

Form

Rev: A

Page: 1 of 28

Date: 08/10/2019

1. PRODUCT IDENTIFICATION

TRADE NAME (as labeled): Guard PU WB Part B

CHEMICAL FAMILY: Polyisocyanate Aliphatic

MANUFACTURER'S/ DISTRIBUTOR'S NAME: LATICRETE South East Asia Pte Ltd

38 Sungei Kadut,

Street 2 (Level2 A3),

Singapore 729245.

Phone number for additional information: (65) 6515 3028

Date prepared or revised: 08/10/2019

2. <u>COMPOSITION INGREDIENTS</u>

Substance / Mixture: MIXTURE

Chemical Nature: Hydrophilic aliphatic polyisocyanate

Ingredients or impurities that contribute to the danger

hexamethylene-1,6-diisocyanate homopolymer

Concentration [wt.-%]: ca. 80

EC-No.: 500-060-2

REACH Registration Number: 01-2119488934-20-0000

CAS-No.: 28182-81-2

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

H335

Hydrophilic aliphatic polyisocyanate based on HDI

Concentration [wt.-%]: ca. 20

CAS-No.: 666723-27-9

Classification (1272/2008/CE): Acute Tox. 3 Inhalative H331 Skin Sens. 1 H317 STOT SE 3

H335 Aquatic



Globally Proven Construction Solutions

Form

Rev: A

Page: 2 of 28

Date: 08/10/2019

Safety Data Sheet

Chronic 3 H412

This contains:

Hexamethylene diisocyanate, oligomerisation product (uretdione type)

Concentration [wt.-%]: ca. 16

EC-No.: 500-060-2

REACH Registration Number: 01-2119488177-26-0000

CAS-No.: 28182-81-2

Classification (1272/2008/CE): Acute Tox. 3 Inhalative H331 Skin Sens. 1 H317 STOT SE 3

H335

Hexamethylene-1,6-diisocyanate Concentration [wt.-%]: < 0,5 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 %Skin Sens. 1 H317 >= 0.5 %

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 section 8 of this SDS.

Candidate List of Substances of Very High Concern for Authorization

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



Rev: A

Form

Page: 3 of 28

Date: 08/10/2019

3. HEALTH HAZARD INFORMATION

Pictograms



Hazardous components which must be listed on the label

:Hexamethylene-1,6-Diisocyanate homopolymer

Hydrophilic aliphatic polyisocyanate based on HDI

Hazard statements

: H317 May cause an allergic skin reaction

H332 Harmful if inhaled

H335 May cause respiratory irritation

Precautionary statements

: P280 Wear protective gloves

P302 + P352 If you COME IN CONTACT WITH the SKIN: wash with abundant soap and water

P304 + P340 IN CASE OF INHALATION: Remove the victim to an open-air area and keep it at rest in a position that does not hinder breathing

P312 If you feel unwilling, contact an ANTI-POISON INFORMATION CENTRE or a doctor



Rev: A

Form

Page: 4 of 28

Date: 08/10/2019

4. FIRST AID: EMERGENCY PROCEDURES

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



Form

Rev: A

Page: 5 of 28

Date: 08/10/2019

5. FIRE FIGHTING MEASURES

Suitable extinguishing agents : Carbon dioxide, dry chemical, foam, water

spray

Unsuitable extinguishing media : Sprinkling with water may be inefficient. If

water is used, spray nozzles are preferred

Specific methods of extinguishing : Water can be used to cool closed containers

in order to avoid buildup of pressure and possible auto-ignition or explosion when

exposed to extreme heat

Special protective equipment for fire-fighters : Complete protective equipment including

self-contained breathing apparatus should be

worn

6. <u>ACCIDENTAL RELEASE MEASURES</u>

Personal precautions : Avoid inhalation of vapors. Refer to protective

measures listed in sections 7 and 8. Keep away from sources of ignition. Do not smoke. The product emits vapors, keep the environment ventilated; Avoid direct contact

with skin, mucous membranes and eyes

For staff who are not part of the emergency : Isolate the location and place warning signs

services to avoid stepping on the spot and run the risk

of an accident

For emergency service personnel : Wear gloves, safety glasses with side

protection and safety shoes

Environmental Precautions : To contain leaks, use inert absorbent

materials. Avoid contamination of soil, sewers,



Form

Rev: A

Page: 6 of 28

Date: 08/10/2019

sewage systems and water bodies

Methods and materials for containment and cleaning

: Removal: in large quantities, pumping material, if small quantities or debris, collect with absorbent material (sand, acid absorbent, universal absorbent, sawdust, vermiculite), incinerate using authorized specific installation

