

**Ceramic Graphene Paint Protection**

Date of compilation: 01/12/2023





Revised: 31/07/2024

Version: 2 (Replaced 1)

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1 Product identifier:** Ceramic Graphene Paint Protection
- Other means of identification:**
- UFI:** 5MR3-40UE-Y000-445N
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
- Relevant uses: Vehicle Underseal; water repeller. For professional users/industrial user only.
- Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**
- GARDX INTERNATIONAL LTD  
LAKE HOUSE, 2 PORT WAY, PORT SOLENT,  
PO6 4TY PORTSMOUTH - UNITED KINGDOM  
Phone: +44 (0)1243 376426  
product@gardx.co.uk  
www.gardx.co.uk
- AUTOMOTOSOL S.R.O  
RYBNÁ 716/24  
PRAHA 1  
110 00  
CZECH REPUBLIC
- +420 222 703288
- 1.4 Emergency telephone number:** CCN: 1012486. For 24/7 multilingual advice for spill, leak, fire, exposure, or accident call Chemtrec @ + 442038850382. NPIS: 0844 892 0111 (healthcare professionals only)

**SECTION 2: HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture:**
- CLP Regulation (EC) No 1272/2008:**
- Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
- Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard, Category 3, H412
- Asp. Tox. 1: Aspiration hazard, Hazard Category 1, H304
- Eye Dam. 1: Serious eye damage, Category 1, H318
- Flam. Liq. 3: Flammable liquids, Category 3, H226
- Skin Corr. 1B: Skin corrosion, Category 1B, H314
- Skin Sens. 1: Sensitisation, skin, Category 1, H317
- STOT RE 1: Specific target organ toxicity — Repeated exposure, Hazard Category 1 (Inhalation), H372
- 2.2 Label elements:**
- CLP Regulation (EC) No 1272/2008:**
- Danger
-    
- Hazard statements:**
- Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
- Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
- Flam. Liq. 3: H226 - Flammable liquid and vapour.
- Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
- Skin Sens. 1: H317 - May cause an allergic skin reaction.
- STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure (Inhalation). Organs affected: Central nervous system.
- Precautionary statements:**

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### SECTION 2: HAZARDS IDENTIFICATION (continued)

P210: Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/protective clothing/face protection.  
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
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.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310: Immediately call a POISON CENTER/doctor.  
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

#### Supplementary information:

EUH066: Repeated exposure may cause skin dryness or cracking.  
Contains 3-aminopropyltriethoxysilane.

#### Substances that contribute to the classification

Hydrocarbons, C10-C13,n-alkanes, iso-alkanes, cyclics, aromatics (2-25 %); Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanam (CAS: 475645-84-2); 3-aminopropyltriethoxysilane (CAS: 919-30-2)

#### 2.3 Other hazards:

Product does not meet PBT/vPvB criteria  
Endocrine-disrupting properties: The product does not meet the criteria.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substance:

