ESPUMA PU PISTOLAVEL PURLOGIC TOP

Version	Revision Date:	SDS Number:	Date of last issue: 14.11.2024
14.1	19.02.2025	10619885-00017	Date of first issue: 15.09.2010

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

1.1 Product identifier

Trade name	:	ESPUMA PU PISTOLAVEL PURLOGIC TOP
Product code	:	0892142
Unique Formula Identifier (UFI)	:	C4S1-30VX-U00Q-HNJP

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

Use of the Sub-stance/Mixture	:	Sealant Professional use product
Recommended restrictions on use	:	May only be used by trained personnel.

1.3 Details of the supplier of the safety data sheet

Company	:	Würth-Portugal Técnica de Montagem, Lda. Estrada Nacional 249-4 - Abrunheira 2710-089 Sintra
Telephone	:	+351 219 157 200
Telefax	:	+351 219 151 331
E-mail address of person responsible for the SDS	:	prodsafe@wuerth.com

1.4 Emergency telephone number

+351 800 250 250

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Skin irritation, Category 2	H315: Causes skin irritation.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.
Specific target organ toxicity - single exposure, Category 3	H335: May cause respiratory irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

Storage:

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Hazardous components which must be listed on the label:

Diphenylmethane diisocyanate, isomers and homologues
4,4'-Diphenylmethane diisocyanate

Additional Labelling

"As from 24 August 2023 adequate training is required before industrial or professional use."

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Diphenylmethane diisocyanate, isomers and homologues	9016-87-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 STOT RE 2; H373 (Respiratory Tract)	>= 30 - < 50

		Acute toxicity estimate Acute inhalation toxicity (dust/mist): 1,5 mg/l	
4,4'-Diphenylmethane diisocyanate	101-68-8 202-966-0 615-005-00-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 STOT RE 2; H373 (Respiratory Tract) --- specific concentration limit Eye Irrit. 2; H319 >= 5 % STOT SE 3; H335 >= 5 % Skin Irrit. 2; H315 >= 5 % Resp. Sens. 1; H334 >= 0,1 % --- Acute toxicity estimate Acute inhalation toxicity (dust/mist): 1,5 mg/l	>= 20 - < 30
Phosphorous oxychloride, reaction products with propylene oxide	1244733-77-4 01-2119486772-26	Acute Tox. 4; H302 Aquatic Chronic 3; H412 --- Acute toxicity estimate Acute oral toxicity: 500 mg/kg	>= 10 - < 20
Dimethyl ether	115-10-6 204-065-8 603-019-00-8	Flam. Gas 1A; H220 Press. Gas Liquefied gas; H280 STOT SE 3; H336	>= 1 - < 10
Octamethylcyclotetrasiloxane	556-67-2 209-136-7 014-018-00-1	Flam. Liq. 3; H226 Repr. 2; H361f Aquatic Chronic 1; H410 ---	>= 0,025 - < 0,1

		M-Factor (Chronic aquatic toxicity): 10	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled : If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.

Respiratory symptoms, including pulmonary edema, may be

delayed.
Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical
Water spray in large fire situations

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NOx)
Isocyanates
Hydrogen cyanide (hydrocyanic acid)
Chlorine compounds
Oxides of phosphorus
Silicon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapours/mists with a water spray jet.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
After approximately one hour, transfer to waste container and do not seal, due to evolution of carbon dioxide.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventila-

tion.

