

1 Identification

GHS Product Identifier

Ultra-Flex 6800 Part B

Other means of identification

Hexamethylene Diisocyanate

Recommended use of the chemical and restriction on use

Aliphatic Polyurethane Cross Linking Agent. Component Product. This component is one part of a 2 part product. Read and understand the hazard information on the SDS for Part A before using this product

Supplier's details

Lava-Liner, Ltd.
1550 G Tiburon Blvd. Suite 418
Tiburon, CA 94920
Ph. 415-829-9114 Fax: 415-829-9203
www.lava-liner.com

Emergency phone number

Chemtrec 800-424-9300

2 Hazard(s) identification

Classification of the substance or mixture

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

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 1), H330

Skin corrosion (Category 1C), H314

Serious eye damage (Category 1), H318

Respiratory sensitisation (Category 1), H334

Skin sensitisation (Category 1), H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS label elements



Harmful if swallowed

Causes severe skin burns and eye damage

May cause an allergic skin reaction

Causes serious eye damage

Fatal if inhaled

May cause allergy or asthma symptoms or breathing difficulties if inhaled

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

[In case of inadequate ventilation] wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER/ doctor/physician if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Get immediate medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Other hazards which do not result in classification

Lachrymator., Rapidly absorbed through skin.

3 Composition/information on ingredients

Description	CAS Number	EINECS Number	%	Note
Hexamethylene diisocyanate	822-06-0	212-485-8	99 - 100	

4 First-aid measures

Description of necessary first-aid measures

General advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

Sigma - 52649 Page 3 of 9

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

Indication of immediate medical attention and special treatment needed, if necessary

No Data Available

5 Fire-fighting measures

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical

Carbon oxides, Nitrogen oxides (NOx)

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7 Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas. Moisture sensitive.

Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

8 Exposure controls/personal protection

Control parameters

Component	CAS-No.	Value	Control parameters	Basis
Hexamethylene diisocyanate	822-06-0	TWA	0.0050 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Respiratory sensitization		
		TWA	0.0050 ppm 0.035 mg/m ³	USA. NIOSH Recommended Exposure Limits
		10 minute ceiling value		
		C	0.02 ppm 0.14 mg/m ³	USA. NIOSH Recommended Exposure Limits
		10 minute ceiling value		

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Individual protection measures

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

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

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.

If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9 Physical and chemical properties

Physical and chemical properties

Appearance Form:	liquid
Colour:	clear, colourless
Odour	pungent
Odour Threshold	No data available
pH	No data available
Melting point/freezingpoint	Freezing point/ range: ca.-66.99 °C (-88.58 °F)
Initial boiling point and boiling range	82 - 85 °C (180 - 185 °F) at 0.1 hPa (0.1 mmHg)
Flash point	135 °C (275 °F) - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	0.007 hPa (0.005 mmHg) at 20 °C (68 °F)
Vapour density	5.81 - (Air = 1.0)
Relative density	1.047 g/mL at 20 °C (68 °F)
Water solubility	No data available
Partition coefficient: noctanol/water	No data available
Auto-ignition temperature	454 °C (849 °F)
Decomposition temperature	No data available
Viscosity	2.29 mm ² /s at 20 °C (68 °F) -
Explosive properties	No data available
Oxidizing properties	No data available

Other safety information

Relative vapour density 5.81 - (Air = 1.0)

10 Stability and reactivity**Reactivity**

No Data Available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No Available Data

Conditions to avoid

Heat / Avoid Moisture

Incompatible materials

Alcohols, Strong bases, Amines, Strong oxidizing agents, Water

Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

11 Toxicological information**Toxicological (health) effects****Acute toxicity**

LD50 Oral - Rat - male - 959 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - 124 mg/m³

(OECD Test Guideline 403)

LD50 Dermal - Rat - > 7,000 mg/kg

(OECD Test Guideline 402)

Skin - Rabbit

Result: Corrosive after 1 to 4 hours of exposure - 4 h

(OECD Test Guideline 404)

Eyes - Rabbit

Result: Corrosive

(OECD Test Guideline 405)

Maximisation Test (GPMT) - Guinea pig

Result: May cause sensitisation by skin contact.

(OECD Test Guideline 406)

in vivo assay - Guinea pig

Result: May cause sensitisation by inhalation.

Germ cell mutagenicity

Ames test

S. typhimurium

Result: negative

OECD Test Guideline 474

Mouse - male and female

Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Information on the likely routes of exposure

Inhalation, Skin Contact, Eye Contact

Symptoms related to the physical, chemical and toxicological characteristics

Serious eye damage/eye irritation

Skin corrosion/irritation

Respiratory or skin sensitisation

Numerical measures of toxicity (such as acute toxicity estimates)

No Data Available

Interactive effects

No Data Available

Mixtures

Not a mixture

Mixture versus ingredient information

Not a mixture

Other information

RTECS: MO1740000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12 Ecological information

Toxicity

Toxicity to fish static test LC0 - Danio rerio (zebra fish) - >= 82.8 mg/l - 96 h
(Directive 67/548/EEC, Annex V, C.1.)

Toxicity to daphnia and
other aquatic
invertebrates

static test EC0 - Daphnia magna (Water flea) - >= 89.1 mg/l - 48 h
(Directive 67/548/EEC, Annex V, C.2.)

Toxicity to algae static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - >
77.4 mg/l - 72 h
(Directive 67/548/EEC, Annex V, C.3.)

Toxicity to bacteria Respiration inhibition EC50 - Sludge Treatment - 842 mg/l - 3 h

Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 42 % - Not readily biodegradable.

(OECD Test Guideline 301F)

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

13 Disposal considerations

Disposal methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14 Transport information

UN Number

2281

UN Proper Shipping Name

Hexamethylene diisocyanate

Transport hazard class(es)

6.1

Packing group, if applicable

II

Environmental hazards

No Data Available

Special precautions for user

No Data Available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No Data Available

15 Regulatory information

Safety, health and environmental regulations specific for the product in question

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Hexamethylene diisocyanate

CAS-No.
822-06-0
Revision Date
1993-04-24

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

Hexamethylene diisocyanate

CAS-No.
822-06-0
Revision Date
1993-04-24

Pennsylvania Right To Know Components

Hexamethylene diisocyanate

CAS-No.
822-06-0
Revision Date
1993-04-24

New Jersey Right To Know Components

Hexamethylene diisocyanate

CAS-No.
822-06-0
Revision Date
1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16 Other information

Other information

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Acute toxicity
Eye Dam. Serious eye damage
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Resp. Sens. Respiratory sensitisation
Skin Corr. Skin corrosion
Skin Sens. Skin sensitisation

HMIS Rating

Health hazard: 4
Chronic Health Hazard:
Flammability: 1
Physical Hazard 0

NFPA Rating

Health hazard: 4
Fire Hazard: 1
Reactivity Hazard: 0

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or

disposal of the product. If the product is used as a component in another product other than that provided by Lava-Liner, Ltd. this SDS information may not be applicable. This SDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).