

SECTION 1: IDENTIFICATION

Product Identifier

Product Name UTX60 Matte - PART A
Alternate Product ID

Recommended Use of the Chemical and Restrictions on Use

Recommended use Concrete Coating
Uses advised against No data available

Details of the Supplier of the Safety Data Sheet

Distributor Address Foundation Armor 10 Howe Drive Amherst, NH 03031

Emergency Telephone Number

Supplier phone number 866-306-0246
24 Hour emergency phone number 800-424-9300 (United States & Canada) 1-703-527-3887 (International)

SECTION 2: HAZARD(S) IDENTIFICATION

Hazard Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/Irritation Category 3

Signal Word Warning

Hazard Statements H317 - May cause an allergic skin reaction

Pictograms



Precautionary Statements

Prevention, Response, Storage, & Disposal

P261 - Avoid breathing vapors or mist.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P333 - P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 - P364 Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P403 + P233 + P235 - Store in a well-ventilated place. Keep container tightly closed. Keep cool.

P405 - Store locked up.

P501 - Dispose of contents/container to an approved waste disposal plant in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) Not Otherwise Classified (HNOC)

None known

Other Information

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Chemical Name	CAS Number	Weight Percentage
Reactive Diluent	716336-43-5	1-3

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

First Aid Instructions/Measures

Eye Contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.

Skin Contact

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

Ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms

See Section 11: TOXICOLOGICAL INFORMATION

Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO₂), Foam, extinguishing powder, in cases of larger fires, water spray should be used.

Unsuitable Extinguishing Media

No data available.

Specific Fire and Explosion Hazards Arising from the Chemical

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

Hazardous Decomposition Products

No data available.

Special Protective Equipment and Precautions for Firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. 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

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

Environmental Precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Containment and Clean-up Measures (Small Spill)

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Containment and Clean-up Measures (Large Spill)

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Dispose of via a licensed waste disposal

contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

SECTION 7: HANDLING AND STORAGE

Protective Measures

Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear an appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on General Occupational Hygiene

Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for Safe Storage, Including any Incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool, and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

None

Recommended Monitoring Procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls

If user operations generate dust, fumes, gas, vapor, or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental Exposure Controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual Protection Measures

Hygiene Measures

Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Hand Protection

The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body Protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other Skin Protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Milky White
Odor:	Slight
Odor Threshold:	Not Available
Upper/Lower Flammability Limits:	Not Available
Vapor Pressure:	Not available
Vapor Density:	Not Available
pH:	Not Available
Relative Density:	1.067 @ 21 °C (70 °F)
Melting Point:	Not Available
Freezing Point:	Not Available
Solubility:	Soluble in water
Boiling Point:	100 °C (212 °F)
Flash Point:	> 248 °C (> 478 °F)
Evaporation Rate:	Not Available
Partition Coefficient: n-octanol/water:	Not Available
Auto-ignition Temperature:	Not Available
Decomposition Temperature:	Not Available
Viscosity (Dynamic):	Not Available
Volatile Organic Compounds (VOC):	< 100 g/L (Mixed A & B)

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Material is stable and non-reactive under normal conditions of use, storage, and transport.

Chemical Stability

Material is stable under recommended storage conditions.

Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid

Protect from freezing.

Incompatible Materials

Water reactives.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke., Other undetermined compounds, Acrylic Acid

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Likely routes of exposure include inhalation by direct contact and vapor inhalation, eye contact by direct contact, skin contact by direct contact and ingestion by direct contact.

Health Effects and Symptoms

Acute

May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash.

Chronic

Not expected to cause adverse chronic health effects.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

No data available.

Components

716336-43-5 Reactive Diluent

Acute oral toxicity	LD50: > 2,000 mg/kg (rat)
Acute dermal toxicity	LD50: > 2000 mg/kg (rat, female)

Carcinogenicity

Not available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Not available.

Additional Ecotoxicological Remarks

No known significant effects or critical hazards.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose in accordance with Federal, State, and Local laws and regulations. The generation of waste should be avoided or minimized wherever possible. Empty containers should be taken to an approved waste handling site for recycling or disposal. Incineration or landfill should only be considered when recycling is not feasible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty Container Precautions

Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name by Regulatory Entity

DOT - Land Transportation

Not Regulated

IMDG - Sea Transportation

Environmentally Hazardous Substance, Liquid, N.O.S.
(Contains Hexanedioic Acid, Polymer with 2-oxiranylmethyl)

IATA - Air Transport

Environmentally Hazardous Substance, Liquid, N.O.S.
(Contains Hexanedioic Acid, Polymer with 2-oxiranylmethyl)

Regulatory Information	UN Number	Class	Packaging Group	Label
DOT Classification	N/A	N/A	N/A	N/A
IMDG Classification	3082	9	III	
IATA Classification	3082	9	III	