Non-applicable

#### 3.2 Mixture:

**Chemical description:** Mixture of polymers, dispersants and organic compounds

#### Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: Non-applicable EC: 919-164-8 Index: Non-applicable REACH: 01-2119473977-17-XXXX	<b>Hydrocarbons, C10-C13,n-alkanes, iso-alkanes, cyclics, aromatics (2-25 %)<sup>(1)</sup></b> Self-classified		<b>75 - &lt;100 %</b>
	Regulation 1272/2008	Aquatic Chronic 3: H412; Asp. Tox. 1: H304; STOT RE 1: H372; EUH066 - Danger	
CAS: 475645-84-2 EC: Non-applicable Index: Non-applicable REACH: Non-applicable	<b>Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanam<sup>(1)</sup></b> Self-classified		<b>3 - &lt;10 %</b>
	Regulation 1272/2008	Acute Tox. 4: H302; Aquatic Chronic 3: H412; Eye Dam. 1: H318; Flam. Liq. 2: H225; Skin Corr. 1B: H314; Water-react. 3: H261 - Danger	
CAS: 919-30-2 EC: 213-048-4 Index: 612-108-00-0 REACH: 01-2119480479-24-XXXX	<b>3-aminopropyltriethoxysilane<sup>(1)</sup></b> Self-classified		<b>1 - &lt;3 %</b>
	Regulation 1272/2008	Acute Tox. 4: H302; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	
CAS: 123-86-4 EC: 204-658-1 Index: 607-025-00-1 REACH: 01-2119485493-29-XXXX	<b>N-butyl acetate<sup>(1)</sup></b> ATP CLP00		<b>1 - &lt;3 %</b>
	Regulation 1272/2008	Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning	
CAS: 302776-68-7 EC: 443-860-6 Index: Non-applicable REACH: 01-0000018706-64-XXXX	<b>Hexyl 2-(1-(diethylamino)hydroxyphenyl)methanoyl)benzoate<sup>(1)</sup></b> Self-classified		<b>1 - &lt;3 %</b>
	Regulation 1272/2008	Aquatic Chronic 4: H413	
CAS: 1330-20-7 EC: 215-535-7 Index: 601-022-00-9 REACH: 01-2119488216-32-XXXX	<b>Xylene<sup>(2)</sup></b> Self-classified		<b>&lt;1 %</b>
	Regulation 1272/2008	Acute Tox. 4: H312+H332; Aquatic Chronic 3: H412; Asp. Tox. 1: H304; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H335 - Danger	
CAS: 100-41-4 EC: 202-849-4 Index: 601-023-00-4 REACH: 01-2119489370-35-XXXX	<b>Ethylbenzene<sup>(2)</sup></b> ATP ATP06		<b>&lt;1 %</b>
	Regulation 1272/2008	Acute Tox. 4: H332; Asp. Tox. 1: H304; Flam. Liq. 2: H225; STOT RE 2: H373 - Danger	

<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

<sup>(2)</sup> Substance with a Union workplace exposure limit

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Chemical name/Classification		Concentration
CAS: 108-65-6 EC: 203-603-9 Index: 607-195-00-7 REACH: 01-2119475791-29-XXXX	<b>2-methoxy-1-methylethyl acetate<sup>(1)</sup></b> ATP ATP01		<1 %
	Regulation 1272/2008	Flam. Liq. 3: H226 - Warning	
CAS: 108-88-3 EC: 203-625-9 Index: 601-021-00-3 REACH: 01-2119471310-51-XXXX	<b>Toluene<sup>(2)</sup></b> Self-classified		<1 %
	Regulation 1272/2008	Aquatic Chronic 3: H412; Asp. Tox. 1: H304; Flam. Liq. 2: H225; Repr. 2: H361d; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H336 - Danger	

<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

<sup>(2)</sup> Substance with a Union workplace exposure limit

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
Hydrocarbons, C10-C13,n-alkanes, iso-alkanes, cyclics, aromatics (2-25 %)	LD50 oral	15000 mg/kg	Rat
CAS: Non-applicable	LD50 dermal	3400 mg/kg	Rabbit
EC: 919-164-8	LC50 inhalation	Not relevant	
Xylene	LD50 oral	Not relevant	
CAS: 1330-20-7	LD50 dermal	1100 mg/kg	Rat
EC: 215-535-7	LC50 inhalation	11 mg/L (4 h)	Rat
3-aminopropyltriethoxysilane	LD50 oral	1491 mg/kg	Rat
CAS: 919-30-2	LD50 dermal	Not relevant	
EC: 213-048-4	LC50 inhalation	Not relevant	

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

##### By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply,etc.) requiring immediate medical assistance.

##### By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

##### By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

##### By ingestion/aspiration:

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

#### 4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed:

Not relevant

### SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media:

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**SECTION 5: FIREFIGHTING MEASURES (continued)****Suitable extinguishing media:**

Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC)

**Unsuitable extinguishing media:**

Water jet

**5.2 Special hazards arising from the substance or mixture:**

Contains substances that react with water producing extremely flammable gases.

**5.3 Advice for firefighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures:****For non-emergency personnel:**

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

**For emergency responders:**

Wear protective equipment. Keep unprotected persons away. See section 8.

**6.2 Environmental precautions:**

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

**6.3 Methods and material for containment and cleaning up:**

DO NOT USE WATER TO CLEAN.

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

**6.4 Reference to other sections:**

See sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling:****A.- General precautions for safe use**

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

**B.- Technical recommendations for the prevention of fires and explosions**

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137 / The Dangerous Substances and Explosive Atmospheres Regulations 2002, 2002 No. 2776). Consult section 10 for conditions and materials that should be avoided.

