

ARBOFLEX[®] PU UV PROTECT

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 Product identifier

Mixture identification:

Trade name: ARBOFLEX PU UV PROTECT

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

Recommended use: Crosslinking agent

Uses advised against: Data not available

1.3 Details of the supplier of the safety data sheet

Company:

Adshead Ratcliffe & Co Ltd.

United Kingdom

Derby Road, Belper,

Derbyshire,

DE56 1WJ

1.4 Emergency telephone number

01623 27285 (Office hours only)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)



Flam. Liq. 3	Flammable liquid and vapour.
Acute Tox. 4	Harmful if inhaled.
Skin Irrit. 2	Causes skin irritation.
Eye Irrit. 2	Causes serious eye irritation.
Skin Sens. 1	May cause an allergic skin reaction.
STOT SE 3	May cause respiratory irritation.
STOT RE 2	May cause damage to organs through prolonged or repeated exposure.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2 Label elements Regulation (EC) n. 1272/2008

Pictograms and Signal Words



Warning

Hazard statements:

H226	Flammable liquid and vapour.
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.
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.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P403+P235	Store in a well-ventilated place. Keep cool.

Special Provisions:

EUH204	Contains isocyanates. May produce an allergic reaction.
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Contains:

HDI oligomers, iminooxadiazindione
o-xylene
hexamethylene-di-isocyanate

Special provisions according to Annex XVII of REACH and subsequent amendments: None

2.3 Other hazards

No PBT/vPvB Ingredients are present

Other Hazards: No other hazards

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

N.A.

3.2 Mixtures

Mixture identification: ARBOFLEX PU UV PROTECT

Hazardous components within the meaning of the CLP regulation and related classification:

Quantity	Name	Ident. Numb.	Classification	Registration Number
>75 - <100%	HDI oligomers, iminooxadiazindione	CAS:28182-81-2 EC:931-297-3	Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	01-219488934-20-XXXX
>10 - <20%	o-xylene	CAS:1330-20-7 EC:215-535-7 Index:601-022-00-9	Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT RE 2, H373; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	01-219488216-32-XXXX
>10 - <20%	2-methoxy-1-methylethyl acetate	CAS:108-65-6 EC:203-603-9 Index:607-195-00-7	Flam. Liq. 3, H226	01-219475791-29-XXXX
>0.25 - <0.49 %	hexamethylene-di-isocyanate	CAS:822-06-0 EC:212-485-8 Index:615-011-00-1	Acute Tox. 2, H330; Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334; Skin Sens. 1, H317	01-219457571-37-XXXX

4. FIRST AID MEASURES

4.1 Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediately and dispose of safely. After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label. In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

4.2 Most important symptoms and effects, both acute and delayed

Eye irritation
Eye damages
Skin Irritation
Erythema

4.3 Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment: (see paragraph 4.1)

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

CO₂ or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2 Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3 Advice for firefighters

Use suitable breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Provide adequate ventilation.

Use appropriate respiratory protection.

6.2 Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Limit leakages with earth or sand.

6.3 Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand Retain contaminated washing water and dispose it.

6.4 Reference to other sections

See also section 8 and 13

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers. Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.

Store at below 20 °C. Keep away from unguarded flame and heat sources.

Avoid direct exposure to sunlight. Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Incompatible materials: None in particular.

Instructions as regards storage premises: Cool and adequately ventilated.

