

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: URETHANE ALIPHATIC - ISO COMPONENT B
Product Code: UA7090I, UA7090I-1, UA7090I-5, UA7090I-Q

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Product Use: Architectural Coating and Waterproofing
 Use this product in accordance with all local, regional, national and international regulations.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address: Gaco Western LLC
 1245 Chapman Dr.
 Waukesha, WI, 53186-5942
 USA
Telephone Number: 800-331-0196 / **International:** 001-800-331-0196
Email: sds@gaco.com
Website: www.gaco.com

1.4 EMERGENCY TELEPHONE NUMBER

For Chemical Emergency
 Spill, Leak, Fire, Exposure, or Incident
 Within USA and Canada: 1-800-424-9300
 Outside USA and Canada: +1-703-527-3887 (collect calls accepted)

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL

Hazard class:

HAZARD CLASSIFICATION	CATEGORY
Acute Toxicity - Inhalation	3
Skin Corrosion/Irritation	2
Eye Damage/Irritation	2A
Sensitization - Respiratory	1
Sensitization – Skin	1B
STOT SE - Specific Toxic Organ Toxicity (Single Exposure)	3
Flammable Liquids	2

2.2 LABEL ELEMENTS

Hazard pictogram: GHS02, GHS06, GHS08



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Signal word:	Danger
Hazard statement:	Highly flammable liquid and vapor Causes skin irritation May cause an allergic skin reaction Causes serious eye irritation Toxic if inhaled May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause respiratory irritation
Prevention:	Keep away from heat, hot surfaces/sparks/open flames/hot surfaces. -No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/eye protection/face protection. In case of inadequate ventilation, wear respiratory protection.
Response:	In case of fire: Use water fog, foam, dry chemical powder, carbon dioxide (CO ₂) to extinguish. Specific treatment (see Section 8 on this label). If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or a rash occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Storage:	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal:	Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3 ADDITIONAL INFORMATION

Main symptoms:	Difficulty breathing. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause allergic skin reaction. Dermatitis. Rash. Skin irritation. May cause redness and pain. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Animal tests and other research indicate that skin contact with isocyanates can play a role in causing isocyanate sensitization and respiratory reaction. Lung damage and respiratory sensitization may be permanent.
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Hazards not otherwise specified: Toxic to aquatic life with long lasting effects

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0 % of the mixture consists of ingredient(s) of unknown acute toxicity

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Material	CAS No.	Weight %*
Isophorone di-isocyanate	4098-71-9	30-60%
4-Chloro- α,α,α -trifluorotoluene	98-56-6	10-30%
isophoronediiisocyanate, homopolymer	53880-05-0	10-30%
2,2,4-Trimethyl-1,3-pentanediol	144-19-4	5-10%
Acetone	67-64-1	5-10%
n-Butyl acetate	123-86-4	5-10%

*The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: FIRST-AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURES

- General information:** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison center immediately.
- Skin contact:** Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and bring along these instructions. Wash contaminated clothing before reuse.
- Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
- Ingestion:** Rinse mouth. Get medical attention if symptoms occur.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Difficulty breathing. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 - May cause respiratory irritation.
 - May cause allergic skin reaction. Dermatitis. Rash.
 - Skin irritation. May cause redness and pain.
- Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
- Skin contact with isocyanates can cause discoloration. Animal tests and other research indicate that skin contact with isocyanates can play a role in causing isocyanate sensitization and respiratory reaction. This data reinforces the need to prevent direct skin contact with isocyanates.
- Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest

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discomfort, shortness of breath, and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

Note to physicians:

Treat symptomatically. Symptoms may be delayed. Thermal burns: Flush with water immediately. While flushing, remove clothes that do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision.

Skin: This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn.

Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound.

Inhalation: Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

Specific treatments:

In case of accident or if you feel unwell, seek medical advice (show the label or SDS where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

General hazards:

Highly flammable liquid and vapor.

Suitable extinguishing media:

Foam, CO2 or dry powder. Water spray may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous. Prevent washings from entering water courses, keep fire exposed containers cool by spraying with water.