Advice on safe handling	:	Do not get on skin or clothing. Do not breathe spray. Do not swallow. Do not get in eyes. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Keep container tightly closed. Keep away from water. Protect from moisture. Already sensitised individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitisers. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Do not spray on an open flame or other ignition source.
Hygiene measures	:	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store locked up. Protect from moisture. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Do not pierce or burn, even after use. Keep cool. Protect from sunlight.
Advice on common storage	:	Do not store with the following product types: Self-reactive substances and mixtures Organic peroxides Oxidizing agents Flammable solids Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which in contact with water, emit flammable gases Explosives Gases
Storage period	:	12 Months
Recommended storage tem-	:	< 50 °C

perature

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Diphenylmethane diisocyanate, isomers and homologues	9016-87-9	TWA	0,01 mg/m3 (NCO)	98/24/EC I
	Further information: Skin, Dermal and respiratory sensitisation, Binding			
		STEL	0,02 mg/m3 (NCO)	98/24/EC I
	Further information: Skin, Dermal and respiratory sensitisation, Binding			
4,4'-Diphenylmethane diisocyanate	101-68-8	VLE-MP	0,005 ppm	PT OEL
		TWA	0,01 mg/m3 (NCO)	98/24/EC I
	Further information: Skin, Dermal and respiratory sensitisation, Binding			
		STEL	0,02 mg/m3 (NCO)	98/24/EC I
	Further information: Skin, Dermal and respiratory sensitisation, Binding			
Dimethyl ether	115-10-6	TWA	1.000 ppm 1.920 mg/m3	2000/39/EC
	Further information: Indicative			
		TWA	1.000 ppm 1.920 mg/m3	PT DL 305/2007
Isobutane	75-28-5	VLE_CD	1.000 ppm	PT OEL

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
4,4'-Diphenylmethane diisocyanate	Workers	Inhalation	Long-term local effects	0,05 mg/m3
	Workers	Inhalation	Acute local effects	0,1 mg/m3
	Consumers	Inhalation	Long-term local effects	0,025 mg/m3
	Consumers	Inhalation	Acute local effects	0,05 mg/m3
Phosphorous oxychloride, reaction products with propylene oxide	Workers	Inhalation	Long-term systemic effects	8,2 mg/m3
	Workers	Inhalation	Acute systemic ef-	22,6 mg/m3

			fects	
	Workers	Skin contact	Long-term systemic effects	2,91 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1,45 mg/m3
	Consumers	Inhalation	Acute systemic effects	5,6 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1,04 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,52 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	2 mg/kg bw/day
Dimethyl ether	Workers	Inhalation	Long-term systemic effects	1894 mg/m3
	Consumers	Inhalation	Long-term systemic effects	471 mg/m3
Octamethylcyclotetrasiloxane	Workers	Inhalation	Long-term systemic effects	73 mg/m3
	Workers	Inhalation	Long-term local effects	73 mg/m3
	Consumers	Inhalation	Long-term systemic effects	13 mg/m3
	Consumers	Inhalation	Long-term local effects	13 mg/m3
	Consumers	Ingestion	Long-term systemic effects	3,7 mg/kg bw/day
Poly(PO) Glycerine Ether	Workers	Inhalation	Long-term systemic effects	98 mg/m3
	Workers	Skin contact	Long-term systemic effects	13,9 mg/kg bw/day
	Workers	Skin contact	Long-term systemic effects	8,3 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
4,4'-Diphenylmethane diisocyanate	Fresh water	1 mg/l
	Marine water	0,1 mg/l
	Intermittent use/release	10 mg/l
	Sewage treatment plant	1 mg/l
	Soil	1 mg/kg
Phosphorous oxychloride, reaction products with propylene oxide	Fresh water	0,32 mg/l
	Freshwater - intermittent	0,51 mg/l
	Marine water	0,032 mg/l
	Sewage treatment plant	19,1 mg/l
	Fresh water sediment	11,5 mg/kg dry weight (d.w.)
	Marine sediment	1,15 mg/kg dry weight (d.w.)

