

X - PRIMER

Creation date	28th November 2024	Version	3.0
Revision date			

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Substance / mixture	X - PRIMER
Number	mixture
UFI	R 34266
	QWV1-23S6-F00Q-D544

1.2. Relevant identified uses of the substance or mixture and uses advised against Mixture's intended use

Adhesion promotor. For professional use only.

Main intended use

PC-ADH-OTH Other adhesives and sealants

Mixture uses advised against

The product should not be used in ways other than those referred in Section 1.

1.3. Details of the supplier of the safety data sheet**Supplier**

Name or trade name	RETECH, s.r.o.
Address	Vackova 1541/4, Praha 5 - Stodůlky, 155 00
	Czech Republic
Identification number (CRN)	25018205
VAT Reg No	CZ25018205
Phone	+420327596428
E-mail	info@retech.cz
Web address	www.retech.com

Competent person responsible for the safety data sheet

Name	RETECH, s.r.o.
E-mail	info@retech.cz

1.4. Emergency telephone number

European emergency number: 112

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification of the mixture in accordance with Regulation (EC) No 1272/2008**

The mixture is classified as dangerous.

Flam. Liq. 2, H225
Eye Irrit. 2, H319
Resp. Sens. 1, H334
STOT SE 3, H336

Most serious adverse physico-chemical effects

Highly flammable liquid and vapour.

Most serious adverse effects on human health and the environment

Causes serious eye irritation. May cause drowsiness or dizziness. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements**Hazard pictogram****Signal word**

Danger

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Hazardous substances

 ethyl methyl ketone
 diphenylmethane-4,4'-diisocyanate
 ISOPHORONE DIISOCYANATE

Hazard statements

 H225 Highly flammable liquid and vapour.
 H319 Causes serious eye irritation.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H336 May cause drowsiness or dizziness.

Precautionary statements

 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P370+P378 In case of fire: Use powder extinguisher/sand/carbon dioxide to extinguish.

Supplemental information

 EUH066 Repeated exposure may cause skin dryness or cracking.
 EUH204 Contains isocyanates. May produce an allergic reaction.
 As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended. Does not contain any PMT or vPvM components.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Chemical characterization

Mixture of substances and additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 606-002-00-3 CAS: 78-93-3 EC: 201-159-0 Registration number: 01-2119457290-43	ethyl methyl ketone	54-<58	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	3
CAS: 1333-86-4 EC: 215-609-9 Registration number: 01-2119384822-32	carbon black	15-<16.5	has not been classified, H?	

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

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Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 615-005-00-9 CAS: 101-68-8 EC: 202-966-0 Registration number: 01-2119457014-47	diphenylmethane-4,4'-diisocyanate	0.89-<1	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 4, H332 Resp. Sens. 1, H334 STOT SE 3, H335 Carc. 2, H351 STOT RE 2, H373 Specific concentration limit: Eye Irrit. 2, H319: C ≥ 5 % Resp. Sens. 1, H334: C ≥ 0.1 % STOT SE 3, H335: C ≥ 5 % Skin Irrit. 2, H315: C ≥ 5 % ATE Inhalation (vapor) = 11 mg/l	1, 2, 4
Index: 615-008-00-5 CAS: 4098-71-9 EC: 223-861-6 Registration number: 01-2119490408-31	ISOPHORONE DIISOCYANATE	0.44-<0.5	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 1, H330 Resp. Sens. 1, H334 STOT SE 3, H335 Aquatic Chronic 2, H411 Specific concentration limit: Skin Sens. 1, H317: C ≥ 0.5 % Resp. Sens. 1, H334: C ≥ 0.5 %	2, 4
CAS: 68928-76-7 EC: 273-028-6	Dimethylbis[(1-oxoneodecyl)oxy]stannane	0.07-<0.1	Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412 Specific concentration limit: ATE Oral = 500 mg/kg bw	

Notes

- 1 Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- 2 Note 2: The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.
- 3 A substance for which exposure limits are set.
- 4 The use of the substance is restricted by Annex XVII of REACH Regulation

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. If the victim is not breathing, perform artificial respiration. Provide medical treatment.

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If on skin

Remove contaminated clothes. Immediately wash with water and soap and rinse thoroughly. In the event of issues, find medical advice. Wash contaminated clothing before reuse.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible.