SECTION 15: REGULATORY INFORMATION

United States Federal Regulations

None required or not listed

US State Regulations

California Proposition 65



WARNING: This product can expose you to chemicals including Diethanolamine, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

This product contains the following Proposition 65 chemicals:

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Diethanolamine (CAS 71-43-2) (< 0.1%)

Listed: June 22, 2012

SECTION 16: OTHER INFORMATION

HMS Ratings

Health - 1 Flammability - 0 Physical Hazard - 0

NFPA Ratings

Health - 1 Flammability - 0 Instability - 0

Issue Date, Revision Date and SDS Version Number

This information is found at the "Footer" of the Safety Data Sheet (all pages). See below.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SECTION 1: IDENTIFICATION

Product Identifier

Product Name UTX60 Matte - PART B
Alternate Product ID

Recommended Use of the Chemical and Restrictions on Use

Recommended use Concrete Coating
Uses advised against No data available

Details of the Supplier of the Safety Data Sheet

Distributor Address Foundation Armor 10 Howe Drive Amherst, NH 03031

Emergency Telephone Number

Supplier phone number 866-306-0246
24 Hour emergency phone number 800-424-9300 (United States & Canada) 1-703-527-3887 (International)

SECTION 2: HAZARD(S) IDENTIFICATION

Hazard Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Inhalation)	Category 4
Skin sensitization	Category 1
Specific target organ toxicity	Category 3 (Respiratory system)

Signal Word Warning

Hazard Statements H317 - May cause an allergic skin reaction
H332 - Harmful if inhaled
H335 - May cause respiratory irritation

Pictograms



Precautionary Statements

Prevention, Response, Storage, & Disposal

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P271 - Use only outdoors or in a well-ventilated area.

P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water.
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P314 - Get medical advice/attention if you feel unwell.
P332 + P313 - IF SKIN irritation occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

Hazard(s) Not Otherwise Classified (HNOC)

None known

Other Information

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Chemical Name	CAS Number	Weight Percentage
Homopolymer of Hexamethylene Diisocyanate	28182-81-2	60-80
Hydrophilic Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate	666723-27-9	10-30

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

Most Important Symptom(s)/Effect(s)

Acute

Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing difficulty). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines 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.

May cause skin irritation with symptoms of reddening, itching, and swelling. Can cause sensitization. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Delayed

Symptoms affecting the respiratory tract can also occur several hours after overexposure.

First Aid Instructions/Measures

Eye Contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Use lukewarm water if possible. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Then remove contact lenses, if easily removable, and continue eye irrigation for not less than 15 minutes. Get medical attention if irritation develops.

Skin Contact

If direct skin contact with isocyanates occurs, immediately remove contaminated clothing and shoes. Wipe off the isocyanate product from the skin using dry towels or other similar absorbent fabric. If readily available, apply a polyglycol-based cleanser (e.g. SKC, Inc. (SKC) D-TAM™ Skin Cleanser) or corn oil. Wash with soap and warm water and pat dry. If a polyglycol-based cleanser is not available, wash with soap and warm water for 15 minutes. If available, use a wipe test pad to verify decontamination is complete (e.g. SKC SWYPE™). Get medical attention if irritation develops. Discard or wash contaminated clothing before reuse.

Inhalation

Move to an area free from further exposure. Extreme asthmatic reactions that may occur in sensitized persons can be life threatening. Get medical attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours.

Ingestion

Do NOT induce vomiting. Wash mouth out with water. Do not give anything by mouth to an unconscious person. Get medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms

See Section 11: TOXICOLOGICAL INFORMATION

Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians

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.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, Carbon dioxide (CO₂), Foam, water spray for large fires.

Unsuitable Extinguishing Media

High volume water jet

Specific Fire and Explosion Hazards Arising from the Chemical

Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO₂ formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

Hazardous Decomposition Products

By Fire and High Heat: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke., Hydrogen cyanide, Isocyanate, Isocyanic Acid, Other undetermined compounds

Special Protective Equipment and Precautions for Firefighters

Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

Environmental Precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Containment and Clean-up Measures (Small Spill)

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Containment and Clean-up Measures (Large Spill)

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

SECTION 7: HANDLING AND STORAGE

Protective Measures

Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear an appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on General Occupational Hygiene

Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for Safe Storage, Including any Incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool, and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Avoid Water, Amines, Strong bases, Alcohols, and Copper alloys.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Homopolymer of Hexamethylene Diisocyanate (28182-81-2)

Time weighted average 0.5 mg/m³

Short Term Exposure Limit (STEL): 1.0 mg/m³ (15-min)

Recommended Monitoring Procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls

If user operations generate dust, fumes, gas, vapor, or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental Exposure Controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual Protection Measures