	Soil	0,34 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	11,6 mg/kg food
Dimethyl ether	Fresh water	0,155 mg/l
	Marine water	0,016 mg/l
	Intermittent use/release	1,549 mg/l
	Sewage treatment plant	160 mg/l
	Fresh water sediment	0,681 mg/kg dry weight (d.w.)
	Marine sediment	0,069 mg/kg dry weight (d.w.)
	Soil	0,045 mg/kg dry weight (d.w.)
Octamethylcyclotetrasiloxane	Fresh water	0,0015 mg/l
	Marine water	0,00015 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	3 mg/kg dry weight (d.w.)
	Marine sediment	0,3 mg/kg dry weight (d.w.)
	Soil	0,54 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	41 mg/kg food
Poly(PO) Glycerine Ether	Fresh water	0,2 mg/l
	Marine water	0,02 mg/l
	Intermittent use/release	1 mg/l
	Sewage treatment plant	1000 mg/l
	Fresh water sediment	0,52 mg/kg
	Marine sediment	0,052 mg/kg
	Soil	0,067 mg/kg

8.2 Exposure controls

Engineering measures

Processing may form hazardous compounds (see section 10).
Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Personal protective equipment

Eye/face protection : Wear the following personal protective equipment:
Safety goggles
Equipment should conform to NP EN 166

Hand protection
Material : Polyethylene
Break through time : 10 min
Glove thickness : 0,025 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous sub-

stance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Wear the following personal protective equipment:
If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Equipment should conform to NP EN 137

Filter type : Self-contained breathing apparatus

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	aerosol
Propellant	:	Isobutane, Dimethyl ether, Propane
Colour	:	coloured
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	Not applicable
Flammability (solid, gas)	:	Extremely flammable aerosol.
Upper explosion limit / Upper flammability limit	:	No data available

Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	substance/mixture is non-soluble (in water)
Viscosity		
Viscosity, kinematic	:	Not applicable
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	Solvent: organic solvents soluble
Partition coefficient: n-octanol/water	:	Not applicable
Vapour pressure	:	Not applicable
Relative density	:	1,17 (20 °C)
Density	:	1,170 g/cm³ (20 °C)
Relative vapour density	:	> 1
Particle characteristics		
Particle size	:	Not applicable

9.2 Other information

Explosives	:	Not explosive

Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable if used as directed. Follow precautionary advice and avoid incompatible materials and conditions.
Polymerises at high temperatures with evolution of carbon dioxide.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Extremely flammable aerosol. Vapours may form explosive mixture with air. Isocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the isocyanate. Exothermic reaction with acids, amines and alcohols Reacts with water to form carbon dioxide and heat Isocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. Hazardous decomposition products will be formed upon contact with water or humid air.

10.4 Conditions to avoid

Conditions to avoid	:	Exposure to moisture Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	Oxidizing agents Acids Bases Water Alcohols Amines Ammonia Aluminium Zinc Brass Tin

Copper
Galvanised metals
Humid air

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Harmful if inhaled.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 2,11 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

4,4'-Diphenylmethane diisocyanate:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 2,24 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute toxicity estimate: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement
Remarks: Based on national or regional regulation.

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg
Remarks: Based on data from similar materials

Phosphorous oxychloride, reaction products with propylene oxide:

Acute oral toxicity : LD50 (Rat): 500 - 2.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Dimethyl ether:

Acute inhalation toxicity : LC50 (Rat): 164000 ppm
Exposure time: 4 h
Test atmosphere: gas

Octamethylcyclotetrasiloxane:

Acute oral toxicity : LD50 (Rat): > 4.800 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): 36 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2.375 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Causes skin irritation.

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Species : Rabbit
Result : Skin irritation

4,4'-Diphenylmethane diisocyanate:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Skin irritation
Remarks	:	Based on data from similar materials

Phosphorous oxychloride, reaction products with propylene oxide:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Octamethylcyclotetrasiloxane:

Species	:	Rabbit
Result	:	No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Result	:	Irritation to eyes, reversing within 21 days

4,4'-Diphenylmethane diisocyanate:

Result	:	Irritation to eyes, reversing within 7 days
Remarks	:	Based on national or regional regulation.