Unsuitable extinguishing media:

Do not use water jet as an extinguisher as this will spread the fire.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Specific hazards:

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

Products of combustion:

May include, and are not limited to: carbon oxides (CO, CO2) nitrogen oxides (NO, NO2 etc.) hydrocarbons, isocyanate vapors, and hydrogen cyanide.

5.3 Special protective equipment and precautions for fire-fighters (PPE)

Special protective equipment for fire-fighters:

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire-fighting procedures:

In case of fire and/or explosion, do not breathe fumes. Move containers from fire area if you can do it without risk. Keep upwind of fire. Move containers from fire area if you can do it without risk.

During a fire, isocyanate vapors and other irritating, highly toxic gases

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may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

Methods for containment:

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning-up:

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. For waste disposal, see Section 13 of the SDS.

If the product is in its solid form: Spilled isocyanate flakes should be picked up carefully. The area should be vacuum cleaned to remove remaining dust particles completely.

If the product is in its liquid form: Absorb spillages onto sand, earth or any suitable adsorbent material. Leave to react for at least 30 minutes. Do NOT absorb onto sawdust or other combustible materials. Shovel into open-top drums for further decontamination. Wash the spillage area with water. Test atmosphere for isocyanate vapour. Neutralise small spillages with decontaminant. Remove and dispose of residues. The compositions of liquid decontaminants are : (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. (See supplier safety information.)

Large spills:

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Prevent product from entering drains.

Small spills:

Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

Environmental precautions:

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 7: HANDLING AND STORAGE**7.1 PRECAUTIONS FOR SAFE HANDLING**

Precautions for Safe handling: Vapors may form explosive mixtures with air. Do not handle or store near an open flame, heat or other sources of ignition. Do not smoke. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, used in confined space, or if the exposure limit is exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are NOT adequate to prevent overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must be exposed to vapor or spray mist. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling. Do NOT breathe smoke and gases created by over heating or burning this material. Decomposition products can be highly toxic and irritating. Store in tightly closed containers to prevent moisture contamination. Do NOT reseal if contamination is suspected.

General hygiene advice: Ensure that medical personnel are aware of the materials(s) involved, and take precautions to protect themselves.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Safe storage: Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Keep container tightly closed. Store in a cool and well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

Store away from incompatible materials.

Minimum: 50°F (10°C)

Maximum: 86°F (30°C)

Specific use: Architectural Coating and Waterproofing

Technical measures: Vapors may form explosive mixtures with air. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment.

Incompatible materials: Copper, copper alloy, galvanized surfaces, water, amines, strong bases, alcohols. Moisture sensitive.

Safe packaging material: Keep in original container.

Precautions: Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Take precautionary measures against static discharges.

Safe handling advice: Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Take precautionary measures against static discharges. Use personal protection recommended in Section 8 of the SDS.

Suitable storage conditions: Keep away from heat, sparks and open flame. Keep container tightly closed.

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Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials. Store in tightly closed containers to prevent moisture contamination. Do NOT reseal if contamination is suspected.

Handling-technical measures: Use non-sparking tools and explosion-proof equipment. All equipment used when handling this product must be grounded.

Local and general ventilation: Provide adequate ventilation.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 CONTROL PARAMETERS**

Control parameters: Follow standard monitoring procedures. Eye wash facilities and emergency shower must be available when handling this product.

Exposure limits:**Isophorone di-isocyanate (and isophoronediiisocyanate, homopolymer)**

NIOSH:
REL-TWA ppm: 0.005
REL-TWA mg/m³: 0.045
REL-STEL ppm: 0.02
REL-STEL mg/m³: 0.18
Skin Notation: Y

4-Chloro- α,α,α -trifluorotoluene

OSHA PEL 2.5 mg.m³ (dust)

Acetone

OSHA:
PEL-TWA ppm: 1000
PEL-TWA mg/m³: 2400
NIOSH:
REL-TWA ppm: 250
REL-TWA mg/m³: 590
IDLH ppm: 2500
IDLH Notes: 10% of LEL

n-Butyl acetate

OSHA:
PEL-TWA ppm: 150
PEL-TWA mg/m³: 710
NIOSH:
REL-TWA ppm: 150
REL-TWA mg/m³: 710
REL-STEL ppm: 200
REL-STEL mg/m³: 950

8.2 EXPOSURE CONTROLS**Engineering measures to reduce exposure:**

Explosion-proof general and local exhaust ventilation.

