CHEMLINE 7001FR PART B

1 PRODUCT AND COMPANY IDENTIFICATION

Supplier Details: Chemline Incorporated
5151 Natural Bridge Road
Saint Louis, MO 63115

Emergency: CHEMTREC 800-262-8200 (24 HOUR SERVICE)
Phone: 314-664-2230
Fax: 314-664-1355
Web: www.chemline.net

2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):

Environmental, Hazards to the aquatic environment - Acute, 3
Health, Respiratory or skin sensitization, 1 Skin
Health, Specific target organ toxicity - Single exposure, 3
Health, Acute toxicity, 4 Dermal
Health, Acute toxicity, 4 Inhalation
Health, Acute toxicity, 4 Oral
Environmental, Hazards to the aquatic environment - Chronic, 3

GHS Label elements, including precautionary statements

GHS Signal Word: WARNING

GHS Hazard Pictograms:

GHS Hazard Statements:

H402 - Harmful to aquatic life
H317 - May cause an allergic skin reaction
H336 - May cause drowsiness or dizziness
H312 - Harmful in contact with skin
H332 - Harmful if inhaled
H302 - Harmful if swallowed
H412 - Harmful to aquatic life with long lasting effects

GHS Precautionary Statements:

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
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.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor/physician.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P330 - Rinse mouth.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to a licensed waste disposal company.

Hazards not otherwise classified (HNOC) or not covered by GHS

Route of Entry: Eyes; Ingestion; Inhalation; Skin;

Target Organs: Eyes; Skin; Respiratory system;

Inhalation: Heating, spraying, foaming or otherwise mechanically dispersing operations way generate vapor or aerosol concentrations sufficient to cause irritation or other adverse effects. Minimal respiratory tract irritation may occur with exposure to a large amount of material.

Skin Contact: Prolonged or repeated exposure can cause skin irritation or dermatitis in some individuals.

Eye Contact: May cause watering of the eye and irritation of the conjunctiva.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
102-60-3	10-30%	2-Propanol, 1,1',1'',1'''-(1,2-ethanediyldinitrilo)tetrakis-
110-63-4	0-6%	1,4-Butanediol
39423-51-3	0-3%	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)
111-46-6	0-2%	Diethylene glycol
13674-84-5	5-25%	2-Propanol, 1-chloro-, phosphate (3:1)
0	40-60%	Proprietary polyol blend

4 FIRST AID MEASURES

Inhalation: If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.

Skin Contact: Remove all contaminated clothing and shoes. Wash skin with large quantities of water and soap. Wash clothing before wearing again and clean shoes. If redness, itching or a burning sensation develops or persists after the area is washed, consult a physician.

Eye Contact: Flush eyes with plenty of water for at least 15 minutes. Use fingers to assure that the eyelids are separated and that the eye is being irrigated. Consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Bring to the attention of a physician.

5 FIRE FIGHTING MEASURES

Flammability: OSHA - none; DOT - none

Flash Point: 300°F

Flash Point Method: COC

Autoignition Temp: NDA

Use dry chemical, foam, carbon dioxide, or halogenated agents. If water is used, use very large quantities. The reaction between water and hot isocyanate may be vigorous. If possible, contain fire run-off water.
Protective Equipment: Wear positive-pressure self-contained breathing apparatus with full face mask and full protective clothing.
Unusual Hazards: At temperatures greater than 400°F, polymeric MDI can polymerize and decompose which will cause

pressure build-up in closed containers. Explosive rupture is possible. Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture the containers. Downwind personnel must be evacuated. Fire Degradation Products: Isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides and traces of hydrogen cyanide.

6 ACCIDENTAL RELEASE MEASURES

Spill: Remove all sources of flames, heating elements, gas engines, etc. Emergency clean-up personnel should wear chemical goggles, rubber or plastic gloves and clothing as required to protect against contact. Prevent spreading and contamination of surface waters and drinking supplies. Notify local health officials and other appropriate agencies if such contamination should occur.
Clean up: With adequate ventilation and appropriate personal protective equipment, cover the area with an inert absorbent material such as clay or vermiculite and transfer to steel waste containers. Ventilate area to remove the remaining vapors.