Phosphorous oxychloride, reaction products with propylene oxide:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Octamethylcyclotetrasiloxane:

Species	:	Rabbit
Result	:	No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

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

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Test Type	:	Buehler Test
Exposure routes	:	Skin contact

Species	:	Guinea pig
Result	:	positive
Remarks	:	Based on data from similar materials
Assessment	:	Probability or evidence of skin sensitisation in humans
Exposure routes	:	inhalation (dust/mist/fume)
Species	:	Rat
Result	:	positive
Assessment	:	Probability of respiratory sensitisation in humans based on animal testing

4,4'-Diphenylmethane diisocyanate:

Test Type	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Result	:	positive
Assessment	:	Probability or evidence of skin sensitisation in humans
Exposure routes	:	Inhalation
Species	:	Rat
Result	:	positive
Remarks	:	Based on data from similar materials
Assessment	:	Probability of respiratory sensitisation in humans based on animal testing

Phosphorous oxychloride, reaction products with propylene oxide:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	negative

Octamethylcyclotetrasiloxane:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 474
Result: negative

4,4'-Diphenylmethane diisocyanate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 474
Result: negative

Phosphorous oxychloride, reaction products with propylene oxide:

Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Method: OECD Test Guideline 482
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

Dimethyl ether:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Sex-linked recessive lethal test in Drosophila mel-

anogaster (in vivo)
Application Route: inhalation (gas)
Result: negative

Octamethylcyclotetrasiloxane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Inhalation
Result: negative

Carcinogenicity

Suspected of causing cancer.

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Species	:	Rat
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	2 Years
Result	:	positive
Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in animal studies

4,4'-Diphenylmethane diisocyanate:

Species	:	Rat
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	2 Years
Result	:	positive
Remarks	:	Based on data from similar materials
Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in animal studies

Dimethyl ether:

Species	:	Rat
Application Route	:	inhalation (vapour)
Exposure time	:	2 Years
Result	:	negative

Reproductive toxicity

Not classified based on available information.

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: inhalation (dust/mist/fume) Result: negative

4,4'-Diphenylmethane diisocyanate:

Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: inhalation (dust/mist/fume) Result: negative Remarks: Based on data from similar materials

Phosphorous oxychloride, reaction products with propylene oxide:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 416 Result: negative
Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rabbit Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative

Dimethyl ether:

Effects on fertility	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: inhalation (vapour) Result: negative
Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: inhalation (vapour) Result: negative

Octamethylcyclotetrasiloxane:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Inhalation Method: OPPTS 870.3800 Result: positive

Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rabbit Application Route: Inhalation Result: negative
Reproductive toxicity - Assessment	:	Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - single exposure

May cause respiratory irritation.

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Assessment	:	May cause respiratory irritation.

4,4'-Diphenylmethane diisocyanate:

Assessment	:	May cause respiratory irritation.

Dimethyl ether:

Assessment	:	May cause drowsiness or dizziness.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Exposure routes	:	inhalation (dust/mist/fume)
Target Organs	:	Respiratory Tract
Assessment	:	Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

4,4'-Diphenylmethane diisocyanate:

Exposure routes	:	inhalation (dust/mist/fume)
Target Organs	:	Respiratory Tract
Assessment	:	Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

Phosphorous oxychloride, reaction products with propylene oxide:

Assessment	:	No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Repeated dose toxicity

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Species	:	Rat
NOAEL	:	1.4 mg/m3
LOAEL	:	4.1 mg/m3
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	13 Weeks

4,4'-Diphenylmethane diisocyanate:

Species	:	Rat
NOAEL	:	0,2 mg/m3
LOAEL	:	1 mg/m3
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	2 yr
Remarks	:	Based on data from similar materials

Phosphorous oxychloride, reaction products with propylene oxide:

Species	:	Rat
LOAEL	:	52 mg/kg
Application Route	:	Ingestion
Exposure time	:	13 Weeks

Dimethyl ether:

Species	:	Rat
NOAEL	:	47,11 mg/l
Application Route	:	inhalation (vapour)
Exposure time	:	2 yr

Octamethylcyclotetrasiloxane:

Species	:	Rat
NOAEL	:	1,82 mg/l
Application Route	:	inhalation (vapour)
Exposure time	:	2 yr

Species	:	Rabbit
NOAEL	:	>= 960 mg/kg
Application Route	:	Skin contact
Exposure time	:	3 Weeks

Aspiration toxicity

Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 1.000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 : > 1.000 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h EC10 : 1.640 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

4,4'-Diphenylmethane diisocyanate:

Toxicity to fish	:	LC50 (Oryzias latipes (Orange-red killifish)): > 3.000 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 129,7 mg/l Exposure time: 24 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 1.640 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials NOEC (Desmodesmus subspicatus (green algae)): 1.640 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to microorganisms	:	EC50 : > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chron-	:	NOEC: 10 mg/l Exposure time: 21 d

ic toxicity)		Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

Phosphorous oxychloride, reaction products with propylene oxide:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 51 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 131 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 82 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC10 (Pseudokirchneriella subcapitata (green algae)): 42 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 : 784 mg/l Exposure time: 3 h Method: ISO 8192
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 32 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

Dimethyl ether:

Toxicity to fish	:	LC50 (Poecilia reticulata (guppy)): > 4.100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 4.400 mg/l Exposure time: 48 h
Toxicity to microorganisms	:	EC10 (Pseudomonas putida): > 1.600 mg/l

Octamethylcyclotetrasiloxane:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,022 mg/l Exposure time: 96 h Remarks: No toxicity at the limit of solubility
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0,015 mg/l Exposure time: 48 h Remarks: No toxicity at the limit of solubility
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0,022 mg/l Exposure time: 96 h Remarks: No toxicity at the limit of solubility

EC10 (Pseudokirchneriella subcapitata (green algae)): >= 0,022 mg/l
Exposure time: 96 h
Remarks: No toxicity at the limit of solubility

Toxicity to fish (Chronic toxicity) : NOEC: 0,0044 mg/l
Exposure time: 14 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,0079 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 10

12.2 Persistence and degradability

Components:

Diphenylmethane diisocyanate, isomers and homologues:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d

4,4'-Diphenylmethane diisocyanate:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302
Remarks: Based on data from similar materials

Phosphorous oxychloride, reaction products with propylene oxide:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 14 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.D.

Dimethyl ether:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Octamethylcyclotetrasiloxane:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 3,7 %
Exposure time: 29 d
Method: OECD Test Guideline 310

12.3 Bioaccumulative potential

Components:

4,4'-Diphenylmethane diisocyanate:

Bioaccumulation	:	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 200
Partition coefficient: n-octanol/water	:	log Pow: 4,51

Phosphorous oxychloride, reaction products with propylene oxide:

Bioaccumulation	:	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 0,8 - 14
Partition coefficient: n-octanol/water	:	log Pow: 2,68

Dimethyl ether:

Partition coefficient: n-octanol/water	:	log Pow: 0,2

Octamethylcyclotetrasiloxane:

Bioaccumulation	:	Species: Pimephales promelas (fathead minnow) Bioconcentration factor (BCF): 12.400 Method: OPPTS 850.1730
Partition coefficient: n-octanol/water	:	log Pow: 6,488 Method: OECD Test Guideline 123

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

Octamethylcyclotetrasiloxane:

Assessment	:	Substance is persistent, bioaccumulative, and toxic (PBT).
	:	Substance is very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.
Please ensure aerosol cans are sprayed completely empty (including propellant)

Waste Code : The following Waste Codes are only suggestions:

used product
08 05 01*, waste isocyanates
16 05 04, gases in pressure containers (including halons) containing hazardous substances

unused product
08 05 01*, waste isocyanates
16 05 04, gases in pressure containers (including halons) containing hazardous substances

uncleaned packagings
08 05 01*, waste isocyanates

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	UN 1950
ADR	:	UN 1950
RID	:	UN 1950
IMDG	:	UN 1950
IATA	:	UN 1950