If swallowed

DO NOT INDUCE VOMITING! Do not provide anything to eat or drink. Provide medical treatment.

4.2. Most important symptoms and effects, both acute and delayed**If inhaled**

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause drowsiness or dizziness.

If on skin

not available

If in eyes

Causes serious eye irritation.

If swallowed

not available

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

not available

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, foam, powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

Container: May burst if heated. Do not breathe smoke.

5.3. Advice for firefighters

Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water. Dispose of contaminated extinguishing water and remains after the fire in accordance with the official regulations.

EN137 - Respiratory protective devices — Self-contained open-circuit compressed air breathing apparatus with full face mask. EN 469 - Protective clothing for firefighters - Performance requirements for protective clothing for firefighting. EN 659+A1: - Protective gloves for firefighters.

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

Provide sufficient ventilation. Highly flammable liquid and vapour. Use explosion-proof electrical equipment. Remove all ignition sources. Stop leak if safe to do so. Use personal protective equipment for work. Do not get in eyes, on skin, or on clothing. Keep unprotected persons away. Follow the instructions in the Sections 7 and 8.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water. Do not allow to enter drains.

6.3. Methods and material for containment and cleaning up

Ventilate the room. Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13.

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6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage
7.1. Precautions for safe handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air. Take action to prevent static discharges. Use of antistatic clothes and footwear is recommended. Electrostatic charge may be formed during use; use only earthed piping (tubing) when repumping. Do not use compressed air for filling, emptying or another handling. Open and handle receptacle with care. Do not eat, drink or smoke when using this product. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Keep only in original container. Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Protect from sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Store away from incompatible materials.

Content	Packaging type	Material of package
30 ml	bottle	

Storage class

3 - Flammable liquids

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

European Union
Commission Directive 2000/39/EC

Substance name (component)	Type	Value
ethyl methyl ketone (CAS: 78-93-3)	OEL 8 hours	600 mg/m ³
	OEL 8 hours	200 ppm
	OEL 15 minutes	900 mg/m ³
	OEL 15 minutes	300 ppm

DNEL

ethyl methyl ketone			
Workers / consumers	Route of exposure	Value	Effect
Consumers	Oral	31 mg/kg bw/day	Chronic effects systemic
Consumers	Inhalation	106 mg/m ³	Chronic effects systemic
Consumers	Dermal	412 mg/kg bw/day	Chronic effects systemic
Workers	Inhalation	600 mg/m ³	Chronic effects systemic
Workers	Dermal	1161 mg/kg bw/day	Chronic effects systemic

PNEC

ethyl methyl ketone	
Route of exposure	Value
Freshwater environment	55.8 mg/l
Freshwater sediment	284.74 mg/kg
Sea sediments	284.7 mg/kg

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ethyl methyl ketone	
Route of exposure	Value
Water (intermittent release)	55.8 mg/l
Microorganisms in sewage treatment	709 mg/l
Soil (agricultural)	22.5 mg/kg

ISOPHORONE DIISOCYANATE	
Route of exposure	Value
Freshwater environment	0.06 mg/l
Marine water	0.006 mg/l
Freshwater sediment	218.92 mg/kg
Sea sediments	21.89 mg/kg
Microorganisms in sewage treatment	10.6 mg/l
Soil (agricultural)	44.01 mg/kg

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Ensure workplace is equipped with a safety shower and eye wash station.

Eye/face protection

Tightly sealed goggles. EN166 - Personal Eye Protection Standard.

Skin protection

Hand protection: Protective gloves resistant to the product. Category III. EN ISO 374-1. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Protective gloves shall be replaced immediately when damaged.

In case of splashing risk:

Material of gloves: Nitrile rubber, NBR. Recommended thickness of the material: ≥ 0.3 mm. Penetration time of glove material: > 480 min.

When handling in long-term or repeatedly, use protective gloves:

Material of gloves: Butyl rubber. Recommended thickness of the material: ≥ 0.4 mm.

Other protection: Wear category I professional long-sleeved overalls and safety footwear (see Regulation (EU) 2016/425 and standard EN ISO 20344). Wear anti-static protective clothing if there is a risk of ignition from static electricity. Contaminated skin should be washed thoroughly.