7. HANDLING AND STORAGE

Precaution for safe handling

: Keep away from heat and open flame. Ensure good ventilation and exhaustion of the site. Store at room temperature (25°C). Store away from moisture. Do not eat, drink or smoke at work. Protect from light. Use PPE's listed in section 8. Keep container closed when not in use. Keep out of reach of animals and children

Hygiene measures

: Do not eat, drink or smoke during work

Conditions for packaging

: Store in the original package tightly closed, in a ventilated environment, covered, away from sources of heat, food, at room temperature and observing the criteria of chemical compatibility. Avoid exposure to heat and direct sunlight

Materials for packaging

: Safe packaging materials:

Original product packaging (container with a lid to contain liquids, to transport

observing section 14)

Incompatible products and materials

: Not applicable



Form

Rev: A

Page: 7 of 28

Date: 08/10/2019

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control Parameters

Exposure assessment value according to TRGS 430: The polyisocyanate content (HDI oligomers and / or prepolymers) is 100%. Use here an exposure assessment value (EBW) of $0.5~\rm mg\,/\,m^3$

8.1 Exposure Control

Face protection : Respiration must be protected when working

in poorly ventilated areas or when spraying. It is recommended to use fresh air mask or, for

short work, A2-P2 combination filter.

In case of hypersensitivity of the respiratory tract and skin (asthma, chronic bronchitis, chronic skin disorders), it is not advisable to

work with the product

Hand protection : Materials suitable for protective gloves; EN

374: Butyl rubber, IIR: thickness> = 0.5 mm; break time> = 480 min. Fluorinated rubber, FKM: thickness> = 0.4 mm; break time> = 480 min. Multilayer gloves: PE / EVAL / PE; break time> = 480 min. Recommendation: Remove

contaminated gloves

Eye protection : Wear eye / face protection

Skin and body protection : Wear suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Aspect : Liquid

Color : Yellowish



Globally Proven
Construction Solutions

Form

Rev: A

Page: 8 of 28

Date: 08/10/2019

Safety Data Sheet

Odor : Almost odorless

Odor limit : Not determined

pH : Not determined

Pour Point : About -45 °C

Boiling Point / Range : Not applicable, decomposition

Flash Point : About 185 °C

Evaporation Rate : Not determined

Flammability (solid, gas) : Not applicable

Combustion Index : Not applicable

Vapor pressure : About 5 hPa at 20 °C

About 9 hPa at 50 °C About 10 hPa at 55 °C

Vapor pressure of ingredients:

Hexamethylene 1,6-diisocyanate : About. 0.007 hPa at 20 ° C

1,6-hexamethylene diisocyanate homopolymer < 0,00001 hPa a 20 °C (pressure balance

vapor/OCDE No.104)

Hexamethylene diisocyanate, oligomerization

product (uretdione type)

: About. 0.0029 hPa at 2 0 ° C

Vapor Density : Not determined

Density : About 1,15 g/cm³ at 20 °C

Miscibility in water : Not miscible at 15 °C

Superficial tension : Not determined

Partition coefficient (n-octanol / water) : Not determined

Spontaneous Ignition Temperature : Not applicable



Globally Proven Construction Solutions

Form

Rev: A

Page: 9 of 28

Date: 08/10/2019

Safety Data Sheet

Ignition temperature : About 445 °C

Decomposition Temperature : About 181 °C

Viscosity, dynamic : 570 - 730 mPa.s at 23 ° C

Explosive Properties : Not determined

Dust Explosion Class : Not applicable

Oxidizing properties : Not determined

Other information:

The values given do not correspond in all cases to the product specification. Specification data are presented in the product data sheet

10. STABILITY AND REACTIVITY

Reactivity : Information not available

Chemical stability : Information not available

Possibility of hazardous reactions : Exothermic reaction with amine and alcohols;

in contact with water, successive formation of CO2; pressure increase in closed containers;

danger of bursting

Conditions to avoid : Information not available

Incompatible Materials : Information not available

Hazardous Decomposition Products : Hazardous decomposition products are not

present under appropriate storage and

handling



Form Rev: A

i (UV. A

Page: 10 of 28

Date: 08/10/2019

11. TOXICOLOGY INFORMATION

There are no toxicological analyses of the product.

Then, the available toxicological data of components.

Information on toxicological effects

Toxicidade aguda, oral : Homopolímero de diisocianto de 1.6-

hexametileno DL50 Ratazana, fêmea: >=

5.000 mg/kg

Método: Protocolo OECD 423

Hydrophilic aliphatic polyisocyanate based on

HDI

LD50 Vole: > = 5,000 mg/kg

Method: OECD Protocol 423 toxicological analysis with a comparable product : 1.6-Hexamethylene Diisocyanic

homopolymer LD50 Rat, male/female: > 2,000

mg/kg

Method: OECD 402 Test Guidelines studies of

a comparable product.

LD50 Rabbit, male/female: > 2,000 mg/kg

Studies of a comparable product

Hydrophilic aliphatic polyisocyanate based on HDI LD50 Rat, male/female: > 2,000 mg/kg

Method: OECD 402 Test Guidelines

Studies of a comparable product

Acute inhalation toxicity : ATEmix value (estimation of acute toxicity of

the mixture), inhalational: 1.07 mg/L, 4 H

Testing Environment: Powder/Mist Method: Calculation method

1.6-Hexamethylene Diisocyanic homopolymer

LC50 Rat, female: 0.390 mg/L, 4 H Testing Environment: Powder/Mist

A outa inhalation tovicity

Acute, dermal toxicity



Construction Solutions

Safety Data Sheet

Form

Rev: A

Page: 11 of 28

Date: 08/10/2019

Method: OECD Test Guideline 403 Toxicological analysis with a comparable product.

Conversion to the estimation of acute toxicity at a given point 1.5 mg/l

Testing Environment: Powder/Mist

Method: Expert Opinion

Evaluation: Harmful by inhalation

Hydrophilic aliphatic polyisocyanate based on HDI LC50 Rat, male/female: 0.158 mg/L, 4 H

Testing Environment: Powder/Mist

Method: OECD Test Guideline 403 studies of

a comparable product

Conversion to the estimation of acute toxicity

at a given point 0.5 mg/l

Testing Environment: Powder/Mist

Method: Expert Opinion

: 1.6-Hexamethylene Diisocyanic

homopolymer

Species: Rabbit

Result: Weakly irritating

Classification: does not cause skin irritation

Method: OECD Test guideline 404

Hydrophilic aliphatic polyisocyanate based on

HDI

Primary cutaneous irritation



Form

Rev: A

Page: 12 of 28

Date: 08/10/2019

Species: Rabbit

Result: An irritant effect is not distinguished from a mechanical effort caused by the

removal of the sample Test

Classification: does not cause skin irritation

Method: OECD Test guideline 404 Toxicological analysis with a comparable

product

Primary cutaneous irritation of the mucous membranes

: 1.6-Hexamethylene Diisocyanic

homopolymer

Species: Rabbit

Result: Weakly irritating

Classification: Does not irritate the eyes

Method: OECD Test Guideline 405

Hydrophilic aliphatic polyisocyanate based on

HDI

Species: Rabbit

Result: Weakly irritating

Classification: Does not irritate the eyes

Method: OECD Test Guideline 405 Toxicological analysis with a comparable

product

: 1.6-Hexamethylene Diisocyanic

homopolymer

Skin sensitization (local lymph node test

(LLNA)):

Awareness



Form

Rev: A

Page: 13 of 28

Date: 08/10/2019

Species: Rat

Result: Positive

Classification: May cause sensitization in

contact with the skin.