7 HANDLING AND STORAGE

Handling Precautions:

Handling: Avoid skin and eye contact. Use personal protective equipment when transferring material to or from drums, totes or other containers. If contamination with isocyanates is suspected, do not reseal containers. Do not smoke or use naked lights, open flames, space heaters, or other ignition sources near pouring, frothing or spraying operations
Special Emphasis for Spray Applications of Mixed Products Containing Isocyanates: Inspect the application area for the potential to expose other persons or for overspray to drift onto buildings, vehicles or other property. When spraying building exteriors, persons entering or exiting the building as well as those inside could be exposed to polyisocyanates due to wind conditions, open windows or air intakes. Do not begin application work until these potential problems have been corrected.

Storage Requirements:

Storage: When stored between 15 and 30°C (60 and 85°F) in sealed containers, typical shelf life is 6 months or more from the date of manufacture. Consult technical data sheet for shelf life requirements affecting performance quality. Opened containers must be handled properly to prevent moisture pickup.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94).

Uses requiring heating and/or spraying may require more agressive engineering controls or PPE.

Personal Protective Equipment:

Personal protective equipment

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:Dermatril (KCL 740 / Aldrich Z677272, Size M)

Splash protection: Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:Dermatril (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

2-Propanol, 1,1',1'',1'''-(1,2-ethanediyldinitrilo)tetrakis- (102-60-3) [10-30%] : no data available

1,4-Butanediol (110-63-4) [0-6%] : no data available

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (39423-51-3) [0-3%] : no data available

Diethylene glycol (111-46-6) [0-2%]

Components with workplace control parameters

TWA 10 mg/m3 USA. Workplace Environmental Exposure Levels (WEEL)

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5) [5-25%] : no data available

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Non-Pigmented liquid.		
Physical State:	Liquid	**Odor:**	Slightly musty odor
Odor Threshold:	No data available	**Solubility:**	Not soluble in water.
Spec Grav./Density:	N/A	**Percent Volatile:**	0%
Viscosity:	No data available	**Freezing/Melting Pt.:**	No data available
Boiling Point:	>442°F	**Flash Point:**	300°F

Flammability:	None	**Vapor Density:**	>1
Partition Coefficient:	No data available	**Auto-Ignition Temp:**	NDA
Vapor Pressure:	No data available	**UFL/LFL:**	No data available
pH:	No data available		
Evap. Rate:	<1		
Decomp Temp:	No data available		

10 STABILITY AND REACTIVITY

Chemical Stability:	This is a stable material. Avoid high temperatures, sparks, flame and extended exposure over 110°F (45°C). This is a stable material. Avoid high temperatures, sparks, flame and extended exposure over 110°F (45°C).
Conditions to Avoid:	High temperatures, sparks, flame and extended exposure over 110°F (45°C).
Materials to Avoid:	isocyanates; Oxidizing materials; acids;
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

2-Propanol, 1,1',1'',1'''-(1,2-ethanediyldinitrilo)tetrakis- (102-60-3) [10-30%]

Information on toxicological effects

Acute toxicity:
Oral LD50 no data available
Inhalation LC50
Dermal LD50
Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: May cause allergic skin reaction.

Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Synergistic effects: no data available

Additional Information:

RTECS: UB5604000

1,4-Butanediol (110-63-4) [0-6%]

Information on toxicological effects

Acute toxicity:
LD50 Oral - rat - 1,525 mg/kg Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Somnolence (general depressed activity). Blood:Other changes.
Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: EK0525000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Stomach - Irregularities - Based on Human Evidence

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (39423-51-3) [0-3%]

Information on toxicological effects

Acute toxicity:
Oral LD50 no data available
Inhalation LC50
Dermal LD50 Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Ingestion Harmful if swallowed. Skin Harmful if absorbed through skin. Causes skin burns. Eyes Causes eye burns.

