SAFETY DATA SHEET

according to Commission Regulation (EU) 2020/878 as amended

ARS-COLOR HS 10 Acrylic Hardener, fast

Creation date	30th April 2018		
Revision date	02nd January 2023	Version	3.0

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

1.1. Product identifier — ARS-COLOR HS 10 Acrylic Hardener, fast

Substance / mixture — mixture

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

Mixture's intended use

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

Manufacturer

UAB HELVINA
Parko str. 96, Ramučiai
LT-54464 Kaunas district, Lithuania
Phone: +370 37 308901
Fax.: +370 37 308902
E-mail: info@helvina.lt
www.helvina.lt

Competent person responsible for the safety data sheet

E-mail — info@helvina.lt

1.4. Emergency telephone number

Poison control and information office: Phone: +370 5 236 2052 or +370 687 53378

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. 3, H226
Asp. Tox. 1, H304
Skin Irrit. 2, H315
Skin Sens. 1, H317
Eye Irrit. 2, H319
Acute Tox. 4, H332
STOT SE 3, H335, H336
STOT RE 2, H373

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

Most serious adverse physico-chemical effects

Flammable liquid and vapour.

Most serious adverse effects on human health and the environment

May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Hazard pictogram

Signal word

Danger

Hazardous substances

Hexamethylene-1,6-diisocyanate homopolymer (CAS: 28182-81-2)
n-butyl acetate (CAS: 123-86-4)
Xylene (CAS: 1330-20-7)
Hexamethylene diisocyanate (CAS: 822-06-0)

Hazard statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P331	Do NOT induce vomiting.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P405	Store locked up.

Supplemental information

EUH204	Contains isocyanates. May produce an allergic reaction.

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.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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
CAS: 28182-81-2 EC: 500-060-2 REACH No: 01-2119485796-17-XXXX	Hexamethylene-1,6-diisocyanate homopolymer	30-60	Skin Sens. 1, H317 Acute Tox. 4, H332 STOT SE 3, H335	
Index: 607-025-00-1 CAS: 123-86-4 EC: 204-658-1 REACH No: 01-2119485493-29-XXXX	n-butyl acetate	20-30	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	
Index: 601-022-00-9 CAS: 1330-20-7 EC: 215-535-7 REACH No: 01-2119488216-32-XXXX	Xylene	15-30	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Acute Tox. 4, H312+H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373	

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 601-023-00-4 CAS: 100-41-4 EC: 202-849-4 REACH No: 01-2119489370-35-XXXX	Ethylbenzene	5-10	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Acute Tox. 4, H332 STOT RE 2, H373 Aquatic Chronic 3, H412	
Index: 607-195-00-7 CAS: 108-65-6 EC: 203-603-9 REACH No: 01-2119475791-29-XXXX	2-methoxy-1-methylethyl acetate	5-10	Flam. Liq. 3, H226	
Index: 615-011-00-1 CAS: 822-06-0 EC: 212-485-8 REACH No: 01-2119457571-37-XXXX	Hexamethylene diisocyanate	<0,1	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 3, H331 Resp. Sens. 1, H334 STOT SE 3, H335 Specific concentration limit: Resp. Sens. 1, H334: C ≥ 0.5 % Skin Sens. 1, H317: C ≥ 0.5 %	

Notes

1 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.

2 A substance for which exposure limits are set.

3 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

Do not perform artificial respiration without self-protection (e.g. a mask). Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Take care of your own safety, do not let the affected person walk! Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists. Rinse skin with water or shower.

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

If the affected person vomits, make sure to prevent inhalation of the vomit (as there is a danger of lung damage after inhalation of these liquids in the airways also in infinitesimal amount). Ensure medical treatment considering the frequent need of further observation for at least 24 hours. Bring an original container with the label and the Safety Data Sheet of the given substance as appropriate.

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

If inhaled

Cough, headache. May cause respiratory irritation. May cause drowsiness or dizziness.

If on skin

May cause an allergic skin reaction.

If in eyes

Causes serious eye irritation.