7.3 Specific end use(s)

Recommendation(s): None in particular

Industrial sector specific solutions: None in particular

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m ³	Long Term ppm	Short Term mg/m ³	Short Term ppm	Behaviour Note
o-xylene	National	SWEDEN		221	50	442	100	SWEDEN, Short term value, 15 minutes average value
	National	FINLAND		220	50	440	100	
	National	NORWAY		108	25			FINLAND, hud
	EU	NNN		221	50	442	100	NORWAY, H
	National	NORWAY		109	25	218	50	Skin
	ACGIH	NNN			100		150	A4, BEI - URT and eye irr, CNS impair
	DFG	GERMANY	C			880	200	A4, BEI - URT and eye irr, CNS impair
	ACGIH				100		150	
	National	SWEDEN		221	50			
	National	FRANCE		221	50	442	100	
	National	SPAIN		221	50	442	100	
	National	GREECE		435	100	650	150	
	National	DENMARK		109	25			
	National	FINLAND		220	50	440	100	
	National	GERMANY		440	100			
	National	PORTUGAL		221	50	442	100	
	National	NORWAY		108	25	135	37.5	
	National	BELGIUM		221	50	442	100	
	NDS	POLAND		100				
	NDSch	POLAND				200		
	CHE	SWITZERLAND				870	200	
	NDS	NETHERLANDS		210		442		
	National	CZECH REPUBLIC		200				
	National	HUNGARY		221		442		
	Malaysi	MALAYSIA		434	100			
	a OEL							
	National	ESTONIA		200	50	450	100	
	National	LATVIA		221	50	442	100	
	National	CZECH REPUBLIC	C			400		
	National	SLOVAKIA	C			442		
	National	SLOVAKIA		221	50			
	National	SLOVAKIA		221	50	442	100	
	National	UNITED KINGDOM		220	50	441	100	
	National	BULGARIA		221.0	50	442	100	
	National	ROMANIA		221	50	442	100	
	National	TURKEY		221	50	442	100	
National	LITHANIA		221	50	442	100		
National	CROATIA		221	50	442	100		
EU			221	50	442	100	Indicative Possibility of significant uptake through the skin (pure)	

Component	OEL Type	Country	Ceiling	Long Term mg/m ³	Long Term ppm	Short Term mg/m ³	Short Term ppm	Behaviour Note
2-methoxy-1-methylethyl acetate	ACGIH	NNN		275	50	400	75	Skin
	SUVA	NNN		275	50			
	National	SWEDEN		250	50	400	75	SWEDEN, Short term value, 15 minutes average value
	National	FINLAND		270	50	550	100	FINLAND, hud
	National	NORWAY		270	50			NORWAY, H
	NDS	NNN		260				Skin
	NDSchl	NNN		520				
	EU	NNN		275	50	550	100	
	National	NORWAY		275	50	550	100	
	DFG	GERMANY	C			270	50	
	National	SWEDEN		275	50			
	National	FRANCE		275	50	550	100	
	National	SPAIN		275	50	550	100	
	National	GREECE		275	50	550	100	
	National	DENMARK		275	50			
	National	FINLAND		270	50	550	100	
	National	GERMANY		270	50			
	National	PORTUGAL		275	50	550	100	
	National	NORWAY		270	50	337.5	75	
	National	BELGIUM		275	50	550	100	
	NDS	POLAND		260				
	NDSch	POLAND				520		
	CHE	SWITZERLAND				275	50	
	NDS	NETHERLAND		550				
	National	CZECH REPUBLIC		270				
	National	HUNGARY		275		550		
	National	ESTONIA		275	50	550	100	
	National	LATVIA		275	50	550	100	
	National	CZECH REPUBLIC	C			550		
	National	SLOVAKIA	C			550		
	National	SLOVAKIA		275	50			
	National	SLOVENIA		275	50	550	100	
	National	UNITED KINGDOM		274	50	548	100	
	National	BULGARIA		275.0	50	550.0	100	
	National	RUMANIA		275	50	550	100	
	TUR	TURKEY		275	50	550	100	
National	LITHUANIA		250	50	400	75		
National	CROATIA		275	50	550	100		
EU			275	50	550	100	Indicative Possibility of significant uptake through the skin	

Biological Exposure Index

CAS-No.	Component	Value	UoM	Medium	Biological Indicator	Sampling Period
1330-20-7	o-xylene	1,5	GGCREAT	Urine	Methyl uric Acid	End of turn
822-06-0	hexamethylene-di-isocyanate	15	MICROGGCREAT	Urine	1,6-Hexamethylenediamine with hydrolysis	End of turn