Signs and Symptoms of Exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

Synergistic effects: no data available

Additional Information:

RTECS: Not available

Diethylene glycol (111-46-6) [0-2%]

Information on toxicological effects

Acute toxicity:
LD50 Oral - rat - 12,565 mg/kg
Inhalation: no data available

LD50 Dermal - rabbit - 11,890 mg/kg

Skin corrosion/irritation: Skin - rabbit Result: Mild skin irritation

Serious eye damage/eye irritation: Eyes - rabbit Result: Mild eye irritation

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: ID5950000

Confusion., Dizziness, Kidney injury may occur., Unconsciousness, Convulsions, Pulmonary edema. Effects may be delayed., Nausea, Headache, Vomiting
Liver - Irregularities - Based on Human Evidence

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5) [5-25%]

Information on toxicological effects

Acute toxicity:
LD50 Oral - rat - female - 1,969 mg/kg
LD50 Oral - rat - male - 1,017 - 4,200 mg/kg
LD50 Dermal - rabbit - > 2,000 mg/kg
no data available

Skin corrosion/irritation: Skin - rabbit Result: Mild skin irritation

Serious eye damage/eye irritation: Eyes - rabbit Result: Mild eye irritation

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: TC9000000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Stomach - Irregularities - Based on Human Evidence

12 ECOLOGICAL INFORMATION

2-Propanol, 1,1',1'',1'''-(1,2-ethanediyldinitrilo)tetrakis- (102-60-3) [10-30%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

1,4-Butanediol (110-63-4) [0-6%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (39423-51-3) [0-3%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Diethylene glycol (111-46-6) [0-2%]

Information on ecological effects

Toxicity:
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 75,200 mg/l - 96 h.

LC50 - Carassius auratus (goldfish) - 5,000 mg/l - 24 h
Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - > 10,000 mg/l - 24 h.
other aquatic invertebrates

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5) [5-25%]

Information on ecological effects

Toxicity:
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 51 mg/l - 96 h.

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

no data available

13 DISPOSAL CONSIDERATIONS

Disposal: Any disposal practice must be in compliance with all federal, state and local laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance are the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.
Do not allow material to enter sewers, a body of water, or contact the ground. Refer to RCRA 40 CFR 261, and/or any other appropriate federal, state or local requirements for proper classification information.

14 TRANSPORT INFORMATION

Non DOT/RCRA regulated

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

2-Propanol, 1,1',1",1'"-(1,2-ethanediyldinitrilo)tetrakis- (102-60-3) [10-30%] TSCA

1,4-Butanediol (110-63-4) [0-6%] HAP, TSCA, TXAIR

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (39423-51-3) [0-3%] TSCA

Diethylene glycol (111-46-6) [0-2%] HAP, PA, TSCA

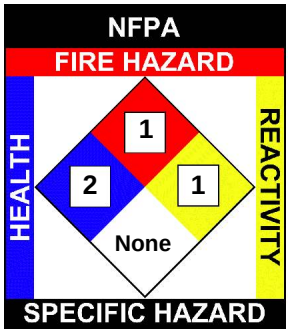
2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5) [5-25%] TSCA

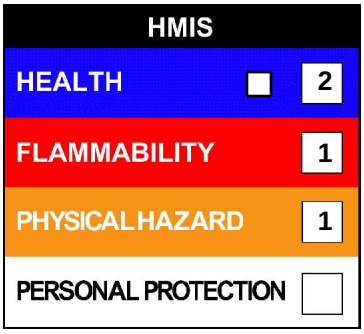
Regulatory CODE Descriptions

TSCA = Toxic Substances Control Act
HAP = Hazardous Air Pollutants
TXAIR = TX Air Contaminants with Health Effects Screening Level
PA = PA Right-To-Know List of Hazardous Substances
IARC = IARC Carcinogen Risks

16 OTHER INFORMATION

NFPA: Health = 2, Fire = 1, Reactivity = 1, Specific Hazard = None
HMIS III: Health = 2, Fire = 1, Physical Hazard = 1





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