If swallowed

Irritation, nausea.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation. Flammable liquid and vapour. Remove all ignition sources. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

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. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use non-sparking tools. Use of antistatic clothes and footwear is recommended. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes. No smoking. Contaminated work clothing should not be allowed out of the workplace. Wash hands and exposed parts of the body thoroughly after handling. Use only outdoors or in a well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take action to prevent static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight. Store locked up. Keep container tightly closed. Keep cool.

The specific requirements or rules relating to the substance/mixture

Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

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	Note
n-butyl acetate (CAS: 123-86-4)	OEL 8 hours	241 mg/m³	
	OEL 8 hours	50 ppm	
	OEL 15 minutes	723 mg/m³	
	OEL 15 minutes	150 ppm	
Xylene (CAS: 1330-20-7)	OEL 8 hours	221 mg/m³	Skin
	OEL 8 hours	50 ppm	
	OEL 15 minutes	442 mg/m³	
	OEL 15 minutes	100 ppm	
Ethylbenzene (CAS: 100-41-4)	OEL 8 hours	442 mg/m³	Skin
	OEL 8 hours	100 ppm	
	OEL 15 minutes	884 mg/m³	
	OEL 15 minutes	200 ppm	
2-methoxy-1-methylethyl acetate (CAS: 108-65-6)	OEL 8 hours	275 mg/m³	Skin
	OEL 8 hours	50 ppm	
	OEL 15 minutes	550 mg/m³	
	OEL 15 minutes	100 ppm	

Other information of limit values

n-Butyl acetate:
DNEL for workers, long-term exposure through the skin: 7mg/kg bw/day
DNEL for workers, long-term exposure by inhalation: 48mg/m3
Consumer DNEL, long-term dermal exposure: 3.4mg/kg bw/day
DNEL for the consumer, long-term exposure by inhalation: 12mg/m3
DNEL for the consumer, long-term exposure after ingestion: 3.4mg/kg bw/day
Freshwater PNEC: 0.18mg/l
PNEC marine waters: 0.018mg/l
PNEC intermittent release: 0.36mg/l
PNEC sewage treatment plant: 35.6mg/l
PNEC freshwater sediment: 0.981mg/kg
PNEC marine sediment: 0.0981mg/l
Soil PNEC: 0.0903mg/kg
1-methoxy-2-propyl acetate
DNEL for workers, short-term inhalation exposure (local effect): 550mg/m3
DNEL for workers, long-term dermal exposure (systemic effect): 796mg/kg bw/day
DNEL for workers, long-term inhalation exposure (systemic effect): 275mg/m3
Consumer DNEL, long-term dermal exposure (systemic effect): 320mg/kg bw
Consumer DNEL, long-term inhalation exposure (systemic effect): 33mg/m3
Consumer DNEL, long-term exposure after ingestion (systemic effect): 36mg/kg bw/day
DNEL for the consumer, long-term inhalation exposure (local effect): 33mg/m3
PNEC freshwater: 0.635mg/l
PNEC marine water: 0.0635mg/l
PNEC occasional release: 6.35mg/l
PNEC sewage treatment plant: 100mg/l
PNEC freshwater sediment: 3.29mg/kg
PNEC marine sediment: 0.329mg/l
Soil PNEC: 0.29mg/kg
Xylene - a mixture of isomers
DNEL worker, inhalation, long-term exposure, systemic effects: 77mg/m3
DNEL worker, inhalation, short term exposure, systemic effects: 289mg/m3
DNEL worker, dermal, long-term exposure, systemic effects: 180mg/kg
DNEL consumer, inhalation, long-term exposure, systemic effects: 14.8mg/m3
DNEL consumer, inhalation, short term exposure, systemic effects: 174mg/m3
DNEL consumer, dermal, long term exposure, systemic effects: 108mg/kg
DNEL consumer, oral, long-term exposure, systemic effects: 1.6mg/kg
PNEC freshwater: 0.327mg/l
PNEC marine water: 0.327mg/l
PNEC freshwater sediment: 12.46mg/kg
PNEC seawater sediment: 12.46mg/kg
PNEC sewage treatment plant: 6.58mg/l
PNEC soil: 2.31mg/kg
PNEC secondary poisoning, oral: mg/kg

8.2. Exposure controls

Take off contaminated clothing and wash before reuse. 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. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Wear protective glasses or a face mask (according to EN 166).