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### SECTION 7: HANDLING AND STORAGE (continued)

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

#### 7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Minimum Temp.: 4 °C

Maximum Temp.: 40 °C

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

#### 7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace:

EH40/2005 Workplace exposure limits, fourth edition, published 2020:

Identification	Occupational exposure limits		
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	WEL (8h)	150 ppm	724 mg/m <sup>3</sup>
	WEL (15 min)	200 ppm	966 mg/m <sup>3</sup>
Xylene <sup>(1)</sup> CAS: 1330-20-7 EC: 215-535-7	WEL (8h)	50 ppm	220 mg/m <sup>3</sup>
	WEL (15 min)	100 ppm	441 mg/m <sup>3</sup>
Ethylbenzene <sup>(1)</sup> CAS: 100-41-4 EC: 202-849-4	WEL (8h)	100 ppm	441 mg/m <sup>3</sup>
	WEL (15 min)	125 ppm	552 mg/m <sup>3</sup>
2-methoxy-1-methylethyl acetate <sup>(1)</sup> CAS: 108-65-6 EC: 203-603-9	WEL (8h)	50 ppm	274 mg/m <sup>3</sup>
	WEL (15 min)	100 ppm	548 mg/m <sup>3</sup>
Toluene <sup>(1)</sup> CAS: 108-88-3 EC: 203-625-9	WEL (8h)	50 ppm	191 mg/m <sup>3</sup>
	WEL (15 min)	100 ppm	384 mg/m <sup>3</sup>

<sup>(1)</sup> Skin

NULL:

BIOLOGICAL MONITORING GUIDANCE VALUES (BMGVs) - EH40/2005

Identification	NULL	NULL	NULL
Xylene CAS: 1330-20-7 EC: 215-535-7	1030 mg/g (NULL)	Methyl hippuric acid in urine	Post shift

#### DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	2 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	14 mg/m <sup>3</sup>	Not relevant
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	11 mg/kg	Not relevant	11 mg/kg	Not relevant
	Inhalation	600 mg/m <sup>3</sup>	600 mg/m <sup>3</sup>	300 mg/m <sup>3</sup>	300 mg/m <sup>3</sup>
Hexyl 2-(1-(diethylamino)hydroxyphenyl)methanoyl)benzoate CAS: 302776-68-7 EC: 443-860-6	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	2900 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	10 mg/m <sup>3</sup>	Not relevant
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	212 mg/kg	Not relevant
	Inhalation	442 mg/m <sup>3</sup>	442 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>

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#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	180 mg/kg	Not relevant
	Inhalation	Not relevant	293 mg/m <sup>3</sup>	77 mg/m <sup>3</sup>	Not relevant
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	796 mg/kg	Not relevant
	Inhalation	Not relevant	550 mg/m <sup>3</sup>	275 mg/m <sup>3</sup>	Not relevant
Toluene CAS: 108-88-3 EC: 203-625-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	384 mg/kg	Not relevant
	Inhalation	384 mg/m <sup>3</sup>	384 mg/m <sup>3</sup>	192 mg/m <sup>3</sup>	192 mg/m <sup>3</sup>

#### DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	Oral	Not relevant	Not relevant	1 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	1 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	3.5 mg/m <sup>3</sup>	Not relevant
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	2 mg/kg	Not relevant	2 mg/kg	Not relevant
	Dermal	6 mg/kg	Not relevant	6 mg/kg	Not relevant
	Inhalation	300 mg/m <sup>3</sup>	300 mg/m <sup>3</sup>	35.7 mg/m <sup>3</sup>	35.7 mg/m <sup>3</sup>
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Not relevant	Not relevant	12.5 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	125 mg/kg	Not relevant
	Inhalation	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>	65.3 mg/m <sup>3</sup>	65.3 mg/m <sup>3</sup>
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Oral	Not relevant	Not relevant	1.6 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	15 mg/m <sup>3</sup>	Not relevant
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Not relevant	Not relevant	36 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	320 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	33 mg/m <sup>3</sup>	33 mg/m <sup>3</sup>
Toluene CAS: 108-88-3 EC: 203-625-9	Oral	Not relevant	Not relevant	8.13 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	226 mg/kg	Not relevant
	Inhalation	226 mg/m <sup>3</sup>	226 mg/m <sup>3</sup>	56.5 mg/m <sup>3</sup>	56.5 mg/m <sup>3</sup>

