

## EMULSION GUARD B

Version1.0

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

EMULSION GUARD B

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Use:**

Hardener for coating materials or adhesives for industrial and trade applications

**Uses advised against:**

Not suitable for use in homemaker (DIY) applications.

#### 1.3 Details of the supplier of the safety data sheet

ShenZhen UCI Magnet & More Co., Limited.

Address:Unit402, Building A, #25 Heng Nan road, GuShu, Xixiang street, BaoAn, Shenzhen, Guangdong

TEL.: +86- 755 – 27783116

URL: [www.ucimagnetandmore.com](http://www.ucimagnetandmore.com)

#### 1.4 Emergency telephone number

In case of emergency: (86)119

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Acute toxicity, Inhalative, Category 4 (H332)

Sensitization of the skin, Sub-category 1B (H317)

Specific target organ toxicity (single exposure), Category 3 (H335)

Chronically hazardous to the aquatic environment, Category 3 (H412)

#### 2.2 Label elements



Warning

**Hazardous components which must be listed on the label**

Hydrophilic aliphatic polyisocyanate based on HDI

**Hazard statements:**

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements:**

P273 Avoid release to the environment.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/ physician if you feel unwell.

### 2.3 Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

**Type of product:** Mixture

### 3.2 Mixtures

hydrophilic aliphatic polyisocyanate

#### Hazardous components

Hydrophilic aliphatic polyisocyanate based on HDI

Concentration [wt.-%]: ca. 100

CAS-No.: 666723-27-9

Classification (1272/2008/CE): Acute Tox. 4 Inhalative H332 Skin Sens. 1B H317 STOT SE 3 H335

Aquatic Chronic 3 H412

This contains:

Hexamethylene-1,6-diisocyanate Homopolymer

Concentration [wt.-%]: ca. 50

EC-No.: 223-242-0

CAS-No.: 3779-63-3

Classification (1272/2008/CE): Acute Tox. 4 Inhalative H332 Skin Sens. 1 H317 STOT SE 3 H335

Hexamethylene-1,6-diisocyanate

Concentration [wt.-%]: <= 0.24

Index-No.: 615-011-00-1

REACH Registration Number: 01-2119457571-37-0000, 01-2119457571-37-0005, 01-2119457571-37-0006

CAS-No.: 822-06-0

Classification (1272/2008/CE): Acute Tox. 4 Oral H302 Acute Tox. 1 Inhalative H330 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Resp. Sens. 1 H334 Skin Sens. 1 H317 STOT SE 3 H335

Specific threshold concentration (GHS):

Resp. Sens. 1	H334	>= 0.5 %
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Skin Sens. 1	H317	>= 0.5 %
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The polymer or the polymers including their impurities are exempted from the provisions on registration according to article 2(9) of the REACH Regulation (EC) No 1907/2006, hence no exposure scenarios are provided. The necessary information about operational conditions and Risk Management Measures (RMM) can be found in chapter 8 of this SDS.

neutralising agent, bound as a salt:

N,N-dimethylcyclohexylamine

Concentration [wt.-%]: ca. 1.6

EC-No.: 202-715-5

REACH Registration Number: 01-2119533030-60

CAS-No.: 98-94-2

Classification (1272/2008/CE): Flam. Liq. 3 H226 Acute Tox. 3 Dermal H311 Acute Tox. 3 Inhalative H331

Acute Tox. 3 Oral H301 Skin Corr. 1B H314 Eye Dam. 1 H318 Aquatic Chronic 2 H411

#### Candidate List of Substances of Very High Concern for Authorisation

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

**SECTION 4: First aid measures****4.1 Description of first aid measures**

**General advice:** Take off all contaminated clothing immediately.

**If inhaled:** Take the person into the fresh air and keep him warm, let him rest; if there is difficulty in breathing, medical advice is required.

**In case of skin contact:** In case of skin contact wash affected areas thoroughly with soap and plenty of water. Consult a doctor in the event of a skin reaction.

**In case of eye contact:** Hold the eyes open and rinse with preferably lukewarm water for a sufficiently long period of time (at least 10 minutes). Contact an ophthalmologist.

**If swallowed:** DO NOT induce the patient to vomit, medical advice is required.

**4.2 Most important symptoms and effects, both acute and delayed**

**Notes to physician:** Basic first aid, decontamination, symptomatic treatment.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Therapeutic measures:** No information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing media:** Carbon dioxide (CO<sub>2</sub>), Foam, extinguishing powder, in cases of larger fires, water spray should be used.

**Unsuitable extinguishing media:** High volume water jet

**5.2 Special hazards arising from the substance or mixture**

Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen, isocyanate vapors and traces of hydrogen cyanide. In the event of fire and/or explosion do not breathe fumes.

**5.3 Advice for fire-fighters**

During fire-fighting respirator with independent air-supply and airtight garment is required.

Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Put on protective equipment (see section 8). Ensure adequate ventilation/exhaust extraction. Keep unauthorized persons away.

**6.2 Environment related measures**

Do not allow to escape into waterways, wastewater or soil.

**6.3 Methods and material for containment and cleaning up**

Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder

based on calcium silicate hydrate, sand). After approx. one hour transfer to waste container and do not seal (evolution of CO<sub>2</sub>!). Keep damp in a safe ventilated area for several days.

#### 6.4 Reference to other sections

For further disposal measures see section 13.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Provide sufficient air exchange and/or exhaust in work rooms. Exhaust ventilation necessary if product is sprayed.

The threshold limit values noted in section 8 must be monitored. In all areas where isocyanate aerosols and/or vapor concentrations are produced in elevated concentrations, exhaust ventilation must be provided in such a way that the workplace exposure limits (WEL) is not exceeded. The air should be drawn away from the personnel handling the product

The personal protective measures described in section 8 must be observed. The precautions required in the handling of isocyanates must be taken. Avoid contact with skin and eyes and the inhalation of vapor.

Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at end of work and use skin-protecting ointment. Keep working clothes separately. Take off all contaminated clothing immediately.

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

Keep container dry and tightly closed in a cool and well ventilated place. Further information on the storage conditions which must be observed to preserve quality can be found in our product information sheet.

Storage class (TRGS 510) : 10: Combustible liquids

#### 7.3 Specific end use(s)

No information available.

### SECTION 8: Exposure controls/personal protection

UK Workplace Exposure Limits (WEL), per EH40 document (Health & Safety Executive). If no UK value exists, EU exposure limits given where available.

#### 8.1 Control parameters

##### Components with workplace control parameters

Substance	CAS-No.	Basis	Type	Value	Ceiling Limit Value	Remarks
Hexamethylene-1,6-diisocyanate Homopolymer	28182-81-2	EH40 WEL	TWA	0.02 mg/m <sup>3</sup>		, measured as NCO
Hexamethylene-1,6-diisocyanate Homopolymer	28182-81-2	EH40 WEL	STEL	0.07 mg/m <sup>3</sup>		, measured as NCO
Hexamethylene-1,6-diisocyanate	822-06-0	EH40 WEL	STEL	0.07 mg/m <sup>3</sup>		, measured as NCO
Hexamethylene-1,6-diisocyanate	822-06-0	EH40 WEL	TWA	0.02 mg/m <sup>3</sup>		, measured as NCO

Exposition assessment value (EBW) per TGRS 430: Polyisocyanate content (HDI oligomers and/or prepolymers) 98 %. Use an exposition assessment value of 0,5 mg/m<sup>3</sup>.

#### 8.2 Exposure controls

**Respiratory protection**

Respiratory protection required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of charcoal filter and particulate filter is recommended.

In case of hypersensitivity of the respiratory tract and skin (e.g. asthmatics and those who suffer from chronic bronchitis and chronic skin complaint) it is inadvisable to work with the product.

**Hand protection**

Suitable materials for safety gloves; EN 374:

Butyl rubber - IIR: thickness  $\geq 0,5$ mm; breakthrough time  $\geq 480$ min.

Fluorinated rubber - FKM ( $\geq 0,4$  mm)

Recommendation: contaminated gloves should be disposed of.

**Eye protection**

Wear eye/face protection.

**Skin and body protection**

Wear suitable protective clothing.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Appearance:	liquid	
Colour:	colourless to yellowish	
Odour:	almost odourless	
Odour Threshold:	not established	
pH:	not applicable	
Pour point:	ca. -27 °C	
Initial boiling point:	> 300 °C at 1,013 hPa	DIN 53171
Flash point:	ca. 192 °C at 1,013 hPa	DIN EN ISO 2719
Evaporation rate:	not established	
Flammability (solid, gas):	not applicable	
Burning number:	not applicable	
Vapour pressure:	ca. 17 hPa at 20 °C	EG A4
	ca. 26 hPa at 50 °C	EG A4
	ca. 28 hPa at 55 °C	EG A4
Vapour pressure of ingredients:		
Hexamethylene-1,6-diisocyanate	ca. 0.007 hPa at 20 °C	
Hexamethylene-1,6-diisocyanate Homopolymer	< 0.0001 hPa at 20 °C (vapor pressure balance/OECD No.104)	
hexamethylene-1,6-diisocyanate homopolymer	< 0.00001 hPa at 20 °C (vapor pressure balance/OECD No.104)	
Vapour density:	not established	
Density:	ca. 1.16 g/cm <sup>3</sup> at 20 °C	DIN 51757
Miscibility with water:	immiscible at 15 °C	
Surface tension:	not established	
Partition coefficient (n-octanol/water):	not established	
Auto-ignition temperature:	not applicable	
Ignition temperature:	ca. 425 °C	DIN 51794
Decomposition temperature:	not established	
Viscosity, dynamic:	ca. 3,500 mPa.s at 23 °C	DIN 53019
Explosive properties:	not established	
Dust explosion class:	not applicable	
Oxidising properties:	not established	

## 9.2 Other information

The indicated values do not necessarily correspond to the product specification. Please refer to the technical information sheet for specification data.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This information is not available.