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route
HDI oligomers, iminooxadiazindione	28182-81-2	0,199 mg/l 44551 mg/kg 0,0199 mg/l 4455 mg/kg 100 mg/l 8884 mg/kg	Fresh Water Fresh Water sediments Marine water Marine water sediments Microorganisms in sewage treatments Soil
o-xylene	1330-20-7	0,327 mg/l 0,327 mg/l 12,46 mg/kg 12,46 mg/kg 2,31 mg/kg 6,58 mg/l 0,32 mg/l	Fresh water Marine water Fresh water sediments Marine water sediments Soil Microorganisms in sewage treatments Intermittent release
2-methoxy-1-methylethyl acetate	108-65-6	0,635 mg/l 0,0635 mg/l 3,29 mg/kg 0,329 mg/kg 6,35 mg/l 100 mg/l 0,29 mg/kg	Fresh water Marine water Fresh water sediments Marine water sediments Intermittent release Microorganisms in sewage treatments Soil
hexamethylene-di-isocyanate	822-06-0	0,077 mg/l 0,008 mg/l 8,42 mg/l 0,013 mg/kg 0,001 mg/kg 0,003 mg/kg	Fresh water Marine water Microorganisms in sewage treatments Fresh water sediments Marine water Soil

Derived No Effect Level. (DNEL)

Component	CAS-No.	Worker Industry	Consumer	Exposure Route	Exposure Frequency Remark
HDI oligomers, iminooxadiazindione	28182-81-2	0,5 mg/m ³ 1 mg/m ³		Human Inhalation Human Inhalation	Long Term, local effects Short Term, local effects
o-xylene	1330-20-7	289 mg/m ³ 289 mg/m ³ 180 mg/m ³ 77 mg/m ³	174 mg/m ³ 174 mg/m ³ 108 mg/m ³ 14.8 mg/m ³ 1.6 mg/m ³	Human Inhalation Human Inhalation Human Dermal Human Inhalation Human Oral	Short Term, local effects Short Term, systemic effects Long Term, systemic effect Long Term, systemic effects Long Term, systemic effects
2-methoxy-1-methylethyl acetate	108-65-6	796 mg/kg 275 mg/kg 550 mg/kg	320 mg/kg 33 mg/kg 36 mg/m ³	Human Dermal Human Inhalation Human Oral Human Inhalation	Long Term, systemic effects Long Term, systemic effects Long Term, systemic effects Short Term, local effects
hexamethylene-diisocyanate	822-06-0	0.035 mg/m ³ 0.07 mg/m ³ 0.035 mg/m ³ 0.07 mg/m ³		Human Inhalation Human Inhalation Human Inhalation Human Inhalation	Long Term, systemic effects Short Term, systemic effects Long Term, local effects Short Term, local effects

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton. Protection for hands:

Suitable materials for safety gloves; EN 374:

Polychloroprene - CR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 48\text{min}$.

Nitrile rubber - NBR: thickness $\geq 0,35\text{mm}$; breakthrough time $\geq 48\text{min}$.

Butyl rubber - IIR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 48\text{min}$.

Fluorinated rubber - FKM: thickness $\geq 0,4\text{mm}$; breakthrough time $\geq 48\text{min}$.

Neoprene gloves are suggested (0,5 mm) not recommended gloves:
not waterproof gloves

Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN 374 for gloves and EN 166 for goggles), correctly maintained and stored.

Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

In case of insufficient ventilation use mask with ABEKP filters (EN 14387).

Use adequate protective respiratory equipment.

Hygienic and Technical measures: N.A.

Appropriate engineering controls: N.A.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state: Liquid

Appearance and colour: 4,50011, clear

Odour: solvent like

Odour threshold: N.A.

pH: N.A.

Melting point / freezing point: N.A.

Initial boiling point and boiling range: 145 °C (293 °F) Flash point: 38 °C (100 °F)

Evaporation rate: N.A.

Upper/lower flammability or explosive limits: N.A. Vapour density: N.A.

Vapour pressure: 10.00

Relative density: 1.07 g/cm³

Solubility in water: immiscible

Partition coefficient (n-octanol/water): N.A. - This product is a mixture

uto-ignition temperature: N.A. - No explosive or spontaneous ignition in contact with air at room temperature

Decomposition temperature: N.A.

Viscosity: 320.00 cPs

Explosive properties: N.A. - No components with explosive properties

Oxidizing properties: N.A. - No component with oxidizing properties

Solid/gas flammability: N.A.