Method: OECD TG 429

Respiratory sensitization

Classification: Substance not classified as

airway sensitizing according to directives

2006/121/EC and 1999/45/EC

No sensitization of the lungs was observed in

animal tests

Both after intradermal induction and inhalation, there was no potential sensitizing of the lungs in guinea pigs with Hexamethylene

diisocyanate-based polyisocyanate

Hydrophilic aliphatic polyisocyanate based on HDI skin sensitization (local lymph node test (LLNA)):

Species: Rat

Result: Positive

Classification: May cause sensitization in

contact with the skin

Method: OECD TG 429

Toxicological analysis with a comparable

product

Respiratory sensitization Classification:



Form

Rev: A

Page: 14 of 28

Date: 08/10/2019

Substance not classified as airway sensitizing according to directives

2006/121/EC and 1999/45/EC

No sensitization of the lungs was observed in animal tests.

Both after intradermal induction and inhalation, there was no potential sensitizing of the pulmoes in With Polyisocyanate-based diisocianate

Subacute, subchronic and prolonged toxicity

: 1.6-Hexamethylene Diisocyanic homopolymer

NOAEL: 3.3 mg/m³ ar

Application route: Inhalant

Species: Vole, male/female

Doses: 0-0.5-3.3-26.4 mg/m³

Exposure Time: 90 D

Treatment frequency: 6 hours per day, 5 days

a week

Test Substance: Aerosol

Method: OECD Protocol 413

Toxicological analysis with a comparable

product.

No evidence of lesions in other organs other

than respiratory organs was found.

: 1.6-Hexamethylene Diisocyanic

homopolymer

Carcinogenicity



Form

Rev: A

Page: 15 of 28

Date: 08/10/2019

No data available

Reproductive toxicity/fertility

Genotoxicidade in vitro

: 1.6-Hexamethylene Diisocyanic homopolymer

The available data have no indication of toxic effects for reproduction.

Hydrophilic aliphatic polyisocyanate based on HDI

The available data have no indication of toxic effects for reproduction.

: 1.6-Hexamethylene Diisocyanic homopolymer

Test type: Salmonella test/microsomes (Ames

test)

Metabolic activation: with/without

Result: no indication of mutagenity.

Method: OECD TG 471

Test type: Point mutation in mammalian cells

(HPRT test)

Metabolic activation: with/without

Result: Negative

Method: OECD TG 476

Toxicological analysis with a comparable

product.

Test type: In vitro chromosomal aberration test

Test system: Chinese hamster Cell line V79



Construction Solutions

Safety Data Sheet

Form

Rev: A

Page: 16 of 28

Date: 08/10/2019

Metabolic activation: with/without

Result: Negative

Method: OECD TG 473

Toxicological analysis with a comparable

product.

Hydrophilic aliphatic polyisocyanate based on

HDI

Test type: Salmonella test/microsomes (Ames

test)

Result: no indication of mutagenity.

Method: OECD TG 471

Toxicological analysis with a comparable

product

Genotoxicity in vivo : No data available.

STOT Assessment - Single exposure

:1.6-Hexamethylene Diisocyanic homopolymer

Exposure Route: inhalant, It may cause airway

irritation.

Hydrophilic aliphatic polyisocyanate based on

HDI, It may cause airway irritation.

STOT evaluation – Repeated exposure

: 1.6-Hexamethylene Diisocyanic

homopolymer based on the available data, the

classification criteria are not populated.

Hydrophilic aliphatic polyisocyanate based on HDI based on the available data, the classification criteria are not

populated.preenchidos.



Globally Proven Construction Solutions

Safety Data Sheet

Form

Rev: A

Page: 17 of 28

Date: 08/10/2019

Aspiration toxicity

CMR Evaluation

Toxicological evaluation

Other indications

: 1.6-Hexamethylene Diisocyanic homopolymer based on the available data, the classification criteria are not populated.

