

CX² Ceramic Top Coat

Date of compilation: 04/01/2023 Version: 1


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

- 1.1 Product identifier:** CX² Ceramic Top Coat
Other means of identification:
UFI: FCR3-M0S8-100H-441F
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant uses: Vehicle Underseal; water repeller
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
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CZECH REPUBLIC

+420 222 703288
- 1.4 Emergency telephone number:** +44 20 38850382 (24 hrs)

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.

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)

UFI: FCR3-MOS8-100H-441F

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria
Endocrine-disrupting properties: The product fails to 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	Hydrocarbons, C10-C13,n-alkanes, iso-alkanes, cyclics, aromatics (2-25 %)⁽¹⁾ Self-classified Regulation 1272/2008 Aquatic Chronic 3: H412; Asp. Tox. 1: H304; STOT RE 1: H372; EUH066 - Danger	75 - <100 %
CAS: 475645-84-2 EC: Non-applicable Index: Non-applicable REACH: Non-applicable	Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanam⁽¹⁾ Self-classified 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	3 - <10 %
CAS: 919-30-2 EC: 213-048-4 Index: 612-108-00-0 REACH: 01-2119480479-24-XXXX	3-aminopropyltriethoxysilane⁽¹⁾ Self-classified Regulation 1272/2008 Acute Tox. 4: H302; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	1 - <3 %
CAS: 123-86-4 EC: 204-658-1 Index: 607-025-00-1 REACH: 01-2119485493-29-XXXX	N-butyl acetate⁽²⁾ ATP CLP00 Regulation 1272/2008 Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning	<1 %

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

⁽²⁾ Substance with a Union workplace exposure limit

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

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:

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SECTION 4: FIRST AID MEASURES (continued)

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 water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for 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:

Non-applicable

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media:****Suitable extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

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.

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

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.

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.- Technical measures for storage

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		
	WEL (8h)	150 ppm	724 mg/m ³
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	WEL (15 min)	200 ppm	966 mg/m ³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	2 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	14 mg/m ³	Non-applicable
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	11 mg/kg	Non-applicable	11 mg/kg	Non-applicable
	Inhalation	600 mg/m ³	600 mg/m ³	300 mg/m ³	300 mg/m ³

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	Oral	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3.5 mg/m ³	Non-applicable
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	2 mg/kg	Non-applicable	2 mg/kg	Non-applicable
	Dermal	6 mg/kg	Non-applicable	6 mg/kg	Non-applicable
	Inhalation	300 mg/m ³	300 mg/m ³	35.7 mg/m ³	35.7 mg/m ³

PNEC:

Identification		PNEC		
		Systemic	Local	Local
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	STP	1.3 mg/L	Fresh water	Non-applicable
	Soil	Non-applicable	Marine water	Non-applicable
	Intermittent	Non-applicable	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
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	Non-applicable	Sediment (Marine water)	0.098 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
	Filter mask for gases and vapours		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
	Chemical protective gloves (Material: Nitrile, Breakthrough time: > 480 min, Thickness: 0.4 mm)		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
	Face shield		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.

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	 CAT III	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.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties	 CAT III	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: Transparent
Colour: Yellowish
Odour: Ammoniacal
Odour threshold: Non-applicable *

Volatility:

Boiling point at atmospheric pressure: 190 °C
Vapour pressure at 20 °C: 32 Pa
Vapour pressure at 50 °C: 214.91 Pa (0.21 kPa)
Evaporation rate at 20 °C: Non-applicable *

Product description:

Density at 20 °C: 817.2 kg/m³
Relative density at 20 °C: 0.807 - 0.827
Dynamic viscosity at 20 °C: Non-applicable *
Kinematic viscosity at 20 °C: Non-applicable *
Kinematic viscosity at 40 °C: <20.49 mm²/s
Concentration: Non-applicable *
pH: Non-applicable *
Vapour density at 20 °C: Non-applicable *
Partition coefficient n-octanol/water 20 °C: Non-applicable *
Solubility in water at 20 °C: Non-applicable *
Solubility properties: Non-applicable *
Decomposition temperature: Non-applicable *