Provide sufficient air exchange and/or exhaust in work rooms. In all workplaces or parts of the plant where high concentrations of isocyanate

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aerosols and/or vapors may be generated (e.g. during pressure release, mold venting or when cleaning mixing heads with an air blast), appropriately located exhaust ventilation must be provided in order to prevent occupational exposure limits from being exceeded. The air should be drawn away from the personnel handling the product. The efficiency of the ventilation system must be monitored regularly because of the possibility of blockage. Atmospheric concentrations should be minimized and kept as low as reasonably practicable below the occupational exposure limit.

8.3 INDIVIDUAL PROTECTIVE MEASURES**General:**

Eye wash fountain and emergency showers are recommended. Use personal protective equipment as required.

Animal tests and other research indicate that skin contact with isocyanates can play a role in causing isocyanate sensitization and respiratory reaction. Lung damage and respiratory sensitization may be permanent.

All applicants who are assigned to an isocyanate work area should undergo a pre-placement medical evaluation. A history of eczema or respiratory allergies such as hay fever, are possible reasons for medical exclusion from isocyanate areas. Applicants who have a history of adult asthma should be restricted from work with isocyanates. A comprehensive annual medical surveillance program should be instituted for all employees who are potentially exposed to diisocyanates. Once a worker has been diagnosed as sensitized to any isocyanate, no further exposure can be permitted.

Eye protection:

Wear safety glasses with side shields (or goggles).

Hand protection:

Wear appropriate chemical resistant gloves. Nitrile rubber showed excellent resistance. Butyl rubber, neoprene and PVC are also effective.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Airborne isocyanate concentrations greater than the ACGIH TLV-TWA (TLV) or OSHA PEL-C- (PEL) can occur in inadequately ventilated environments when isocyanates is sprayed, aerosolized, or heated. In such cases, respiratory protection must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The type of respiratory protection available includes (1) an atmosphere-supplying respiratory such as a self-contained breathing apparatus (SCBA) or a supplied air respirator (SAR) in the positive pressure or continuous flow mode, or (2) an air purifying respirator (APR). If an APR is selected then (a) the cartridge must be equipped with an end-of-service life indicator (ESLI) certified by NIOSH, or (b) a change out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program. Further, if an APR is selected, the airborne diisocyanate concentration must be no greater than 10 times the TLV or PEL. The recommended APR cartridge is an organic vapor/particulate filter combination cartridge (OV/P100).

Skin and body protection:

Wear appropriate chemical resistant clothing. Animal tests and other research indicate that skin contact with isocyanates can play a role in causing isocyanate sensitization and respiratory reaction. This data reinforces the need to prevent direct skin contact with isocyanates.

Hygiene measures:

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed

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Thermal hazards: out of the workplace.
Wear appropriate thermal protective clothing, when necessary.

Environmental exposure controls: Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White Liquid
Color:	White
Form:	Liquid
Odor:	Strong solvent
Odor Threshold:	Not available
Physical State:	Liquid
pH (at 20°C):	Not available
Melting Point/Freezing Point:	Not available
Initial Boiling Point and Boiling Range:	Not available
Flash Point:	-4°F/-20°C
Evaporation Rate:	Not available
Flammability (solid, gaseous):	Highly flammable liquid and vapor.
Lower Flammability/Explosive Limit:	Not available
Upper Flammability/Explosive Limit:	Not available
Vapor Pressure (mm Hg @38°C):	Not available
Vapor Density:	Not available
Density (lb/gal):	8.903
Relative Density/Specific Gravity:	1.069
Solubility in water/miscibility:	Insoluble - reacts slowly with water to liberate CO2 gas
Partition coefficient: n-octanol/water:	Not available
Auto-ignition Temperature:	Not available
Decomposition Temperature:	Not available
Viscosity (at 20°C) g/L:	Not available
Oxidizing Properties:	Not available
Explosive Properties:	Not available
VOC:	<50 g/L (<0.417 lb/gal)
Solvent content - Organic:	Not available
Solvent content - Water:	Not available
Solvent content - Solids:	66.5%
Other information:	Not available
Incompatibilities:	Copper, copper alloy, galvanized surfaces, water, amines, strong bases, alcohols. Moisture sensitive.