Respiratory protection

Use a mask with filter when the exposition limits of the substances are exceeded or at the place with insufficient ventilation. Filter A. EN143 - Respiratory protective devices - Gas filter(s) and combined filter(s).

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

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

Physical state	liquid
Colour	black
Odour	after solvents
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	80 °C
Flammability	data not available
Lower and upper explosion limit	
bottom	0.8 %

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upper	11.5 %
Flash point	-10 °C (DIN 51755)
Auto-ignition temperature	400 °C
Decomposition temperature	data not available
pH	non-soluble (in water)
Kinematic viscosity	data not available
Solubility in water	data not available
Solubility in fats	data not available
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	150 mbar
Density and/or relative density	
Density	data not available
Relative density	0.92-0.96 (ISO 1183-1 A)
Relative vapour density	data not available
Particle characteristics	data not available
Form	liquid

9.2. Other information

Evaporation rate	data not available
Vapour density	2.5
Content of organic solvents (VOC)	61.91 %
Max. VOC content in the product in its ready to use condition	588.1 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

When used in the standard way, there is not any dangerous reaction with other substances.

Ethyl methyl ketone:

Reacts with strong oxidizing agents. Reacts with light metals. Attacks various types of plastic materials. Decomposes under the effect of heat.

Diphenylmethane-4,4'-diisocyanate:

Thermal decomposition: at 274 °C/525 °F. The product will harden into a solid mass in contact with water. With water it produces carbon dioxide and forms an insoluble solid polymer, therefore any wet material must be stored in open containers.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Vapours mixed up with air can be explosive.

Ethyl methyl ketone:

May form peroxides with: air, light, strong oxidising agents. Risk of explosion on contact with: hydrogen peroxide, nitric acid, sulphuric acid. May react dangerously with: oxidising agents, trichloromethane, alkalis. Forms explosive mixtures with air.

Diphenylmethane-4,4'-diisocyanate:

May react dangerously with: alcohols, amines, ammonia, sodium hydroxide, acids, water, strong acids, strong bases.

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10.4. Conditions to avoid

Protect against overheating. Take action to prevent static discharges. Remove all ignition sources.

 Ethyl methyl ketone:
 Keep away from heat, open flames.

10.5. Incompatible materials

 Ethyl methyl ketone:
 Strong oxidants, inorganic acids, ammonia, copper, chloroform.

10.6. Hazardous decomposition products

Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

 Diphenylmethane-4,4'-diisocyanate:
 May develop: nitric oxide, carbon oxides, hydrogen cyanide.

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

Acute toxicity

Based on the available data, the criteria for classification of the mixture are not met.

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Route of exposure	Parameter	Value	Exposure time	Species	Sex
Inhalation	ATE	>5 mg/l			

carbon black					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	>8000 mg/kg		Rat	
Dermal	LD ₅₀	>3000 mg/kg		Rabbit	
Inhalation (dust/mist)	LC ₅₀	>27 mg/l	1 hour	Rat	

Dimethylbis[(1-oxonodecyl)oxy]stannane					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	ATE	500 mg/kg bw			

diphenylmethane-4,4'-diisocyanate					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	>2000 mg/kg		Rat	
Dermal	LD ₅₀	>9400 mg/kg		Rabbit	
Inhalation	LC ₅₀	2.24 mg/l		Rat	
Inhalation (vapor)	ATE	11 mg/l			

ethyl methyl ketone					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	2737 mg/kg		Rat	
Dermal	LD ₅₀	6480 mg/kg		Rabbit	
Inhalation	LC ₅₀	23.5 mg/l	8 hours	Rat	

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ISOPHORONE DIISOCYANATE

Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	4814 mg/kg		Rat	
Dermal	LD ₅₀	>7000 mg/kg		Rat	
Inhalation	LC ₅₀	0.031 mg/l	4 hours	Rat	

Skin corrosion/irritation

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Serious eye damage/irritation

Causes serious eye irritation. Data for the components of the mixture are not available.

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Data for the components of the mixture are not available.

Germ cell mutagenicity

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Carcinogenicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

diphenylmethane-4,4'-diisocyanate

Route of exposure	Parameter	Value	Result	Species	Sex	Source
						IARC: Group 3 (not classifiable as a human carcinogen)

Reproductive toxicity

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Toxicity for specific target organ - single exposure

May cause drowsiness or dizziness. Data for the components of the mixture are not available.