Skin protection

Hand protection: Protective gloves resistant to the product in accordance with the EN-374 standard. Contaminated skin should be washed thoroughly. Recommended materials: Viton: thickness 0.4 mm, penetration time > 480 min. Nitrile rubber: thickness 0.4 mm, penetration time > 30 min. Glove material: Choosing the right glove depends not only on the material, but also on the brand and quality resulting from differences in manufacturers. The resistance of the glove material can be determined after testing. The exact breakdown time of the gloves must be established by the manufacturer.

Respiratory protection

Avoid inhalation of product vapours. In conditions of insufficient ventilation, use individual respiratory protection equipment - a mask or a half-mask complete with a filter and vapor absorber type A or universal (class 1,2 or 3) in accordance with EN 14387. Mask with a filter against organic vapours in a poorly ventilated environment.

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	colourless
Odour	solvent-ester
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	data not available
Flammability	inflammable
Lower and upper explosion limit	
bottom	1 % (xylene)
upper	8 % (xylene)
Flash point	32 °C
Auto-ignition temperature	>200 °C
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	data not available
Solubility in water	insoluble
Partition coefficient n-octanol/water (log value)	does not apply to mixtures
Vapour pressure	9 hPa (ksylen)
Density and/or relative density	
Density	1 g/cm³ at 20 °C
Relative vapour density	4,0 (n-butyl acetate)
Particle characteristics	data not available
Form	liquid

9.2. Other information

not available

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. No toxicological data is available for the mixture.

Acute toxicity

Harmful if inhaled.
ATE mix leather: <3500mg/kg
ATE mix inhalation: <1.5mg/l (mist)
The test atmosphere generated during animal testing is not representative of the working conditions, how the substance is marketed and how it is expected to be used. Therefore, test results cannot be used directly for risk assessment. Based on expert judgment and weight of evidence, a modified acute inhalation classification is warranted.
Converted acute toxicity point estimate: 1.5mg/L
Atmosphere Control: Dust/Mist
Method: Expert opinion

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

Toxicity for specific target organ - repeated exposure

May cause damage to organs through prolonged or repeated exposure. Based on available data the classification criteria are not met.

Aspiration hazard

May be fatal if swallowed and enters airways.

More information

Component data:
n-Butyl acetate:
LD50 (rat, male; oral): 10760mg/kg
LD50 (rabbit; skin): >14000mg/kg
LC50 (rat, male, female; inhalation): 23.4mg/l/h (In vivo, aerosol)
Xylene - a mixture of isomers
LD50 (oral, rat): 3523mg/kg
LD50 (skin, rabbit): 12126mg/kg
LC50 (rat; inhalation): 27124mg/m3
1-methoxy-2-propyl acetate
LD50 (rat; oral): >5000mg/kg
LC50 (rat; inhalation): >20mg/l, 6h
LD50 (rabbit; skin): >5000mg/kg
LD50 (rat; skin): >2000mg/kg
Hexamethylene-1,6-diisocyanate homopolymer
LD50 (rat, oral): >5000mg/kg
LD50 (rabbit, skin): >2000mg/kg
LC50 (rat; inhalation): 0.554mg/l, 4h (dust/mist)

11.2. Information on 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.

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Mixture not classified as hazardous.
Do not allow to enter ground water, sewage system and watercourses.

n-Butyl acetate:
LC50 fish (Pimephales promelas): 18mg/l, 96h
EC50 shellfish (Daphnia sp.): 44mg/l, 48h
NOEC algae (Desmodesmus subspicatus): 200mg/l, 72h
ErC50 algae (Desmodesmus subspicatus): 648mg/l, 72h
IC50 activated sludge (Tetrahymena pyriformis): 356mg/l, 40h
Xylene - a mixture of isomers
LC50 fish: >1.3 mg/l
Ethylbenzene:
EC50 shellfish: 0.96mg/l
1-methoxy-2-propyl acetate:
LC50 - fish (Oncorhynchus mykiss): 134mg/l, 96h
EC50 - invertebrates (Daphnia magna): 408mg/l, 48h
ErC50 – algae (Pseudokirchnerierlla subcapitata): >1000mg/l, 96h
Hexamethylene-1,6-diisocyanate homopolymer
LC50 - fish (Danio rerio): >100mg/l, 96h
EC50 - invertebrates (Daphnia magna): >100mg/l, 48h
ErC50 – algae (Scenedesmus subspicatus): >100mg/l, 72h
EC50 – bacteria (activated sludge): >100mg/l, 3h