Hydrophilic aliphatic polyisocyanate based on HDI based on the available data, the classification criteria are not populated.

: 1.6-Hexamethylene Diisocyanic homopolymer carcinogenicity: Based on available data, the classification criteria are not fulfilled.

Mutagenicity: In vitro tests did not show mutagenic effects. Based on the available data, the classification criteria are not populated.

Teratogenicity: Based on the available data, the classification criteria are not fulfilled.

Reproductive toxicity/Fertility: Based on the available data, the classification criteria are not filled

: 1.6-Hexamethylene Diisocyanic homopolymer acute effects: harmful by inhalation.

Sensitization: May cause sensitization in contact with the skin.

: Characteristics/Special Effects: In case of excessive exposure-especially in the application to the pistol, without protective measures, paints and varnishes containing isocyanate, irritation of the eyes, nose, pharynx and airways is possible, depending on the concentration of the product. It can cause



Form

Rev: A

Page: 18 of 28

Date: 08/10/2019

hypersensitivity and the delayed onset of disorders (asthma, breathing difficulties, and cough). Hypersensitive people may also react with irritations in the case of very low concentrations of isocyanate, even lower than the MAK value. In the case of prolonged contact with the skin, irritation and burns effects are possible.

Animal testing and other studies indicate that skin contact with diisocyanates may perform an important role in sensitization to isocianates and airway reactions.

12. ECOLOGICAL INFORMATION

Avoid penetration in water courses, wastewater and soil.

Then the available data: Toxicity

Acute toxicity to fish

: 1.6-Hexamethylene Diisocyanic homopolymer LC50 > 100 mg/L

Species: Danio rerio (zebra fish)

Exposure time: 96 h

Method: Directive 67/548/EEC, annex V, C. 1.

Preparation of samples based on the reactivity of the substance with water:

Ultra Turrax: 60 s, 8,000 rpm; 24 h in magnetic stirrer; Filtration.

Hydrophilic aliphatic polyisocyanate based on HDI LC50 35.2 mg/l



Form

Rev: A

Page: 19 of 28

Date: 08/10/2019

Species: Danio rerio (zebra fish)

Exposure time: 96 h

Method: OECD Test Guideline 203

Ecotoxicological analyses of a comparable

product

Acute toxicity to Daphnia

: 1.6-Hexamethylene Diisocyanic

homopolymer

EC50 > 100 mg/L

Species: Daphnia magna

Exposure Time: 48 h

Method: Directive 67/548/EEC, annex V, C. 2.

Preparation of samples based on the reactivity

of the substance with water:

Ultra Turrax: 60 s, 8,000 rpm; 24 h in magnetic

stirrer; Filtration.

Hydrophilic aliphatic polyisocyanate based on

HDI

EC50 > 100 mg/L

Species: Daphnia magna

Exposure Time: 48 h

Method: OECD TG 202

Ecotoxicological analyses of a comparable

product

Acute toxicity to algae : 1.6-Hexamethylene Diisocyanic



Form

Rev: A

Page: 20 of 28

Date: 08/10/2019

homopolymer

EC50 199 mg/l

Test Type: Growth inhibition

Species: Scenedesmus subspice

Exposure Time: 72 h

Method: Directive 67/548/EEC, annex V, C. 3.

Preparation of samples based on the reactivity of the substance with water:

Ultra Turrax: 60 s, 8,000 rpm; 24 h in magnetic stirrer; Filtration.

Hydrophilic aliphatic polyisocyanate based on HDI

EC50 72 mg/l

Species: Desmodesmus subspicy (green Alga)

Exposure Time: 72 h

Method: OECD Protocol 201

Ecotoxicological analyses of a comparable

product

1.6-Hexamethylene Diisocyanic homopolymer

EC50 > 10,000 mg/L

Test Type: Respiration inhibition

Species: Activated sludge

Exposure time: 3 h

Acute toxicity to bacteria



Form

Rev: A

Page: 21 of 28

Date: 08/10/2019

Method: EG-RL 88/302/EEC

Hydrophilic aliphatic polyisocyanate based on

HDI

EC50 > 10,000 mg/L

Species: Activated sludge

Method: OECD Protocol 209

Ecotoxicological analyses of a comparable

product

Evaluation of Ecotoxicology

1.6-Hexamethylene Diisocyanic homopolymer

Acute toxicity to the aquatic environment: based on available data, the classification criteria for the are not populated.