#### PNEC:

Identification				
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	STP	1.3 mg/L	Fresh water	Not relevant
	Soil	Not relevant	Marine water	Not relevant
	Intermittent	Not relevant	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	STP	35.6 mg/L	Fresh water	0.18 mg/L
	Soil	0.09 mg/kg	Marine water	0.018 mg/L
	Intermittent	0.36 mg/L	Sediment (Fresh water)	0.981 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0.098 mg/kg
Hexyl 2-(1-(diethylamino)hydroxyphenyl)methanoyl)benzoate CAS: 302776-68-7 EC: 443-860-6	STP	Not relevant	Fresh water	Not relevant
	Soil	10 mg/kg	Marine water	Not relevant
	Intermittent	Not relevant	Sediment (Fresh water)	0.536 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0.0536 mg/kg
Xylene CAS: 1330-20-7 EC: 215-535-7	STP	6.58 mg/L	Fresh water	0.327 mg/L
	Soil	2.31 mg/kg	Marine water	0.327 mg/L
	Intermittent	0.327 mg/L	Sediment (Fresh water)	12.46 mg/kg
	Oral	Not relevant	Sediment (Marine water)	12.46 mg/kg

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#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	STP	9.6 mg/L	Fresh water	0.1 mg/L
	Soil	2.68 mg/kg	Marine water	0.01 mg/L
	Intermittent	0.1 mg/L	Sediment (Fresh water)	13.7 mg/kg
	Oral	0.02 g/kg	Sediment (Marine water)	1.37 mg/kg
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	STP	100 mg/L	Fresh water	0.635 mg/L
	Soil	0.29 mg/kg	Marine water	0.064 mg/L
	Intermittent	6.35 mg/L	Sediment (Fresh water)	3.29 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0.329 mg/kg
Toluene CAS: 108-88-3 EC: 203-625-9	STP	13.61 mg/L	Fresh water	0.68 mg/L
	Soil	2.89 mg/kg	Marine water	0.68 mg/L
	Intermittent	0.68 mg/L	Sediment (Fresh water)	16.39 mg/kg
	Oral	Not relevant	Sediment (Marine water)	16.39 mg/kg



#### 8.2 Exposure controls:

##### A.- Individual protection measures, such as personal protective equipment



In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 2016/425/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

##### B.- Respiratory protection





Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours (Filter type: A2)	 CAT III	EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

##### C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Nitrile, Breakthrough time: > 480 min, Thickness: 0.1 mm, Conditions of use: Splashing)	 CAT III	EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

##### D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield	 CAT II	EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.
 Mandatory face protection	Panoramic glasses against splash/projections.	 CAT II	EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.






##### E.- Body protection

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#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties		EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
	Work clothing			Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN ISO 13287:2020 EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

#### F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

#### Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

##### 9.1 Information on basic physical and chemical properties:

###### Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Opaque
Colour:	Black, Yellowish
Odour:	Ammoniacal
Odour threshold:	Not relevant *

###### Volatility:

Boiling point at atmospheric pressure:	189 °C
Vapour pressure at 20 °C:	57 Pa
Vapour pressure at 50 °C:	337.91 Pa (0.34 kPa)
Evaporation rate at 20 °C:	Not relevant *

###### Product description:

Density at 20 °C:	Not relevant *
Relative density at 20 °C:	0.821 - 0.841
Dynamic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	<20.49 mm²/s
Concentration:	Not relevant *
pH:	Not relevant *
Vapour density at 20 °C:	Not relevant *

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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## Ceramic Graphene Paint Protection

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Insoluble in water
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *
<b>Flammability:</b>	
Flash Point:	~32 °C
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	275 °C
Lower flammability limit:	Not available
Upper flammability limit:	Not available
<b>Particle characteristics:</b>	
Median equivalent diameter:	Non-applicable

#### 9.2 Other information:

##### Information with regard to physical hazard classes:

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

##### Other safety characteristics:

Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

\*Not relevant due to the nature of the product, not providing information property of its hazards.

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

#### 10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

#### 10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

#### 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Precaution

#### 10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Precaution	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

#### 10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

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## Ceramic Graphene Paint Protection

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### SECTION 11: TOXICOLOGICAL INFORMATION

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

##### Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

##### A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

##### B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

##### C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious eye damage after contact.

##### D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

##### E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

##### F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

##### G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Serious health effects in the case of prolonged inhalation, including death, serious functional disorders or morphological changes of toxicological importance. Organs affected: Central nervous system.
- Skin: Repeated exposure may cause skin dryness or cracking

##### H- Aspiration hazard:

May be fatal if swallowed and enters airways.