Toxicity for specific target organ - repeated exposure

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Aspiration hazard

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

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More information

Diphenylmethane-4,4'-diisocyanate:

Mucous membranes and airways may be irritated, and the central nervous system may be affected. Irritation of eye tissue layers. Causes skin irritation. Irritation of the digestion system can occur. Headaches. Chest tightness. Unconsciousness, breathing problems, dizziness, cough, nausea.

Risk of pulmonary edema. Risk of pneumonia.

11.2. Information on other hazards
Endocrine disrupting properties

Based on the available data, the criteria for classification of the mixture are not met. Does not contain any components that may cause endocrine disruption for humans.

Other information

not available

SECTION 12: Ecological information
12.1. Toxicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Acute toxicity

carbon black				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	>1000 mg/l	96 hours	Fish (Branchydanio rerio)	
EC ₅₀	>10000 mg/l	72 hours	Algae (Scenedesmus subspicatus)	

diphenylmethane-4,4'-diisocyanate				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	>1000 mg/l	96 hours	Fish (Danio rerio)	

ethyl methyl ketone				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	2993 mg/l	96 hours	Fish (Pimephales promelas)	
EC ₅₀	308 mg/l	48 hours	Daphnia (Daphnia magna)	

Chronic toxicity

diphenylmethane-4,4'-diisocyanate				
Parameter	Value	Exposure time	Species	Environment
NOEC	1640 mg/l		Algae (Desmodesmus subspicatus)	

12.2. Persistence and degradability

Data for the mixture are not available.

Biodegradability

diphenylmethane-4,4'-diisocyanate				
Parameter	Value	Exposure time	Environment	Result
	0.1-100 mg/l		Fresh water	Hardly biodegradable

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ethyl methyl ketone

Parameter	Value	Exposure time	Environment	Result
	>10000 mg/l		Fresh water	Easily biodegradable

12.3. Bioaccumulative potential

Data for the mixture are not available.

diphenylmethane-4,4'-diisocyanate

Parameter	Value	Exposure time	Species	Environment	Temperature [°C]
Log Kow	4.51				

ethyl methyl ketone

Parameter	Value	Exposure time	Species	Environment	Temperature [°C]
Log Kow	0.3				

12.4. Mobility in soil

Based on the available data, the criteria for classification of the mixture are not met. Does not contain any PMT or vPvM components.

12.5. Results of PBT and vPvB assessment

Based on the available data, the criteria for classification of the mixture are not met. Does not contain any PBT or vPvB components.

12.6. Endocrine disrupting properties

Based on the available data, the criteria for classification of the mixture are not met. Does not contain any components that may cause endocrine disruption in the environment.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations
13.1. Waste treatment methods

Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Recycle the product where possible. Dispose unused product as hazardous waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information
14.1. UN number or ID number

UN 1139

14.2. UN proper shipping name

COATING SOLUTION

14.3. Transport hazard class(es)

3 Flammable liquids

14.4. Packing group

II

14.5. Environmental hazards

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14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

Additional information

IATA - Special provision: A3

Hazard identification No.

UN number

Safety signs

33
1139

3



Road transport - ADR

Special provisions	640D
Limited quantities	5 L
Transport category	3
Tunnel restriction code	(D/E)

Railway transport - RID

Air transport - ICAO/IATA

Packaging instructions passenger	353
Cargo packaging instructions	364

Marine transport - IMDG

EmS (emergency plan)	F-E, S-E
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SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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Restrictions pursuant to Annex XVII of Regulation (EC) No. 1907/2006 (REACH), as amended

diphenylmethane-4,4'-diisocyanate

Restriction	Conditions of restriction
56	<p>1. Shall not be placed on the market after 27 December 2010, as a constituent of mixtures in concentrations equal to or greater than 0,1 % by weight of MDI for supply to the general public, unless suppliers shall ensure before the placing on the market that the packaging:</p> <p>(a) contains protective gloves which comply with the requirements of Council Directive 89/686/EEC (*****);</p> <p>(b) is marked visibly, legibly and indelibly as follows, and without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures:</p> <p>“— Persons already sensitised to diisocyanates may develop allergic reactions when using this product.</p> <p>— Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.</p> <p>— This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.”</p> <p>2. By way of derogation, paragraph 1(a) shall not apply to hot melt adhesives.</p>