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

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Melting point/freezing point: Non-applicable *

Flammability:

Flash Point: ~32 °C

Flammability (solid, gas): Non-applicable *

Autoignition temperature: 300 °C

Lower flammability limit: Not available

Upper flammability limit: Not available

Particle characteristics:

Median equivalent diameter: Non-applicable

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties: Non-applicable *

Oxidising properties: Non-applicable *

Corrosive to metals: Non-applicable *

Heat of combustion: Non-applicable *

Aerosols-total percentage (by mass) of flammable components: Non-applicable *

Other safety characteristics:

Surface tension at 20 °C: Non-applicable *

Refraction index: Non-applicable *

*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.

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 (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

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

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

Dangerous health implications:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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, as it does not contain 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, as it does not 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: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

H- Aspiration hazard:

The consumption of a considerable dose can cause pulmonary damage.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	LD50 oral	1491 mg/kg	Rat
	LD50 dermal	4000 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
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	Non-applicable	
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	Non-applicable	
	LC50 inhalation	Non-applicable	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
N-butyl acetate	12789 mg/kg		Rat
CAS: 123-86-4		14112 mg/kg	Rabbit
EC: 204-658-1	23.4 mg/L (4 h)		Rat

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product fails to meet the criteria.

Other information

Non-applicable

SECTION 12: ECOLOGICAL INFORMATION

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

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
	LC50	EC50		
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	Non-applicable		
	EC50	Non-applicable		
	EC50	675 mg/L (72 h)	Scenedesmus subspicatus	Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
	NOEC	EC50		
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	NOEC	Non-applicable		
	NOEC	23.2 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
3-aminopropyltriethoxysilane CAS: 919-30-2 EC: 213-048-4	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	67 %
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	5 days
	BOD5/COD	Non-applicable	% Biodegradable	84 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
	BCF	Pow Log
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BCF	4
	Pow Log	1.78
	Potential	Low

12.4 Mobility in soil:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Absorption/desorption		Volatility	
N-butyl acetate	Koc	Non-applicable	Henry	Non-applicable
CAS: 123-86-4	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 204-658-1	Surface tension	2.478E-2 N/m (25 °C)	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product fails to 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):

Non-applicable

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-dangerous 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

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 2021 and RID 2021:



14.1 UN number or ID number: UN2920

14.2 UN proper shipping name: 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)

14.3 Transport hazard class(es): 8
Labels: 8, 3

14.4 Packing group: II

14.5 Environmental hazards: No

14.6 Special precautions for user
Special regulations: 274

Tunnel restriction code: D/E

Physico-Chemical properties: see section 9

Limited quantities: 1 L

14.7 Maritime transport in bulk according to IMO instruments: Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:

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SECTION 14: TRANSPORT INFORMATION (continued)



14.1 UN number or ID number:	UN2920
14.2 UN proper shipping name:	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)
14.3 Transport hazard class(es):	8
Labels:	8, 3
14.4 Packing group:	II
14.5 Marine pollutant:	No
14.6 Special precautions for user	
Special regulations:	274
EmS Codes:	F-E, S-C
Physico-Chemical properties:	see section 9
Limited quantities:	1 L
Segregation group:	Non-applicable
14.7 Maritime transport in bulk according to IMO instruments:	Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



14.1 UN number or ID number:	UN2920
14.2 UN proper shipping name:	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)
14.3 Transport hazard class(es):	8
Labels:	8, 3
14.4 Packing group:	II
14.5 Environmental hazards:	No
14.6 Special precautions for user	
Physico-Chemical properties:	see section 9
14.7 Maritime transport in bulk according to IMO instruments:	Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

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

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SECTION 15: REGULATORY INFORMATION (continued)**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.:

Non-applicable

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:

Acute Tox. 4: H302 - Harmful if swallowed.

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.

Eye Dam. 1: H318 - Causes serious eye damage.

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

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).

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:**

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SECTION 16: OTHER INFORMATION (continued)

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 -