canada) : All components of this product are on the Canadian DSL
ENCS (Japan) : On the inventory, or in compliance with the inventory
TSCA (USA) : All substances listed as active on the TSCA inventory
No substances are subject to TSCA 12(b) export notification requirements.
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
⚠ WARNING: This product can expose you to cumene and benzene, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Chemical Name	CAS Number	Concentration (%)	No Significant Risk Level (NSRL)	Maximum Allowable Dose Level (MADL)
Cumene	98-82-8	<0.0004 (calculated)	Not established	Not established
Benzene	71-43-2	<0.0004 (calculated)	Inhalation 13 µg/day	Inhalation 49 µg/day

Section 16 Other Information

Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

Date of initial issue: November 21, 2024
Date of previous revision issue: N/A
Revision Date: November 21, 2024

FREEMAN Manufacturing & Supply Company

Safety Data Sheet

Freeman 2065 Part B (Hardener)

Section 1 Identification

Product identifiers

Freeman 2065 Part B (Hardener)

Relevant identified uses of the substance or mixture and uses advised against

Polyol component of polyurethane system. For industrial and professional use only.

Details of the supplier of the safety data sheet

Freeman Manufacturing & Supply Company
1101 Moore Road
Avon, OH 44011-4043 USA
Telephone: (440) 934-1902
Email: contactus@freemansupply.com

24 Hour emergency telephone number:
CHEMTREC (800) 424-9300
Customer Number 8849

Section 2 Hazards Identification

GHS Classification of product in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute Toxicity (oral). Category 4
Eye Irritation, Category 2A
Reproductive Toxicity, Category 2

GHS Label elements

Warning

Hazard Statements

H302 Harmful if swallowed
H319 Causes serious eye irritation.
H361 Suspected of damaging fertility or the unborn child.

Precautionary Statements

Prevention: P270 Do not eat, drink or smoke when using this product.
P264 Wash contaminated body parts thoroughly after handling.
P280 Wear protective gloves/eye protection/face protection.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth.
Response: P305+P351+P338: IF IN EYES: Rinse continuously 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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Storage: P405 Store locked up.
Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

Section 3 Composition/Information on Ingredients

Ingredient	CAS Number	EC / List Number	Concentration (%)
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	229-934-9	40-60
Benzenediamine, ar-methyl-, polymer with methyloxirane and oxirane	67800-94-6	614-144-2	30-40
Polyether Polyol	25214-63-5	933-202-0	10-20

Section 3 Composition/Information on Ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4 First Aid Measures

If inhaled

Move person into fresh air. If not breathing, give artificial respiration.
Call a physician or poison control center immediately.

In case of skin contact

Wash off immediately with plenty of water for at least 15 minutes. Take off all contaminated clothing immediately.
Call a physician or poison control center immediately.

In case of eye contact

Flush eyes with water for at least 15 minutes. Get medical attention immediately.

If swallowed

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting.
Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.
Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Toxic effects for reproduction. Suspected of damaging fertility or the unborn child.

Indication of any immediate medical attention and special treatment required

Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Section 5 Fire-Fighting Measures

Extinguishing Media

Suitable agents: Dry chemical, carbon dioxide (CO_2), water spray. Water fog applied gently may be used as a blanket for fire extinguishment.
Unsuitable agents: Do not use direct water stream, may spread fire.

Specific hazards arising from the chemical

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products

Fire or high heat may produce carbon dioxide, carbon monoxide, and other aliphatic fragments which have not been determined.

Special protective actions and equipment for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For personal protection see section 8.

Environmental precautions

Avoid release to the environment.

Methods and materials for containment and cleaning up

Use appropriate personal protective equipment during clean up. Evacuate and keep unnecessary people out of spill area.
Move containers from spill area. Absorb with an inert dry material until it appears dry. Place in an appropriate waste disposal container. See Section 13 for disposal guidance.

Section 7 Handling and Storage

Precautions for safe handling

For industrial/occupational use only. Ensure thorough ventilation of stores and work areas. Avoid breathing vapors or fumes. 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. Wash contaminated clothing before reuse. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Store at ambient temperatures in closed containers. Storage temperature: 18 - 29 °C
Protect against moisture. Do not heat this material above the flash point.
Incompatible with acids, and oxidizing agents (e.g. Chlorine, chromic acid etc.).
Avoid unintentional contact with isocyanates.

Section 8 Exposure Controls/Personal Protection

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Appropriate engineering controls

Provide local exhaust ventilation to control mists/vapours.

Individual protection measures

Eye/face protection: Safety glasses equipped with side shields or goggles.
Hand protection: Chemical-resistant, impervious gloves. Consult glove manufacturer for suitability. Contaminated gloves should be replaced.
Body protection: Prevent skin contact when handling material.
Respiratory protection: The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If airborne concentrations are elevated or adequate ventilation is not provided, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used.

Safety stations

Make emergency eyewash stations and washing facilities available in work area.