### 10.2 Chemical stability

This information is not available.

### 10.3 Possibility of hazardous reactions

Exothermic reaction with amines and alcohols; reacts slowly with water forming CO<sub>2</sub>, in closed containers risk of bursting owing to increase of pressure.

### 10.4 Conditions to avoid

This information is not available.

### 10.5 Incompatible materials

This information is not available.

### 10.6 Hazardous decomposition products

On drying of the coating / hardening release of neutralising agent. (see section 3)

## SECTION 11: Toxicological information

Toxicological studies on the product are not yet available.

Please find below the data available to us:

### 11.1 Information on toxicological effects

#### Acute toxicity, oral

Hydrophilic aliphatic polyisocyanate based on HDI  
LD50 rat:  $\geq 5,000$  mg/kg  
Method: OECD Test Guideline 423  
Toxicological studies of a comparable product.

#### Acute toxicity, dermal

No data available.

#### Acute toxicity, inhalation

Hydrophilic aliphatic polyisocyanate based on HDI  
LC50 rat, female: 0.390 mg/l, 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Studies of a comparable product.

The test atmosphere generated in the animal study is not representative of workplace environments, how the substance is placed on the market, and how it can reasonably be expected to be used. Therefore the test result cannot be directly applied for the purpose of assessing hazard. Based on expert judgment and the weight of the evidence, a modified classification for acute inhalation toxicity is justified.

Converted acute toxicity point estimate 1.5 mg/l  
Test atmosphere: dust/mist  
Method: Expert judgement

Assessment: Harmful if inhaled.

#### **Primary skin irritation**

Hydrophilic aliphatic polyisocyanate based on HDI

Species: rabbit

Result: An irritant effect cannot be distinguished from a mechanical load caused by the removal of the test specimen.

Classification: No skin irritation

Method: OECD Test Guideline 404

Toxicological studies of a comparable product.

#### **Primary mucosae irritation**

Hydrophilic aliphatic polyisocyanate based on HDI

Species: rabbit

Result: slight irritant

Classification: No eye irritation

Method: OECD Test Guideline 405

Toxicological studies of a comparable product.

#### **Sensitisation**

Hydrophilic aliphatic polyisocyanate based on HDI

Skin sensitization (local lymph node assay (LLNA)):

Species: Mouse

Result: positive

Classification: H317: May cause sensitization by skin contact (Sub cat. 1B)

Method: OECD Test Guideline 429

Toxicological studies of a comparable product.

#### **Respiratory sensitization**

Classification: No classification according to EC Directives 2006/121/EC or 1999/45/EC as respiratory sensitizer.

No pulmonary sensitisation observed in animal tests.

No pulmonary sensitisation potential was observed in guinea pigs after either intradermal or inhalative induction with polyisocyanate based on hexamethylene diisocyanate.

#### **Subacute, subchronic and prolonged toxicity**

No data available.

#### **Carcinogenicity**

No data available.

#### **Reproductive toxicity/Fertility**

No data available.

#### **Reproductive toxicity/Teratogenicity**

No data available.

#### **Genotoxicity in vitro**

Hydrophilic aliphatic polyisocyanate based on HDI

Test type: Salmonella/microsome test (Ames test)

Result: No indication of mutagenic effects.

Method: OECD Test Guideline 471

Toxicological studies of a comparable product.

#### **Genotoxicity in vivo**

No data available.

#### **STOT evaluation – one-time exposure**

Hydrophilic aliphatic polyisocyanate based on HDI

May cause respiratory irritation.

Studies of a comparable product.

#### **STOT evaluation – repeated exposure**

No data available.

#### **Aspiration toxicity**

No data available.

#### **Additional information**

Special properties/effects: Over-exposure entails the risk of concentration-dependent irritating effects on eyes, nose throat, and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low isocyanate concentrations, including concentrations below the UK Workplace Exposure Limit (WEL). Prolonged contact with the skin may cause tanning and irritant effects.

Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing isocyanate sensitization and respiratory reaction.

## **SECTION 12: Ecological information**

Ecotoxicological studies of the product are not available.

Do not allow to escape into waterways, wastewater or soil.