9.2 Other information

No additional information

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicological information of the mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

HDI oligomers, iminooxadiazindione	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg LD50 Skin Rat > 2000 mg/kg LD50 Skin Rabbit > 2000 mg/kg LC50 Inhalation Mist Rat = 1,5 mg/l 4h LC50 Skin Rat = mg/l LC50 Inhalation Rat = 18500 mg/m ³ 1h Respiratory Tract Irritant Inhalation Mist Rabbit 90 d Positive mg/kg Respiratory Tract Irritant Rabbit Positive Skin Sensitization Skin Mouse Positive 4h
	b) skin corrosion/irritation	
	d) respiratory or skin sensitisation	
o-xylene	a) acute toxicity	Skin Sensitization Inhalation Mouse Positive mg/m ³ LD50 Oral Rat > 2000 mg/kg LC50 Inhalation Vapour Rat = 11 mg/l 4h LD50 Skin Rabbit = 3200 mg/kg LD50 Skin Rabbit > 4350 mg/kg LC50 Inhalation Rat = 29,08 mg/l 4h LD50 Oral Rat = 3500 mg/kg NOAEL Inhalation Rat > 2000 ppm NOAEL Oral Rat = 500 mg/kg NOAEL Oral Rat = 1000 mg/kg NOAEL Inhalation Rat = 500 ppm
	e) germ cell mutagenicity	
	f) carcinogenicity	
	g) reproductive toxicity	
2-methoxy-1- methylethyl acetate	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg LD50 Skin Rabbit > 5000 mg/kg LC50 Inhalation Dust Rat > 23,8 mg/l LD50 Skin Rabbit > 5 g/kg LD50 Oral Rat = 8532 mg/kg NOAEL Inhalation Rat = 1000 ppm NOAEL Inhalation Rat = 500 ppm
	e) germ cell mutagenicity	
	g) reproductive toxicity	
hexamethylene-di- isocyanate	a) acute toxicity	LD50 Oral Rat = 746 mg/kg LC50 Inhalation Vapour Rat = 0,124 mg/l 4h LD50 Skin Rat > 7000 mg/kg LD50 Skin Rabbit = 593 mg/kg LC50 Inhalation Rat = 0,06 mg/l 4h LD50 Oral Rat = 738 mg/kg

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.

- a) acute toxicity
 - b) skin corrosion/irritation
 - c) serious eye damage/irritation
 - d) respiratory or skin sensitisation
 - e) germ cell mutagenicity
 - f) carcinogenicity
 - g) reproductive toxicity
 - h) STOT-single exposure
- Toxicological kinetics, metabolism and distribution information
- i) STOT-repeated exposure
 - j) aspiration hazard

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Adopt good working practices, so that the product is not released into the environment. Eco-Toxicological Information:

List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox InfoS
HDI oligomers, iminooxadiazindione	CAS: 28182-81-2 -EINECS: 931-297-3	a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48 a) Aquatic acute toxicity : EC50 Algae = 199 mg/L 72 c) Bacteria toxicity : EC50 Bacteria > 10000 mg/L 3
o-xylene	CAS: 1330-20-7 -EINECS: 215-535-7 - INDEX: 601-022-00-9	a) Aquatic acute toxicity : LC50 Fish > 2 mg/L 96 a) Aquatic acute toxicity : EC50 Algae = 2,2 mg/L 72 c) Bacteria toxicity : EC50 = 96 mg/L 24 b) Aquatic chronic toxicity : NOEC Fish > 1,3 mg/L b) Aquatic chronic toxicity : NOEC Daphnia = 1,57 mg/L a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 13,4 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 2,661 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 13,5 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus 13,1 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 19 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus 7,711 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 23,53 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 780 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio > 780 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata 30,26 mg/L 96h EPA a) Aquatic acute toxicity : EC50 Daphnia water flea = 3,82 mg/L 48h a) Aquatic acute toxicity : LC50 Daphnia Gammarus lacustris = 0,6 mg/L 48h