Hygiene Measures

Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Hand Protection

The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body Protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other Skin Protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Light Yellow
Odor:	Slight
Odor Threshold:	Not Available
Upper/Lower Flammability Limits:	Not Available
Vapor Pressure:	Not available
Vapor Density:	Not Available
pH:	Not Available
Relative Density:	1.152 @ 21 °C (70 °F)
Melting Point:	Not Available
Freezing Point:	Not Available
Solubility:	Soluble in water
Boiling Point:	Not Available
Flash Point:	185 °C (> 365 °F)
Evaporation Rate:	Not Available
Partition Coefficient: n-octanol/water:	Not Available
Auto-ignition Temperature:	Not Available
Decomposition Temperature:	Not Available
Viscosity (Dynamic):	Not Available
Volatile Organic Compounds (VOC):	< 100 g/L (Mixed A & B)

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Contact with moisture, other materials that react with isocyanates, or temperatures above 350 F (177 C), may cause polymerization, Moisture (water and high humidity) or high heat (temperatures greater than 350 F (177C)) can cause pressure build-up with possible explosive rupture.

Chemical Stability

Material is stable under recommended storage conditions.

Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid

Heat, flames and sparks. Protect from freezing.

Incompatible Materials

Water, Amines, Strong bases, Alcohols, Copper alloys

Hazardous Decomposition Products

By Fire and High Heat: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke., Hydrogen cyanide, Isocyanate, Isocyanic Acid, Other undetermined compounds

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Likely routes of exposure include inhalation by direct contact and vapor inhalation, eye contact by direct contact, skin contact by direct contact and ingestion by direct contact.

Health Effects and Symptoms

Acute

Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing difficulty). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines 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.

May cause skin irritation with symptoms of reddening, itching, and swelling. Can cause sensitization. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

Chronic

As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to isocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to isocyanates at levels well below the exposure limits or guidelines. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent.

Prolonged contact with skin can cause reddening, swelling, rash, and, in some cases, skin sensitization. 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.

Prolonged vapor contact with the eyes may cause conjunctivitis.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Symptoms affecting the respiratory tract can also occur several hours after overexposure.

Components

28182-81-2 Homopolymer of Hexamethylene Diisocyanate28182-81-2

Acute oral toxicity	LD50: > 5,000 mg/kg (rat, female)
Acute inhalation toxicity	LC50: > 0.39 mg/l dust/mist (rat, female)
Acute dermal toxicity	LD50: > 2,000 mg/kg (rat, male/female)

666723-27-9 Hydrophilic Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate

Acute oral toxicity	LD50: > 5,000 mg/kg (rat)
Acute inhalation toxicity	LC50: > 0.158 mg/l dust/mist (rate, male/female, 4h)
Acute dermal toxicity	LD50: > 2,000 mg/kg (rat, male/female)

Carcinogenicity

Not available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Not available.

Additional Ecotoxicological Remarks

No known significant effects or critical hazards.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose in accordance with Federal, State, and Local laws and regulations. The generation of waste should be avoided or minimized wherever possible. Empty containers should be taken to an approved waste handling site for recycling or disposal. Incineration or landfill should only be considered when recycling is not feasible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty Container Precautions

Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name by Regulatory Entity

DOT - Land Transportation	Not Regulated
IMDG - Sea Transportation	Not Regulated
IATA - Air Transport	Not Regulated

*This product is only sold in containers less than reportable quantity of 9,074 kg (20,005 lbs)

SECTION 15: REGULATORY INFORMATION

United States Federal Regulations

US Toxic Substances Control Act

Listed on the Active Portion of the TSCA Inventory. No substances are subject to TSCA 12(b) export notification requirements.

SARA Section 311/312 Hazard Categories:

Refer to hazard classification information in Section 2.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components: None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components:

Concentration	Components	CAS No.
< 1 ppm	Hexachlorobenzene	118-74-1

US State Regulations

California Proposition 65



WARNING: This product can expose you to chemicals including Hexachlorobenzene, which is known to the State of California to cause cancer and developmental toxicity. For more information go to www.P65Warnings.ca.gov.

This product contains the following Proposition 65 chemicals:

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Hexachlorobenzene (CAS 118-74-1) (< 1 ppm) Listed: October 1, 1987

California Proposition 65 - CRT: Listed date/Developmental Toxicity substance

Hexachlorobenzene (CAS 118-74-1) (< 1 ppm) Listed: January 1, 1989

SECTION 16: OTHER INFORMATION

HMIS Ratings

Health - 2 Flammability - 0 Physical Hazard - 0

NFPA Ratings

Health - 2 Flammability - 0 Instability - 0

Issue Date, Revision Date and SDS Version Number

This information is found at the "Footer" of the Safety Data Sheet (all pages). See below.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.