General hygienic practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

Appearance	Amber liquid
Odor	Slight, of polyol
Odor threshold	No data available
pH	Not determined
Freezing point	< 0°C (<32°F)
Boiling point/boiling range	>200°C (>392°F))
Flash point	>93°C (>200°F)
Evaporation rate	No data available
Flammability (solid, gas)	Not applicable
Upper/lower flammability limits	No data available
Vapor pressure	<2.00 mmHg (25°C)
Vapor density	No data available
Relative density (g/cm^3)	0.95 – 1.05
Water solubility	Slight
Coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	90 – 300 cP at room temperature

Section 10 Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.
Corrosion to metals: No corrosive effect on metal.
Oxidizing properties: Not an oxidizer.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

None known

Conditions to avoid

Avoid temperature >80°F, open flames and sources of ignition, and moisture

Incompatible materials

Strong oxidizing agents, acids, isocyanates

Hazardous decomposition products

Fire or high heat may produce hazardous decomposition products: carbon dioxide, carbon monoxide, and other aliphatic fragments which have not been determined.

Section 11 Toxicological Information

Acute toxicity: Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning.

Chronic toxicity: Not expected to cause adverse chronic health effects.

Skin corrosion/irritation: No irritation is expected under intended use and appropriate handling.

Respiratory/skin sensitization: Not classified based on available information.

Germ cell mutagenicity: Not expected to be mutagenic in humans.

Carcinogenicity: No carcinogenic component of this product present at levels greater than or equal to 0.1% as defined by IARC, NTP and/or OSHA

Reproductive toxicity: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity (STOT)

- Single Exposure: Not classified based on available information.

- Repeated Exposure: Not classified based on available information.

Aspiration hazard: Not expected to be a hazard

Section 12 Ecological Information

Ecotoxicity: No data available for this product.

Component	Toxicity to fish	Toxicity to aquatic invertebrates	Toxicity to algae/aquatic plants	Chronic toxicity to aquatic invertebrates
2,2,4-trimethyl-1,3-pentanediol diisobutyrate (6846-50-0)	NOEC: (Fish): >= 6 mg/l Exposure time: 96 h Remarks: (limit of solubility in fresh water)	NOEC: (daphnid): >= 1.46 mg/l Exposure time: 48 h Remarks: (limit of solubility in fresh water)	EC50 (Chlorella pyrenoidosa): > 7.49 mg/l Exposure time: 72 h Remarks: (limit of solubility in fresh water)	EC50 (Daphnia): > 1.3 mg/l Exposure time: 21 d Remarks: (limit of solubility in fresh water) NOEC: (Daphnia): 0.7 mg/l Exposure time: 21 d

Section 12 Ecological Information

Benzenediamine, ar-methyl-, polymer with methyloxirane and oxirane (67800-94-6)	LC50 (48 h) > 100 mg/l, Brachydaniorerio	EC50 (48 h) > 100 mg/l, Daphnia magna	No data available	No observed effect concentration (21 d) > 1 mg/l, Daphnia magna
Polyether Polyol (25214-63-5)	LC 50 (Fathead minnow (Pimephales promelas), 96 h): >1,000 mg	No data available	No data available	No data available.

Persistence and degradability: No data available for this product.

Component	Biodegradability
2,2,4-trimethyl-1,3-pentanediol diisobutyrate (6846-50-0)	Biodegradation: 70.73 % Exposure time: 28 d Method: Ready Biodegradability: CO2 Evolution Test
Benzenediamine, ar-methyl-, polymer with methyloxirane and oxirane (67800-94-6)	Poorly biodegradable.
Polyether Polyol (25214-63-5)	aerobic, < 50 %, Exposure time: 28 d

Bioaccumulative potential: No data available for this product.

Component	Bioaccumulation
2,2,4-trimethyl-1,3-pentanediol diisobutyrate (6846-50-0)	Species: Fish Bioconcentration factor (BCF): 1.95 Bioconcentration factor (BCF): 183 - 194
Benzenediamine, ar-methyl-, polymer with methyloxirane and oxirane (67800-94-6)	Significant accumulation in organisms is not to be expected.
Polyether Polyol (25214-63-5)	No data available

Mobility in soil: No data available for this product

Component	Assessment transport between environmental compartments
2,2,4-trimethyl-1,3-pentanediol diisobutyrate (6846-50-0)	No data available
Benzenediamine, ar-methyl-, polymer with methyloxirane and oxirane (67800-94-6)	Adsorption to solid soil phase is not expected.
Polyether Polyol (25214-63-5)	No data available

Section 13 Disposal Considerations

EPA Hazardous Waste Code(s): None
Do not dispose of waste into sewer. Do not contaminate waterways. Contact a licensed contractor for detailed recommendations. Follow applicable federal, state, and local regulations.

Section 14 Transport Information

DOT / IATA / IMDG Not classified as a dangerous good in non-bulk packaging

Section 15 Regulatory Information

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components
None
Superfund Amendments and Reauthorization Act of 1986 Title III (SARA)
Section 302 Extremely Hazardous Substances: No components with a section 302 EHS TPQ.
Section 313 Toxic Chemicals (40 CFR 372.65): This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
The ingredients of this product are reported in the following inventories:
TSCA: All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
No substances are subject to TSCA 12(b) export notification requirements.
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
⚠ WARNING: This product can expose you to cumene and benzene, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Chemical Name	CAS Number	Concentration (%)	No Significant Risk Level (NSRL)	Maximum Allowable Dose Level (MADL)
Cumene	98-82-8	<0.0004 (calculated)	Not established	Not established
Benzene	71-43-2	<0.0004 (calculated)	Inhalation 13 µg/day	Inhalation 49 µg/day

Section 16 Other Information

Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

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