Please find below the data available to us:

### **12.1 Toxicity**

#### **Acute Fish toxicity**

Hydrophilic aliphatic polyisocyanate based on HDI  
LC50 35.2 mg/l  
Species: Danio rerio (zebra fish)  
Exposure duration: 96 h  
Method: OECD Test Guideline 203  
Ecotoxicological reports on a comparable product

#### **Acute toxicity for daphnia**

Hydrophilic aliphatic polyisocyanate based on HDI  
EC50 > 100 mg/l  
Species: Daphnia magna (Water flea)  
Exposure duration: 48 h  
Method: OECD Test Guideline 202  
Ecotoxicological reports on a comparable product

#### **Acute toxicity for algae**

Hydrophilic aliphatic polyisocyanate based on HDI  
ErC50 72 mg/l  
Species: Desmodesmus subspicatus (Green algae)  
Exposure duration: 72 h  
Method: OECD Test Guideline 201  
Ecotoxicological reports on a comparable product

#### **Acute bacterial toxicity**

Hydrophilic aliphatic polyisocyanate based on HDI  
EC50 > 10,000 mg/l  
Species: activated sludge  
Method: OECD Test Guideline 209  
Ecotoxicological reports on a comparable product

### **12.2 Persistence and degradability**

#### **Biodegradability**

Hydrophilic aliphatic polyisocyanate based on HDI  
Biodegradation: 0 %, 28 d, i.e. not readily degradable  
Method: OECD Test Guideline 301 F  
Ecotoxicological reports on a comparable product

### **12.3 Bioaccumulative potential**

No data available.



**12.4 Mobility in soil**

No data available.

**12.5 Results of PBT and vPvB assessment**

This substance does not meet the criteria for classification as PBT or vPvB.

**12.6 Other adverse effects**

Isocyanate reacts with water at the interface forming CO<sub>2</sub> and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by watersoluble solvents. Previous experience shows that polyurea is inert and non-degradable.

**SECTION 13: Disposal considerations**

Dispose in accordance with applicable international, national and local laws, ordinances and statutes. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

**13.1 Waste treatment methods**

After final product withdrawal, all residues must be removed from containers (drip-free, powder-free or paste-free). Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. These containers can be returned for recycling to the appropriate centres set up within the framework of the existing take-back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

None disposal into waste water.

**SECTION 14: Transport information****ADR/RID**

14.1 UN number	:	Not dangerous goods
14.2 UN proper shipping name	:	Not dangerous goods
14.3 Transport hazard class(es)	:	Not dangerous goods
14.4 Packing group	:	Not dangerous goods
14.5 Environmental hazards	:	Not dangerous goods

**ADN**

14.1 UN number	:	Not dangerous goods
14.2 UN proper shipping name	:	Not dangerous goods
14.3 Transport hazard class(es)	:	Not dangerous goods
14.4 Packing group	:	Not dangerous goods
14.5 Environmental hazards	:	Not dangerous goods

**IATA**

14.1 UN number	:	Not dangerous goods
14.2 UN proper shipping name	:	Not dangerous goods
14.3 Transport hazard class(es)	:	Not dangerous goods
14.4 Packing group	:	Not dangerous goods
14.5 Environmental hazards	:	Not dangerous goods

**IMDG**

14.1 UN number	:	Not dangerous goods
14.2 UN proper shipping name	:	Not dangerous goods
14.3 Transport hazard class(es)	:	Not dangerous goods
14.4 Packing group	:	Not dangerous goods
14.5 Environmental hazards	:	Not dangerous goods

**14.6 Special precautions for user**

See section 6 - 8.

Additional information : Not dangerous cargo.

Keep dry.  
 Avoid heat above +50 °C.  
 Keep separated from foodstuffs.

#### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances.**  
 not applicable

#### Water contaminating class (Germany)

2 water endangering

(in accordance with Annex 4 to the Directive on Water-Hazardous Substances)

Any existing national regulations on the handling of isocyanates must be observed.

#### Other regulations

The European Committee of Paint, Printing Ink and Artists' Colours Manufacturers' Associations (CEPE) provides the following information on coatings containing isocyanates: Ready-to-use paints containing isocyanates may have an irritant effect on mucous membranes - especially on breathing organs - and cause hypersensitivity reactions. Inhalation of vapor or spray mist may cause sensitisation. When handling paints containing isocyanates all precautions required for solvent-containing paints must be followed. Vapor and spray mist in particular should not be inhaled. Allergics and asthmatics as well as people prone to respiratory ailments should not work with isocyanate containing paints.

#### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been conducted for this substance / mixture resp. its components.

### SECTION 16: Other information

#### Full text of the hazard statements of the CLP classification (1272/2008/CE) referred to under sections 2, 3 and 10.

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

The product is used mainly as a hardener in coating materials or adhesives. The handling of coating materials or adhesives containing reactive polyisocyanates and residual monomeric HDI requires appropriate protective measures referred to in this safety data sheet. These products may therefore be used only in industrial or trade applications. They are not suitable for use in homemaker (DIY) applications.

#### Further information

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.