14.2 UN proper shipping name

ADN	:	AEROSOLS
ADR	:	AEROSOLS
RID	:	AEROSOLS
IMDG	:	AEROSOLS
IATA	:	Aerosols, flammable

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADN	:	2	2.1
ADR	:	2	2.1
RID	:	2	2.1
IMDG	:	2.1	
IATA	:	2.1	

14.4 Packing group

ADN

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Labels	:	2.1

ADR

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Labels	:	2.1
Tunnel restriction code	:	(D)

RID

Packing group	:	Not assigned by regulation
Classification Code	:	5F
Hazard Identification Number	:	23
Labels	:	2.1

IMDG

Packing group	:	Not assigned by regulation
Labels	:	2.1

EmS Code	:	F-D, S-U

IATA (Cargo)

Packing instruction (cargo aircraft)	:	203
Packing instruction (LQ)	:	Y203
Packing group	:	Not assigned by regulation
Labels	:	Flammable Gas

IATA (Passenger)

Packing instruction (passenger aircraft)	:	203
Packing instruction (LQ)	:	Y203
Packing group	:	Not assigned by regulation
Labels	:	Flammable Gas

14.5 Environmental hazards

ADN
Environmentally hazardous : no

ADR
Environmentally hazardous : no

RID
Environmentally hazardous : no

IMDG
Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 56: 4,4'-Diphenylmethane diisocyanate, Diphenylmethane diisocyanate, isomers and homologues

Number on list 74: 4,4'-Diphenylmethane diisocyanate, Diphenylmethane diisocyanate, isomers and homologues

Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their use/purpose or the conditions of the restriction. Please refer to the conditions in corresponding Regulation to determine whether an entry is applicable to the placing on the market or not.

Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
P3a	FLAMMABLE AEROSOLS	150 t	500 t
18	Liquefied flammable gases (including LPG) and natural gas	50 t	200 t

Volatile organic compounds	:	Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 17 %

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information	:	Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H220	:	Extremely flammable gas.
H226	:	Flammable liquid and vapour.
H280	:	Contains gas under pressure; may explode if heated.
H302	:	Harmful if swallowed.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
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.
H361f	:	Suspected of damaging fertility.
H373	:	May cause damage to organs through prolonged or repeated exposure if inhaled.
H410	:	Very toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Carc.	:	Carcinogenicity
Eye Irrit.	:	Eye irritation
Flam. Gas	:	Flammable gases
Flam. Liq.	:	Flammable liquids
Press. Gas	:	Gases under pressure
Repr.	:	Reproductive toxicity
Resp. Sens.	:	Respiratory sensitisation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
98/24/EC I	:	Europe. Chemical Agents Directive - Annex I: Binding occupational exposure limit values
PT DL 305/2007	:	Portugal. Indicative Occupational Exposure Limits
PT OEL	:	Portugal. Security and Health at the Workplace - Occupational exposure limits of chemical agents
2000/39/EC / TWA	:	Limit Value - eight hours
98/24/EC I / STEL	:	Limit values Short-term

98/24/EC I / TWA	:	Limit values 8 hours
PT DL 305/2007 / TWA	:	8 Hour limit value
PT OEL / VLE-MP	:	Time Weighted Average
PT OEL / VLE_CD	:	Short Term Exposure Limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Training advice	:	Observe requirements and guidance related to training before using this product at work.
Sources of key data used to compile the Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Classification of the mixture:		**Classification procedure:**
Aerosol 1	H222, H229	Based on product data or assessment
Acute Tox. 4	H332	Calculation method
Resp. Sens. 1	H334	Calculation method
Skin Sens. 1	H317	Calculation method

Carc. 2	H351	Calculation method
STOT RE 2	H373	Calculation method
Skin Irrit. 2	H315	Calculation method
Aquatic Chronic 3	H412	Calculation method
STOT SE 3	H335	Calculation method
Eye Irrit. 2	H319	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

PT / EN