Chronic toxicity to the aquatic environment: there is no indications of chronic aquatic toxicity.

Impact on sewage treatment: Given the reduced toxicity to bacteria, there is no danger of

Deterioration of the purification capacity of the biological treatment plants.

Persistence and degradability

Evaluation of Ecotoxicology

1.6-Hexamethylene Diisocyanic homopolymer

Acute toxicity to the aquatic environment: based on available data, the classification criteria for the are not populated.

Chronic toxicity to the aquatic environment: there is no indications of chronic aquatic toxicity.

Impact on sewage treatment: Given the reduced toxicity to bacteria, there is no danger of

Deterioration of the purification capacity of the biological treatment plants.

Persistence and degradability



Globally Proven Construction Solutions

Form

Rev: A

Page: 22 of 28

Date: 08/10/2019

Safety Data Sheet

Biodegradability

1.6-Hexamethylene Diisocyanic homopolymer

Test Type: Aerobic

Biodegradability: 2%, 28 D, i.e. not easily degradable

Method: Directive 92/32/EEG, annex V, C. 4. E.

Ecotoxicological analysis with the product

Test Type: Aerobic

Biodegradability: 0%, 28 D, i.e., not inherently degradable

Method: OECD Protocol 302 C

Ecotoxicological analysis with the product

Hydrophilic aliphatic polyisocyanate based on HDI

Biodegradability: 0%, i.e. not easily degradable

Method: OECD Protocol 301 F

Ecotoxicological analyses of a comparable product

Water stability

1.6-Hexamethylene Diisocyanic homopolymer

Test Type: Hydrolysis

Semi-Life: 7.7 h at 23 °c

Method: OECD TG 111

The substance hydrolyzes rapidly into water.

Studies of a comparable product.



Form Rev: A

Page: 23 of 28

Date: 08/10/2019

Degradability

1.6-Hexamethylene Diisocyanic homopolymer

Test type: Phototransformation in air

Temperature: 25 °c

Sensitizing: HO Radicals

Half-life (indirect photolysis): 11.7 h

Method: SRC-AOP (calculation)

After evaporation or exposure to air, the product degrades quickly by photochemical processes.

Test type: Phototransformation in air

Temperature: 25 °c

Sensitizing: HO Radicals

Half-life (indirect photolysis): 3.1 h

Method: SRC-AOP (calculation)

After evaporation or exposure to air, the product degrades quickly by photochemical processes.

Hydrolysis product studies.

Volatility (Henry Law's constant)

1.6-Hexamethylene Diisocyanic homopolymer

Calculated value = < 0.000001 Pa * m3/mol at 25 °c

Method: Bond Method

The substance must be classified as non-volatile from water.

Calculated value = < 0.000001 Pa * m3/mol at 25 °c

Method: Bond Method



Form

Rev: A

Page: 24 of 28

Date: 08/10/2019

The substance must be classified as non-volatile from water

Hydrolysis product studies

Bioaccumulation potential

Bioaccumulation

1.6-Hexamethylene Diisocyanic homopolymer

Bioconcentration factor (BCF): 706.2

Method: (Calculated)

The substance hydrolyzes rapidly into water.

It is not expected to accumulate in aquatic organisms.

Bioconcentration factor (BCF): 10.11

Method: (Calculated)

It is not expected to accumulate in aquatic organisms.

Hydrolysis product studies.