diphenylmethane-4,4'-diisocyanate, ISOPHORONE DIISOCYANATE

Restriction	Conditions of restriction
74	<p>1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:</p> <p>(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or</p> <p>(b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).</p> <p>2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:</p> <p>(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or</p> <p>(b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: “As from 24 August 2023 adequate training is required before industrial or professional use”.</p> <p>3. For the purpose of this entry “industrial and professional user(s)” means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.</p> <p>4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:</p> <p>(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).</p> <p>(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:</p> <ul style="list-style-type: none"> — handling open mixtures at ambient temperature (including foam tunnels); — spraying in a ventilated booth; — application by roller; — application by brush; — application by dipping and pouring; — mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore; — cleaning and waste; — any other uses with similar exposure through the dermal and/or inhalation route; <p>(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:</p>

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diphenylmethane-4,4'-diisocyanate, ISOPHORONE DIISOCYANATE

Restriction	Conditions of restriction
	<ul style="list-style-type: none"> — handling incompletely cured articles (e.g. freshly cured, still warm); — foundry applications; — maintenance and repair that needs access to equipment; — open handling of warm or hot formulations (> 45 °C); — spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers); — and any other uses with similar exposure through the dermal and/or inhalation route. <p>5. Training elements:</p> <p>(a) general training, including on-line training, on:</p> <ul style="list-style-type: none"> — chemistry of diisocyanates; — toxicity hazards (including acute toxicity); — exposure to diisocyanates; — occupational exposure limit values; — how sensitisation can develop; — odour as indication of hazard; — importance of volatility for risk; — viscosity, temperature, and molecular weight of diisocyanates; — personal hygiene; — personal protective equipment needed, including practical instructions for its correct use and its limitations; — risk of dermal contact and inhalation exposure; — risk in relation to application process used; — skin and inhalation protection scheme; — ventilation; — cleaning, leakages, maintenance; — discarding empty packaging; — protection of bystanders; — identification of critical handling stages; — specific national code systems (if applicable); — behaviour-based safety; — certification or documented proof that training has been successfully completed <p>(b) intermediate level training, including on-line training, on:</p> <ul style="list-style-type: none"> — additional behaviour-based aspects; — maintenance; — management of change; — evaluation of existing safety instructions; — risk in relation to application process used; — certification or documented proof that training has been successfully completed <p>(c) advanced training, including on-line training, on:</p> <ul style="list-style-type: none"> — any additional certification needed for the specific uses covered; — spraying outside a spraying booth; — open handling of hot or warm formulations (> 45 °C); — certification or documented proof that training has been successfully completed <p>6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture(s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.</p> <p>7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.</p> <p>8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.</p> <p>9. Member States shall include in their reports pursuant to Article 117(1) the following information:</p> <p>(a) any established training requirements and other risk management measures related to the</p>

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diphenylmethane-4,4'-diisocyanate, ISOPHORONE DIISOCYANATE

Restriction	Conditions of restriction
	industrial and professional uses of diisocyanates foreseen in national law; (b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates; (c) national exposure limits for diisocyanates, if there are any; (d) information about enforcement activities related to this restriction. 10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

More information

Directive 2012/18/EU of the European parliament and of the Council - ANNEX I - Hazard categories: P5c FLAMMABLE LIQUIDS.

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. May produce an allergic reaction.
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Guidelines for safe handling used in the safety data sheet

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P370+P378	In case of fire: Use powder extinguisher/sand/carbon dioxide to extinguish.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

Acute Tox.	Acute toxicity
ADR	European agreement concerning the international carriage of dangerous goods by road
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
BCF	Bioconcentration Factor
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service

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CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EC ₅₀	Concentration of a substance when it is affected 50 % of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquid
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
log K _{ow}	Octanol-water partition coefficient
NOEC	No observed effect concentration
OEL	Occupational Exposure Limits
PBT	Persistent, bioaccumulative and toxic
PMT	Persistent, mobile and toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Resp. Sens.	Respiratory sensitization
RID	Agreement on the transport of dangerous goods by rail
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very persistent and very bioaccumulative
vPvM	Very persistent and very mobile

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

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The version 3.0 replaces the SDS version from Wednesday, 20 July 2022. Changes were made in sections 1, 2, 8, 11, 12, 13, 15 and 16.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.