12.2. Persistence and degradability

No data available for the mixture

n-Butyl acetate:
It is slowly hydrolyzed in water.
Half-life of hydrolysis: 78 days at pH: 8 and 2 years at pH: 7 (at 25oC).
Readily biodegradable substance: 80% within 5 days (83% within 28 days).
Xylene - a mixture of isomers
The substance is easily biodegradable.
1-methoxy-2-propyl acetate:
Readily biodegradable substance; >=83% within 28 days
Hexamethylene-1,6-diisocyanate homopolymer
Biodegradation: 1%, 28 days, not easily degraded

12.3. Bioaccumulative potential

n-Butyl acetate:
Log Ko/w: 2.3 (expected BCF: 15.3) - the substance does not show the potential for bioaccumulation.
1-methoxy-2-propyl acetate:
BCF: 3.16 - does not bioaccumulate

12.4. Mobility in soil

No data available for the mixture

1-methoxy-2-propyl acetate: low potential

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

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.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. 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. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

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

	ADR/RID	**ADN**	**IMDG**	**IATA**
14.1. UN number or ID number	1263	1263	1263	1263
14.2. UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
14.3. Transport hazard class(es)	3 Safety signs: 3 	3 Safety signs: 3 	3 Safety signs: 3 	3 Safety signs: 3 
14.4. Packing group	III	III	III	III
14.5. Environmental hazards	No	No	No	No
14.6. Special precautions for user	Classification code: F1 Limited quantities LQ: 5L Ilości wyłączone: E1 Hazard identification No.: 30 Transport category: 3 Tunnel restriction code: D/E	Classification code: F1 Limited quantities LQ: 5L Excepted quantities: E1	LQ: 5L EmS: F-E, S-E Stowage and handling: Category A Segregation: -	**Passenger Aircraft (PAX)** IATA LTD QTY Pkg Inst: Y344 IATA LTD QTY Max Qty per Pkg: 10L IATA Pkg Inst:355 Max Capacity per inner receptacle: 5L Max Net Qty per Pkg: 30L **Cargo Aircraft (CAO)** Cargo Air Packing Inst: 366 Cargo Air Max : 30L IATA Special Prov: A3, A72, A192

14.7. Maritime transport in bulk according to IMO instruments	not relevant

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.

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

Hexamethylene diisocyanate

Restriction	Conditions of restriction
74	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: (a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (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). 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: (a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (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". 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. 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: (a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s). (b) the training elements in points (a) and (b) of paragraph 5 for the following uses: — 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; (c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses: — 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. 5. Training elements:

Hexamethylene diisocyanate

Restriction	Conditions of restriction
	(a) general training, including on-line training, on: — 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 (b) intermediate level training, including on-line training, on: — 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 (c) advanced training, including on-line training, on: — 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 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. 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. 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. 9. Member States shall include in their reports pursuant to Article 117(1) the following information: (a) any established training requirements and other risk management measures related to the 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

not available

SECTION 16: Other information

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
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.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
H312+H332	Harmful in contact with skin or if inhaled.

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.
P280	Wear protective gloves.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P331	Do NOT induce vomiting.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P405	Store locked up.

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

EUH204	Contains isocyanates. May produce an allergic reaction.
EUH066	Repeated exposure may cause skin dryness or cracking.

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

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
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
log Kow	Octanol-water partition coefficient
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals

RID	Agreement on the transport of dangerous goods by rail
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

Acute Tox.	Acute toxicity
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
Asp. Tox.	Aspiration hazard
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquid
Resp. Sens.	Respiratory sensitization
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

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.

More information

Classification procedure - calculation method.

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.