Mobility in the soil

Distribution by environmental compartments

1.6-Hexamethylene Diisocyanic homopolymer

Adsorption/soil not applicable

Environmental dissemination

1.6-Hexamethylene Diisocyanic homopolymer not applicable

PBT and VPVB Evaluation results

1.6-Hexamethylene Diisocyanic homopolymer



Form

Rev: A

Page: 25 of 28

Date: 08/10/2019

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

Other adverse effects:

The isocyanate reacts with water in the interface, forming CO2 and an insoluble solid product with high melting point (polyurea). This reaction is strongly favored by surfactant substances (e.g. liquid soaps) or water-soluble solvents. According to the experience so far acquired Polyurea is inert and not degradable.

13. <u>DISPOSAL CONSIDERATIONS</u>

In the treatment and disposition of the product, it remains and used packaging, it must be satisfied to the local, state and national legislation. For disposal within the EU, use the valid waste code in each case according to the European Waste List (RSI).

Methods of waste treatment:

Directly after the last product withdrawal, the packaging must be emptied completely (so that it does not become liquid, powder, granular or paste). After neutralized the product remains adherent to the container walls, undo the product labels and hazard indications. These packaging can be delivered for recycling to the reception centres of packaging materials of the chemical industry return systems. The recovery of empty packages must be carried out accordance with national legislation and the rules on environmental protection.

Do not dispose in wastewater.

14. TRANSPORT INFORMATION

ADG7 - Australia

14.1 UN number : Not dangerous goods

14.2 UN proper shipping name : Not dangerous goods

14.3 Transport hazard class : Not dangerous goods



Form

Rev: A

Page: 26 of 28

Date: 08/10/2019

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 : 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 : Not dangerous goods

14.4 Packing group : Not dangerous goods

14.5 Environmental hazards : Not dangerous goods

15. REGULATORY INFORMATION

Regulation/legislation specific to the substance or mixture in the field of health, Safety and environment directive 2012/18/EU for the control of hazards of serious accidents involving hazardous substances.

Not applicable

Water Contamination Class (Germany)

1 Slight water contaminant (According to Appendix 4 VwVwS) Observe the M 044 information sheet on the manufacture of polyurethane and isocyanate processing of BG Chemie (German



Form

Rev: A

Page: 27 of 28

Date: 08/10/2019

Professional Chemical Industry association).

Other regulations:

The European Committee of the Associations of Manufacturers of paints, press paints and art paints (CEPE) shall communicate the following information on paints containing isocyanates: isocyanate inks may cause mucosal irritation-in particular Of the airways-and Trigger hypersensitivity actions. In case of inhalation of vapors or aerosols, there is danger of sensitization. When handling this type of paints, it is necessary to have the same precautions as those provided for solvent inks and in particular for aerosols and vapours which should not be Inhaled. Allergic, asthmatic or cheeky people to respiratory tract infections should not do any work that puts them in contact with isocyanate-containing paints.

Chemical Safety Assessment:

A chemical safety assessment was carried out to:

1.6-Hexamethylene Diisocyanic homopolymer

16. OTHER INFORMATION

Full text of the hazard warnings entered in chapters 2, 3 and 10 of the CLP classification (1272/2008/EC).

H302 Harmful by ingestion

H315 causes skin irritation

H317 may cause an allergic skin reaction

H319 causes severe eye irritation

H330 Deadly by inhalation

H331 Toxic by inhalation

H332 harmful by inhalation

H334 when inhaled, it may cause symptoms of allergy or asthma or difficulty in respiratory



Rev: A

Form

Page: 28 of 28

Date: 08/10/2019

H335 may cause irritation of the airways

H412 harmful to aquatic organisms with long lasting effects

The product is mainly used as a hardener in coating materials or adhesives. The handling of coating materials or adhesives, which contain reactive polyisocyanates and residual contents of HDI monomer, requires adequate protection measures (see also safety data sheet). Therefore, they should only be used in industrial or professional applications. Are not indicated for applications "Do-it-yourself".

The modifications made since the last version will be underlined in the margin. This version replaces all previous versions.

Supplementary information:

The information provided in this FISPQ is the most correct that we have until the date of its publication. The information provided is intended only to provide advice that provides safe use, handling, processing, storage, transportation and disposal and should not be considered a guarantee or quality specification. The information refers only to the designated product and, unless specified in the text, may not be valid if the same product is used in any combination with other products or processes.