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 CHEMICAL STABILITY
Chemical stability: Material is stable under normal conditions.
Materials to avoid: The product is stable and non-reactive under normal conditions of use, storage and transport.

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10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 CONDITIONS TO AVOID

Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.

10.5 INCOMPATIBLE MATERIALS

Copper, copper alloy, galvanized surfaces, water, amines, strong bases, alcohols. Moisture sensitive.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous decomposition products: By fire and high heat: Carbon dioxide (CO₂), Carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke, isocyanate, isocyanic acid, other undetermined compounds.

Hazardous polymerization: Moisture sensitive. Contact with moisture, other materials that react with isocyanates, or temperatures above 350°F (177°C), may cause polymerizations.

Other information: Not available.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity: Difficulty breathing. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Toxic if inhaled. May cause an allergic skin reaction. Dermatitis. Rash. Skin irritation. May cause redness and pain. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Likely routes of exposure: Skin contact. Eye contact. Inhalation.

Eye: Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Skin: May cause an allergic skin reaction. Dermatitis. Rash. Causes irritation. May cause redness and pain. Contact with isocyanates can cause discoloration. Animal tests and other research indicate that skin contact with MDI can play a role in causing isocyanate sensitization and respiratory reaction. This data reinforces the need to prevent direct skin contact with isocyanates.

Ingestion: Not an expected route of exposure. Expected to be a low ingestion hazard.

Inhalation: Toxic if inhaled. Difficulty breathing. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

LD50/LC50 values relevant to this classification:

Isophorone di-isocyanate (and isophoronediiisocyanate, homopolymer)

Oral rat LD50 4814 mg/kg bw
 Oral mouse LD50 >2645 mg/kg bw
 Oral rat LD50 2645 mg/kg bw
 Oral rat LD50 5490 mg/kg bw
 Inhal rat LC50 0.031 mg/L air 4hr
 Inhal rat LC50 31 mg/m³ air 4hr
 Inhal rat LC50 50 mg/m³ air 4hr
 Inhal rat RD50 4.7 mg/m³ air 3hr
 Inhal rat LC50 40 mg/m³ air 4hr
 Inhal rat LC50 260 mg/m³ air 1hr
 Inhal mouse LC50 3 mg/m³ air 30min
 Derm rat LD50 >7000 mg/kg bw
 Derm rabbit LD50 4780 mg/kg bw

4-Chloro- α,α,α -trifluorotoluene

Oral rat LD50 5546 mg/kg bw
 Oral rat LD50 7270 mg/kg bw
 Inhal rat LC50 32.03 mg/L air 4hr
 Derm rabbit LD50 >5000 mg/kg bw
 Derm rabbit LD50 >2000 mg/kg bw

2,2,4-Trimethyl-1,3-pentanediol

Oral LD50: (Rat): 3,200 mg/kg
 Dermal LD50: (Guinea Pig): > 20 ml/kg
 Inhalation LC50 (Rat, 6 h): > 3.3 mg/l

Acetone

Oral rat LD50 5800 mg/kg bw
 Oral rat LD50 7190 mg/kg bw
 Inhal rat LC50 132 mg/L air 3hr
 Inhal rat LC50 76.0mg/L air 4hr
 Derm guinea pig LD50 7426 mg/kg bw
 Derm rabbit LD50 15,800 mg/kg bw

n-Butyl acetate

Oral rat LD50 12.2-14.5 mL/kg bw
 Oral rat LD50 10,760 mg/kg bw (calculated)
 Oral rat LD50 14,130 mg/kg bw
 Inhal rat LC50 >21 mg/L air 4hr
 Inhal rat LC50 5280 mg/m³ air 4hr
 Inhal rat LC50 23.4 mg/L air 4hr
 Inhal rat LC50 44.9 mg/L air 4hr (9312 ppm)
 Inhal rat LC50 >4.6 mg/L air 4hr
 Inhal rat LC50 >71.5 mg/L air 4hr
 Inhal rat LC50 >21.1 mg/L air 4hr
 Derm rabbit LD50 >16 mL/kg bw (14,112 mg/kg bw)
 Derm rabbit LD50 >20 mL/kg bw (17,600 mg/kg bw)

