

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : 4100-B  
 Product code : 4100-B  
 Other means of identification : 4100-B/1, 4100-B/5

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Protective Industrial Polymers  
 7875 Bliss Parkway  
 North Ridgeville, Ohio 44039 - USA-Ohio  
 T 440-327-0015  
[www.protectpoly.com](http://www.protectpoly.com)

#### 1.4. Emergency telephone number

Emergency number : Chemtrec: 800-424-9300 (Outside USA) 703-527-3887

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Respiratory sensitisation Category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H315 - Causes skin irritation  
 H319 - Causes serious eye irritation  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS-US) :

P261 - Avoid breathing fume, vapors  
 P264 - Wash hands, forearms and face thoroughly after handling  
 P280 - Wear protective clothing  
 P284 - In case of poor ventilation  
 P302+P352 - If on skin: Wash with plenty of soap  
 P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing  
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P321 - Specific treatment (see a doctor if symptoms do not go away. on this label)  
 P332+P313 - If skin irritation occurs: Get medical advice/attention  
 P337+P313 - If eye irritation persists: Get medical advice/attention  
 P342+P311 - If experiencing respiratory symptoms: Call a doctor  
 P362+P364 - Take off contaminated clothing and wash it before reuse  
 P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

# 4100-B

## Safety Data Sheet

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

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None under normal conditions.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Hexamethylene Diisocyanate	(CAS No) 28182-81-2	80 - 90	Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317
Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester	(CAS No) 822-06-0	0 - 0.5	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation:dust,mist), H330

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Get medical advice/attention if you feel unwell.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : When symptoms occur: rinse immediately with plenty of water.  
First-aid measures after eye contact : Rinse immediately with plenty of water.  
First-aid measures after ingestion : Give nothing or a little water to drink. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/injuries after inhalation : Irritation of respiratory tract.  
Symptoms/injuries after skin contact : Causes skin irritation.  
Symptoms/injuries after eye contact : Causes eye irritation.  
Symptoms/injuries after ingestion : Irritation of the gastric/intestinal mucosa.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Alcohol resistant foam, water, water fog, CO2, dry chemical, dry sand, limestone powder.

### 5.2. Specific hazards arising from the chemical

No additional information available

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Wear self-contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Absorb spillage to prevent material damage.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

No special environmental precautions required.

### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Dam up the liquid spill.

# 4100-B

## Safety Data Sheet

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

Methods for cleaning up : Absorb spillage to prevent material damage. Cover the solid spill with dry sand/earth/vermiculite soda ash or powdered limestone.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Work under local exhaust/ventilation. Wear personal protective equipment.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use. Store in a dry place. Store in a closed container.

Incompatible products : Strong acids. Strong bases.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Hexamethylene Diisocyanate (28182-81-2)

Not applicable

#### Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

ACGIH	Local name	Hexamethylene diisocyanate
ACGIH	ACGIH TWA (ppm)	0.005 ppm
ACGIH	Remark (ACGIH)	URT irr; resp sens

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### Hand protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product

#### Eye protection:

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Color : Colourless to light yellow  
Odor : Faint Odor  
Odor threshold : No data available  
pH : No data available  
Melting point : No data available  
Freezing point : No data available  
Boiling point : No data available  
Flash point : 208 °C  
Relative evaporation rate (butyl acetate=1) : No data available  
Flammability (solid, gas) : No data available

# 4100-B

## Safety Data Sheet

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

Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Will not occur.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong acids, strong bases and oxidation agents.

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)</b>	
LD50 oral rat	746 mg/kg (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral)
LD50 dermal rabbit	599 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	0.124 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
ATE US (oral)	745 mg/kg body weight
ATE US (dermal)	599 mg/kg body weight
ATE US (gases)	45 ppmV/4h
ATE US (vapors)	0.31 mg/l/4h
ATE US (dust, mist)	0.31 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. Not classified.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified

# 4100-B

## Safety Data Sheet

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

Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Irritation of respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: Irritation of the gastric/intestinal mucosa.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Not classified due to lack of data.

#### 12.2. Persistence and degradability

##### 4100-B

Persistence and degradability	Not established.
-------------------------------	------------------

##### Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

Persistence and degradability	Not readily biodegradable in water.
-------------------------------	-------------------------------------

#### 12.3. Bioaccumulative potential

##### 4100-B

Bioaccumulative potential	Not established.
---------------------------	------------------

##### Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

Log Pow	1.08 (QSAR)
---------	-------------

Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
---------------------------	--

#### 12.4. Mobility in soil

##### 4100-B

Ecology - soil	No Data Available.
----------------	--------------------

##### Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

Ecology - soil	Low potential for adsorption in soil.
----------------	---------------------------------------

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods : Collect all waste in suitable and labeled containers and dispose according to local legislation.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Proper Shipping Name (DOT) : Not Regulated

Other information : No supplementary information available.

#### TDG

#### Transport by sea

Not applicable

#### Air transport

Not applicable

# 4100-B

## Safety Data Sheet

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

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester	CAS No 822-06-0	0 - 0.5%
--	-----------------	----------

#### Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

CERCLA RQ	100 lb
-----------	--------

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

No additional information available

##### National regulations

No additional information available

#### 15.3. US State regulations

#### Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

Other information : Disclaimer: This SDS to the best of our knowledge conforms to the requirements of OSHA 20 CFR 1910.1200 and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Each user must review the SDS in the context of how the product will be handled and used in the workplace.

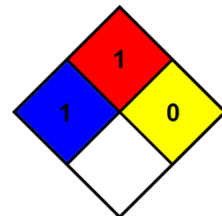
Full text of H-phrases:

H302	Harmful if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

# 4100-B

## Safety Data Sheet

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

---

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*