##### Other information:

Not relevant

##### Product-specific toxicological information:

Acute toxicity		Genus
LC50 inhalation	>300 mg/L	

##### Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanam CAS: 475645-84-2 EC: Non-applicable	LD50 oral	>301 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation		
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	LD50 oral	1491 mg/kg (ATEi)	Rat
	LD50 dermal	4000 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L	

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## Ceramic Graphene Paint Protection

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### SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
Hydrocarbons, C10-C13,n-alkanes, iso-alkanes, cyclics, aromatics (2-25 %) CAS: Non-applicable EC: 919-164-8	LD50 oral	15000 mg/kg	Rat
	LD50 dermal	3400 mg/kg	Rabbit
	LC50 inhalation	>13.1 mg/L (4 h)	Rat
Hexyl 2-(1-(diethylamino)hydroxyphenyl)methanoylbenzoate CAS: 302776-68-7 EC: 443-860-6	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	LD50 oral	12789 mg/kg	Rat
	LD50 dermal	14112 mg/kg	Rabbit
	LC50 inhalation	23.4 mg/L (4 h)	Rat
Xylene CAS: 1330-20-7 EC: 215-535-7	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	1100 mg/kg	Rat
	LC50 inhalation	11 mg/L (4 h)	Rat
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	LD50 oral	3500 mg/kg	Rat
	LD50 dermal	15354 mg/kg	Rabbit
	LC50 inhalation	17.2 mg/L (4 h)	Rat
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	LD50 oral	8532 mg/kg	Rat
	LD50 dermal	5100 mg/kg	Rat
	LC50 inhalation	30 mg/L (4 h)	Rat
Toluene CAS: 108-88-3 EC: 203-625-9	LD50 oral	5580 mg/kg	Rat
	LD50 dermal	12124 mg/kg	Rat
	LC50 inhalation	28.1 mg/L (4 h)	Rat

#### 11.2 Information on other hazards:

##### Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

##### Other information

Not relevant

### SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

Harmful to aquatic life with long lasting effects.

#### 12.1 Toxicity:

##### Acute toxicity:

Identification	Concentration		Species	Genus
Hydrocarbons, C10-C13,n-alkanes, iso-alkanes, cyclics, aromatics (2-25 %) CAS: Non-applicable EC: 919-164-8	LC50	>10 - 100 mg/L (96 h)		Fish
	EC50	>10 - 100 mg/L (48 h)		Crustacean
	EC50	>10 - 100 mg/L (72 h)		Algae
Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanam CAS: 475645-84-2 EC: Non-applicable	LC50	>10 - 100 mg/L (96 h)		Fish
	EC50	>10 - 100 mg/L (48 h)		Crustacean
	EC50	>10 - 100 mg/L (72 h)		Algae
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	LC50	934 mg/L (96 h)	Danio rerio	Fish
	EC50	331 mg/L (48 h)	N/A	Crustacean
	EC50	603 mg/L (72 h)	Desmodesmus subspicatus	Algae
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	LC50	18 mg/L (96 h)	Pimephales promelas	Fish
	EC50	44 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	675 mg/L (72 h)	Scenedesmus subspicatus	Algae

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## Ceramic Graphene Paint Protection

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### SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration	Species	Genus
Hexyl 2-(1-(diethylamino)hydroxyphenyl)methanoylbenzoate CAS: 302776-68-7 EC: 443-860-6	LC50 >100 mg/L (96 h)	Brachydanio rerio	Fish
	EC50 >100 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 >100 mg/L (72 h)	Desmodesmus subspicatus	Algae
Xylene CAS: 1330-20-7 EC: 215-535-7	LC50 >10 - 100 mg/L (96 h)		Fish
	EC50 >10 - 100 mg/L (48 h)		Crustacean
	EC50 >10 - 100 mg/L (72 h)		Algae
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	LC50 42.3 mg/L (96 h)	Pimephales promelas	Fish
	EC50 75 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 63 mg/L (3 h)	Chlorella vulgaris	Algae
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	LC50 161 mg/L (96 h)	Pimephales promelas	Fish
	EC50 481 mg/L (48 h)	Daphnia sp.	Crustacean
	EC50 Not relevant		
Toluene CAS: 108-88-3 EC: 203-625-9	LC50 13 mg/L (96 h)	Carassius auratus	Fish
	EC50 11.5 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 Not relevant		