Calculated overall chemical acute toxicity values for this formulation:

Calculated overall Chemical Acute Toxicity Values		
LC50 (inhalation)	LD50 (oral)	LD50 (dermal)

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1<5 mg/kg (dust and mist)	>2000 mg/kg	>2000 mg/kg
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11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

Skin corrosion/irritation:	Causes irritation. May cause redness and pain..
Serious eye damage/irritation:	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Respiratory sensitization:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization:	May cause an allergic skin reaction.
Symptoms and target organs:	Difficulty breathing. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause an allergic skin reaction. Dermatitis. Rash. Skin irritation. May cause redness and pain. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Chronic health effects:	No chronic health effects known.
Carcinogenicity:	This product is not classified as a carcinogen.
Mutagenicity:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductive Toxicity:	This product is not expected to cause reproductive or developmental effects.
Specific Target Organ Toxicity (STOT):	
Single Exposure:	May cause respiratory irritation.
Repeated Exposure:	Not classified as an STOT - Repeated Exposure.
Aspiration Toxicity:	Based on available data, this product is not expected to cause aspiration toxicity.
Other Information:	Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Ecotoxicity:	Toxic to aquatic life with long lasting effects.
Acute aquatic toxicity:	The product is not classified as acutely environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Chronic toxicity:	Toxic to aquatic life with long lasting effects.
Environmental effects:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

12.2 PERSISTENCE AND DEGRADABILITY

Persistence/biodegradability:	The product contains substances which are not expected to be readily biodegradable.
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12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation:	No data available.
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12.4 MOBILITY

Mobility:	No data available.
Mobility in soil:	No data available.
Mobility in non-soil:	No data available.

12.5 OTHER ADVERSE EFFECTS

Ozone layer:	No data available.
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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

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Disposal method:	This material must be disposed of in accordance with all local, state, provincial, and federal regulations.
Contaminated packaging:	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Dispose of contents and container in accordance with all local, regional, national and international regulations.
EU codes:	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Residual waste:	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Disposal instructions:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents and container in accordance with all local, regional, national and international regulations.
Waste codes:	D001: Waste Flammable material with a flash point <140°F (<60°C) The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Other disposal recommendations:	None

SECTION 14: TRANSPORT INFORMATION**DOT Non-Bulk**

UN: UN1992

Proper shipping name: Flammable liquids, toxic, n.o.s. (Acetone, Isophorone di-isocyanate)**Hazard class:** 3, 6.1**Packing group:** PG II**DOT Bulk**

UN: UN1992

Proper shipping name: Flammable liquids, toxic, n.o.s. (Acetone, Isophorone di-isocyanate)**Hazard class:** 3, 6.1**Packing group:** PG II**IMDG**

UN: UN1992

Proper shipping name: Flammable liquids, toxic, n.o.s. (Acetone, Isophorone di-isocyanate)**Hazard class:** 3, 6.1**Packing group:** PG II**ICAO/IATA**

UN: UN1992

Proper shipping name: Flammable liquids, toxic, n.o.s. (Acetone, Isophorone di-isocyanate)**Hazard class:** 3, 6.1**Packing group:** PG II

Reportable quantity: Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material

SECTION 15: REGULATORY INFORMATION**15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL****US Federal Regulations:**

SAFETY DATA SHEET

U.S. OSHA (Occupational Safety and Health Administration) Specifically Regulated Substances (29 CFR 1910.1001-1050)

No components of this product are present at concentration greater than or equal to 0.1% and are identified as a carcinogen or potential carcinogen by OSHA.

SARA/CERCLA reporting requirements:

The following components of this product are found at concentrations greater than or equal to 0.1% and are subject to SARA/CERCLA reporting requirements.

Material	SARA 302 (EHSs) TPQ	SARA 304 EHSs RQ	CERCLA RQ	SARA 313 listed	RCRA CODE	CAA 112(r) TQ
Isophorone di-isocyanate	500	500	Not listed	313	Not listed	Not listed
Acetone	Not listed	Not listed	5,000	Not listed	U002	Not listed
n-Butyl acetate	Not listed	Not listed	5,000	Not listed	Not listed	Not listed

State Right-to-Know Regulations

The following components of this product are found at concentrations greater than or equal to 0.1%, subject to state Right-to-Know reporting requirements; or are found at any concentration and are listed under California Proposition 65.

Material	California Proposition 65	Massachusetts Right-to-Know	Minnesota Employee Right-to-Know	New Jersey Community Environmental Hazard Right-to-Know	New Jersey Right-to-Know Substance	Pennsylvania Right-to-Know	Rhode Island Right-to-Know
Isophorone di-isocyanate	Not listed	Listed	Listed	Not listed	Listed	Listed	Listed
4-Chloro- α,α,α -trifluorotoluene	Not listed	Listed	Not listed	Not listed	Not listed	Not listed	Not listed
Acetone	Not listed	Listed	Listed	Not listed	Listed	Listed	Listed
n-Butyl acetate	Not listed	Listed	Listed	Not listed	Listed	Listed	Listed

Global Inventories:

Notification status:	
US - TSCA	All substances are listed
Canada -DSL	Not all substances are listed
Canada - NDSL	At least 1 substance is listed
EU - EINECS	Not all substances are listed
EU - ELINCS	No substances are listed
EU - NLP	No substances are listed
Australia – AICS	All substances are listed
China - EICSC	All substances are listed
Japan - ENCS	All substances are listed
Korea - KECI	All substances are listed
Taiwan - NECI	All substances are listed
New Zealand - NZIoC	Not all substances are listed
Philippine - PICCS	All substances are listed

EU - REACH Status:

A registration number is not available for substances in this mixture as the substances are exempted from registration, the annual tonnage does not require a registration or the registration is envisioned for a later registration deadline.

CANADA – WHMIS (Workplace Hazardous Materials Information System) Classification:

B2, D1A, D2A, D2B

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MEXICO:

Hazard Classification: 2-3-1
Carcinogen Status: No data available.

SECTION 16: OTHER INFORMATION

HMIS (Hazardous Materials Identification System) rating:

Health:	2*
Flammability:	3
Physical:	1

NFPA 704 (National Fire Protection Association) rating:

Health	2
Fire	3
Reactivity	1

Legend:

- DOT US Department of Transportation
- IATA International Air Transport Association
- ICAO International Civil Aviation Organization
- IMDG International Maritime Dangerous Goods
- ACGIH American Conference of Governmental Industrial Hygienists
- NTP National Toxicology Program
- IARC International Agency for Research on Cancer
- PPE Personal Protective Equipment
- RCRA Resource Conservation and Recovery Act
- CAA Clean Air Act
- SARA Superfund Amendments and Reauthorization Act
- EPCRA Emergency Planning and Community Right-to-Know Act
- WHMIS Workplace Hazardous Materials Information System
- EU European Union
- REACH Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
- CERCLA Comprehensive Environmental Response, Compensation and Liability Act
- TSCA US Toxic Substances Control Act (TSCA)
- DSL Canada Domestic Substance List (DSL)
- NDSL Canada Non-Domestic Substance List (NDSL)
- EINECS European Inventory of Existing Commercial Chemical Substances (EINECS)
- ELINCS European List of Notified Chemical Substances (ELINCS)
- NLP European list of No-longer Polymers (NLP)
- AICS Australian Inventory of Chemical Substances (AICS)
- EICSC China Existing Chemical Inventory - IECSC
- ENCS Japanese Existing and New Chemical Substances Inventory(ENCS)
- KECI Korea Existing Chemicals Inventory(KECI)
- NECI Taiwan National Existing Chemical Inventory (NECI)
- NZIoC New Zealand Inventory of Chemicals (NZIoC)
- PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)
- HMIS Hazardous Materials Identification System
- NFPA National Fire Protection Association (NFPA)

SAFETY DATA SHEET

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Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.
Prepared by: Gaco Western LLC

End of Safety Data Sheet