Component	Ident. Numb.	Ecotox InfoS
2-methoxy-1-methylethyl acetate	CAS:108-65-6 - EINECS:203-603-9 - INDEX:607-195-00-7	a) Aquatic acute toxicity : LC50 Fish = mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia > 500 mg/L 48 b) Aquatic chronic toxicity : NOEC Fish = 47,5 mg/L - 14 d b) Aquatic chronic toxicity : NOEC Daphnia = 100 mg/L - 21 d a) Aquatic acute toxicity : EC50 Algae > 1000 mg/L 72 a) Aquatic acute toxicity : NOEC Algae = 1000 mg/L 96 a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 161 mg/L 96h IUCLID a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna > 500 mg/L 48h IUCLID
hexamethylene-diisocyanate	a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna > 500 mg/L 48h IUCLID	a) Aquatic acute toxicity : EC50 Algae = 77,4 mg/L 72 a) Aquatic acute toxicity : LC50 Fish = 8,8 mg/L 96 a) Aquatic acute toxicity : LC50 Fish Brachydanio rerio = 26,1 mg/L 96h IUCLID

12.2 Persistence and degradability N.A.

12.3 Bioaccumulative potential N.A.

12.4 Mobility in soil N.A.

12.5 Results of PBT and vPvB assessment N.A.

12.6 Other adverse effects N.A.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Product:

Do not dispose of waste into sewers.

Do not contaminate ponds, waterways or ditches with chemical or used container. Send to an authorized waste disposal service.

Contaminated packaging:

Empty remaining content.

Dispose of as unused product.

Do not re-use empty containers.

14. TRANSPORT INFORMATION

14.1 UN number

1139

14.2 UN proper shipping name

ADR-Shipping Name: COATING SOLUTION

IATA-Technical name: COATING

SOLUTION IMDG-Technical name: COATING SOLUTION

14.3 Transport hazard class(es)

ADR-Class: 3

IATA-Class: 3

IMDG-Class: 3

14.4 Packing group

ADR-Packing Group: III IATA-Packing group: III IMDG-Packing group: III

14.5 Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

14.6 Special precautions for user

Road and Rail (ADR-RID) :

ADR-Label: 3

ADR-Hazard identification number: 30 ADR-Special Provisions: -

ADR-Transport category (Tunnel restriction code): 3 (D/E) Air (IATA) :

IATA-Passenger Aircraft: 355 IATA-Cargo Aircraft: 366 IATA-Label: 3

IATA-Subsidiary hazards: -

IATA-Erg: 3L

IATA-Special Provisioning: A3 Sea (IMDG) :

IMDG-Stowage Code: Category A IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 955 IMDG-Page: N/A

IMDG-Label: N/A

IMDG-EMS: F-E, S-E

IMDG-MFAG: N/A

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

N.A.

15. REGULATORY INFORMATION

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

VOC (2004/42/EC) : 340 g/l
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EU) 2015/830
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1	Lower-tier threshold (tonnes)	Upper-tier threshold (tonnes)
Products belongs to category P5c	5000	50000

German Water Hazard Class. N.A.

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3, 40
Restrictions related to the substances contained: NonE

SVHC Substances:

No data available

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

16. OTHER INFORMATION

Code	Description
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
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.
H373	May cause damage to organs through prolonged or repeated exposure.

Code	Hazard class and hazard category	Description
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/2/Inhal	Acute Tox. 2	Acute toxicity (inhalation), Category 2
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.10/1	Asp. Tox. 1	Aspiration hazard, Category 1
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.1/1	Resp. Sens. 1	Respiratory Sensitisation, Category 1
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
2.6/3	On basis of test data
3.1/4/Inhal	Calculation method
3.2/2	Calculation method
3.3/2	Calculation method
3.4.2/1	Calculation method
3.8/3	Calculation method
3.9/2	Calculation method

This document was prepared by a competent person who has received appropriate training. Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways ATE: Acute Toxicity Estimate
ATEmix: Acute toxicity Estimate (Mixtures)
ATEmix: Acute toxicity Estimate (Mixtures)
BCF: Biological Concentration Factor
BEI: Biological Exposure Index
BOD: Biochemical Oxygen Demand
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CAV: Poison Center
CE: European Community
CLP: Classification, Labeling, Packaging.
CMR: Carcinogenic, Mutagenic and Reprotoxic
COD: Chemical Oxygen Demand
COV: Volatile Organic Compound
CSA: Chemical Safety Assessment
CSR: Chemical Safety Report
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level.
DPD: Dangerous Preparations Directive
DSD: Dangerous Substances Directive
EC₅₀: Half Maximal Effective Concentration
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances.
ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the “International Air Transport Association” (IATA). IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the “International Civil Aviation Organization” (ICAO). IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard). vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

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