#### Chronic toxicity:

Identification	Concentration	Species	Genus
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	NOEC Not relevant		
	NOEC 23.2 mg/L	Daphnia magna	Crustacean
Hexyl 2-(1-(diethylamino)hydroxyphenyl)methanoylbenzoate CAS: 302776-68-7 EC: 443-860-6	NOEC 0.0088 mg/L	Pimephales promelas	Fish
	NOEC 0.0127 mg/L	Daphnia magna	Crustacean
Xylene CAS: 1330-20-7 EC: 215-535-7	NOEC 1.3 mg/L	Oncorhynchus mykiss	Fish
	NOEC 1.17 mg/L	Ceriodaphnia dubia	Crustacean
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	NOEC Not relevant		
	NOEC 0.96 mg/L	Ceriodaphnia dubia	Crustacean
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	NOEC 47.5 mg/L	Oryzias latipes	Fish
	NOEC 100 mg/L	Daphnia magna	Crustacean

### 12.2 Persistence and degradability:

#### Substance-specific information:

Identification	Degradability	Biodegradability
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	BOD5 Not relevant	Concentration Not relevant
	COD Not relevant	Period 28 days
	BOD5/COD Not relevant	% Biodegradable 67 %
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BOD5 Not relevant	Concentration Not relevant
	COD Not relevant	Period 5 days
	BOD5/COD Not relevant	% Biodegradable 84 %
Xylene CAS: 1330-20-7 EC: 215-535-7	BOD5 Not relevant	Concentration Not relevant
	COD Not relevant	Period 28 days
	BOD5/COD Not relevant	% Biodegradable 88 %
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	BOD5 Not relevant	Concentration 100 mg/L
	COD Not relevant	Period 14 days
	BOD5/COD Not relevant	% Biodegradable 90 %
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BOD5 Not relevant	Concentration 785 mg/L
	COD Not relevant	Period 8 days
	BOD5/COD Not relevant	% Biodegradable 100 %
Toluene CAS: 108-88-3 EC: 203-625-9	BOD5 2.5 g O <sub>2</sub> /g	Concentration 100 mg/L
	COD Not relevant	Period 14 days
	BOD5/COD Not relevant	% Biodegradable 100 %

### 12.3 Bioaccumulative potential:

#### Substance-specific information:

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### SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BCF	4
	Pow Log	1.78
	Potential	Low
Xylene CAS: 1330-20-7 EC: 215-535-7	BCF	9
	Pow Log	2.77
	Potential	Low
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	BCF	1
	Pow Log	3.15
	Potential	Low
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BCF	1
	Pow Log	0.43
	Potential	Low
Toluene CAS: 108-88-3 EC: 203-625-9	BCF	90
	Pow Log	2.73
	Potential	Moderate

#### 12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Koc	Not relevant	Henry	Not relevant
	Conclusion	Not relevant	Dry soil	Not relevant
	Surface tension	2.478E-2 N/m (25 °C)	Moist soil	Not relevant
Xylene CAS: 1330-20-7 EC: 215-535-7	Koc	202	Henry	524.86 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	Not relevant	Moist soil	Yes
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Koc	520	Henry	798.44 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	2.859E-2 N/m (25 °C)	Moist soil	Yes
Toluene CAS: 108-88-3 EC: 203-625-9	Koc	178	Henry	672.8 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	2.793E-2 N/m (25 °C)	Moist soil	Yes

Insoluble in water

#### 12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

#### 12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

#### 12.7 Other adverse effects:

Not described

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods:

##### Type of waste (Regulation (EU) No 1357/2014):

Not relevant

##### Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC, The Waste Regulations 2011, 2011 No. 988). As under 15 01 (2014/955/EU) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

##### Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

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**SECTION 13: DISPOSAL CONSIDERATIONS (continued)**

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**
**Transport of dangerous goods by land:**

With regard to ADR 2023 and RID 2023:



- |  |   |
|--|---|
| <b>14.1 UN number or ID number:</b>                                  | UN2920  |
| <b>14.2 UN proper shipping name:</b>                                 | CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanam; N-butyl acetate) |
| <b>14.3 Transport hazard class(es):</b>                              | 8   |
| Labels:  | 8, 3  |
| <b>14.4 Packing group:</b>   | II  |
| <b>14.5 Environmental hazards:</b>                                   | No  |
| <b>14.6 Special precautions for user</b>                             |   |
| Special regulations:   | 274   |
| Tunnel restriction code:   | D/E   |
| Physico-Chemical properties:   | see section 9   |
| Limited quantities:  | 1 L   |
| <b>14.7 Maritime transport in bulk according to IMO instruments:</b> | Not relevant  |

**Transport of dangerous goods by sea:**

With regard to IMDG 41-22:



- |  |   |
|--|---|
| <b>14.1 UN number or ID number:</b>                                  | UN2920  |
| <b>14.2 UN proper shipping name:</b>                                 | CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanam; N-butyl acetate) |
| <b>14.3 Transport hazard class(es):</b>                              | 8   |
| Labels:  | 8, 3  |
| <b>14.4 Packing group:</b>   | II  |
| <b>14.5 Marine pollutant:</b>  | No  |
| <b>14.6 Special precautions for user</b>                             |   |
| Special regulations:   | 274   |
| EmS Codes:   | F-E, S-C  |
| Physico-Chemical properties:   | see section 9   |
| Limited quantities:  | 1 L   |
| Segregation group:   | Not relevant  |
| <b>14.7 Maritime transport in bulk according to IMO instruments:</b> | Not relevant  |

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2024:



- |  |   |
|--|---|
| <b>14.1 UN number or ID number:</b>                                  | UN2920  |
| <b>14.2 UN proper shipping name:</b>                                 | CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanam; N-butyl acetate) |
| <b>14.3 Transport hazard class(es):</b>                              | 8   |
| Labels:  | 8, 3  |
| <b>14.4 Packing group:</b>   | II  |
| <b>14.5 Environmental hazards:</b>                                   | No  |
| <b>14.6 Special precautions for user</b>                             |   |
| Physico-Chemical properties:   | see section 9   |
| <b>14.7 Maritime transport in bulk according to IMO instruments:</b> | Not relevant  |

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**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885  
Control of Substances Hazardous to Health Regulations 2002 (as amended)  
EH40/2005 Workplace exposure limits  
The Waste Regulations 2011, 2011 No. 988

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION****Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878)

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:**

Not relevant

**Texts of the legislative phrases mentioned in section 2:**

- H314: Causes severe skin burns and eye damage.  
H318: Causes serious eye damage.  
H412: Harmful to aquatic life with long lasting effects.  
H317: May cause an allergic skin reaction.  
H372: Causes damage to organs through prolonged or repeated exposure (Inhalation). Organs affected: Central nervous system.  
H304: May be fatal if swallowed and enters airways.  
H226: Flammable liquid and vapour.

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**CLP Regulation (EC) No 1272/2008:**

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**SECTION 16: OTHER INFORMATION (continued)**

Acute Tox. 4: H302 - Harmful if swallowed.  
Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.  
Acute Tox. 4: H332 - Harmful if inhaled.  
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.  
Aquatic Chronic 4: H413 - May cause long lasting harmful effects to aquatic life.  
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.  
Eye Dam. 1: H318 - Causes serious eye damage.  
Eye Irrit. 2: H319 - Causes serious eye irritation.  
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.  
Flam. Liq. 3: H226 - Flammable liquid and vapour.  
Repr. 2: H361d - Suspected to damage the foetus.  
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.  
Skin Irrit. 2: H315 - Causes skin irritation.  
Skin Sens. 1: H317 - May cause an allergic skin reaction.  
STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure (Inhalation).  
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral).  
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.  
STOT SE 3: H335 - May cause respiratory irritation.  
STOT SE 3: H336 - May cause drowsiness or dizziness.  
Water-react. 3: H261 - In contact with water releases flammable gases.

**Classification procedure:**

Skin Corr. 1B: Calculation method  
Eye Dam. 1: Calculation method  
Aquatic Chronic 3: Calculation method  
Skin Sens. 1: Calculation method  
STOT RE 1: Calculation method  
Asp. Tox. 1: Calculation method  
Flam. Liq. 3: Calculation method (2.6.4.3)

**Advice related to training:**

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://echa.europa.eu>  
<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
LC50: Lethal Concentration 50  
EC50: Effective concentration 50  
LogPOW: Octanolwater partition coefficient  
Koc: Partition coefficient of organic carbon  
UFI: unique formula identifier  
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -