

This product is for the professional painting of vehicles only after reference to the manufacturer's data sheet.

According to Regulation (EC) No 1907/2006 (REACH)
 Annex II, as amended by Regulation (EU) No. 453/2010
 Trade name : REVIVify
 Product No : Self-healing Ultra
 Print date : 3/17/2021

SAFETY DATA SHEET

1. CHEMICAL AND COMPANY IDENTIFICATION

Chemical name : Crystalline Silicon Dioxide Dispersion Liquid
Other name : REVIVify UHSC S3
Application and restriction : -----
Manufacturer's, importer's or supplier's name : Idée Technology Co., Ltd
Address : No. 52, Ln. 1129, Zhonghua Rd., Zhubei City, Hsinchu County 302, Taiwan (R. O. C.)
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2. HAZARDS IDENTIFICATION DATA

2.1 Chemical hazards classification :
 Classification of the substance or mixture
 Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Annex	Hazard class and category	Hazard statement code(s)
B. 6	flammable liquid	Cat. 3 (Flam. Liq. 3) H226
A. 10	acute toxicity (oral)	Cat. 4 (Acute Tox. 4) H302
A. 2	skin corrosion/irritation	Cat. 1A (Skin Corr. 1A) H314
A. 3	serious eye damage/eye irritation	Cat. 1 (Eye Dam. 1) H318
A. 7	reproductive toxicity	Cat. 2 (Repr. 2) H361f

Hazards not otherwise classified Very toxic to aquatic life with long lasting effects (GHS category 1: aquatic toxicity - acute and chronic)

The most important adverse physicochemical, human health and environmental effects
 Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. The product is combustible and can be ignited by potential ignition sources.

Indication content :
 1. Harmful if inhaled. 2. Causes skin irritation. 3. Causing serious damage to eye irritation
 2. Symbols : 
 3. Warning information : Maybe Intense burning · Harmful if inhaled, Causes skin irritation, Causing serious damage to eye irritation

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Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

Response:

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of accident or feel ill, immediately contact the medical.

Storage:

P405 Store locked up.

Disposal: P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPONENTS IDENTIFICATION DATA

Mixture :

Chemical properties :

Description: Mixture of substances listed below with nonhazardous additions.

Hazardous components name / concentration or concentration range (ingredient percent):

Product/ingredient name	Identifiers	%	Classification	
			67/548/EEC Regulation (EC) No.1272/2008 [CLP]	
Organic polysilazane compound	CAS No 67829000004-666 1P	40~50	C, F; R22 Xi; R34	H224 H302 H314 H318

4. AID MEASURES

4.1. Description of first aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in the recovery position and seek medical advice.

If inhaled :

Remove patient to the fresh air and seek medical assistance. Keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in the recovery position.

On skin contact :

Remove contaminated clothing. Wash skin with soap and water, rinse abundantly. Do NOT use solvents or thinners.

On contact with eyes :

Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart, and seek medical advice.

On ingestion :

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If swallowed, rinse the mouth with plenty of water (only if the person is conscious) and seek medical advice immediately. Keep the injured person at rest. Do not induce vomiting.

Most important symptoms and harm effects :

There are no data available on the mixture itself. The mixture has been assessed following the conventional

method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly.

See Sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver, and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause the removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea, and vomiting. This takes into account, where known, delayed, and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation, and dermal routes of exposure and eye contact.

1. Harmful if inhaled. 2. Causes skin irritation. 3. Causing serious damage to eye irritation

Protection for first aid personnel : Wear protective clothing C grade in first aid in the safe area

Proposal for physician : When patients inhaled, consider giving oxygen. When swallowed, consider gastric lavage.

5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media

Foam (alcohol resistant), carbon dioxide, powders, water spray.

Do not allow run-off from fire fighting to enter drains or watercourses.

Unsuitable extinguishing media for safety reasons

Water jet

5.2. Special hazards arising from the substance or mixture

Fire will produce dense black smoke. Inhalation of dangerous decomposition products may cause serious damage to health.

5.3. Advice for firefighters

Special protective equipment

Appropriate breathing apparatus may be required.

Additional information

Cool closed containers in the vicinity of the source of the fire.

6: Accidental Release Measures

Please comply with local international regulations.

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6.1. Personal precautions, protective equipment, and emergency procedures

Advice on product handling can be found in sections 7 and 8 of this safety data sheet. Exclude sources of ignition and ventilate the area. Avoid breathing vapors.

6.2. Environmental precautions

Do not allow to enter drains or watercourses. If the product enters drains or sewers, the local water company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the Environment Agency.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth, and place in a suitable container for disposal according to the waste regulations (see section 13). Clean preferably with a detergent; avoid the use of solvents.

7: Handling and Storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available user-specific information provided in the Exposure Scenario(s).

7.1. Precautions for safe handling

Instructions for Safe Handling

Avoid skin and eye contact. Avoid inhalation of vapor and spray mist.

Avoid inhalation of dust from sanding.

Smoking, eating, and drinking are forbidden in the application area.

For personal protection see section 8. Comply with the health and safety at work laws.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapor in all cases. In such

circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapor concentration has fallen below the exposure limits.

Care should be taken when reopening partly used containers (pressurization!).

7.2. Conditions for safe storage, including any incompatibilities

Requirements for Storage Areas and Containers

Electrical equipment must be explosion-proof to the appropriate standard. Floors must be of conducting type and impermeable to the materials being stored.

Keep container tightly closed. Never use pressure to empty; the container is not a pressure vessel. Close containers carefully once opened and store upright in order to prevent any leakage. No smoking. Prevent unauthorized access.

Information on Combined Storage

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.

Additional Information on Storage Conditions

Always keep in containers of the same material as the original one. Observe label precautions. Store in a dry, well-ventilated place away from sources of heat and direct sunlight. Keep away from sources of ignition.

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Storage temperature: 5 - 35 °C

Detailed information can be gained from the relevant technical datasheets.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering control :

Control parameters :

TWA/ppm	STEL/ppm	CEILING	BEIs
No data available.	No data available.	No data available.	No data available.

8.2. Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment) Eye/face protection

Wear eye/face protection.

Personal protective equipment

Respiratory Protection

When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators.

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet (sanding/ flatting) should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Use ALP2 breathing-protection half mask in case of contact with aerosols.

Hand Protection

Wear protective gloves.

Any chemical protection glove certified according to EN 374 is suitable: e.g. nitrile gloves

Material thickness: = 0,7 mm

Further information on penetration time is available from the manufacturer of the glove. Data are based on information from the glove manufacturer, the raw material manufacturer or according to specifics of the product components.

The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties).

Follow manufacturer's advice on use, storage, maintenance and replacement of gloves.

The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream).

Eye Protection

Required when there is a risk of eye contact.

Use tight-fitting protective goggles.

Skin Protection

Skin protection

· hand protection

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Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leaktightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES :

Appearance : liquid	PH : -----
Olfactory threshold : No information	odour : Little Ammonia odor
Boiling point: 140 °C	Melting point : No information
Flammability point : not relevant (fluid)	Density : 0.97 g /ml at 25 °C 8.11 lb/gal at 25 °
Decomposition temperature : No information	Flash point : 44 - 48 °C at 101.3 kPa 112 - 119 °F at 1 atm
Self-ignition temperature : No information	Test Methods : (closed cup)ISO 3679
Vapor pressure : 132 Pa at 25 °C	Explosive limit : not determined
Specific gravity : No information	Vapor density : >5 (Air=1)
Evaporation rate : No information	Solubility : not determined

10. STABILITY AND REACTIVITY

10.1. Reactivity	Stable under recommended storage and handling conditions (see section 7).
10.2. Chemical stability	The product is stable if stored and handled as prescribed/indicated.
10.3. Possibility of hazardous reactions	No hazardous reactions if stored and handled as prescribed/indicated.
10.4. Conditions to avoid	Avoid all sources of ignition: heat, sparks, open flame.
10.5. Incompatible materials	Keep away from highly acidic or alkaline substances as well as oxidants in order to prevent exothermal reactions.
10.6. Hazardous decomposition products	When exposed to high temperatures hazardous decomposition products such as carbon monoxide, carbon dioxide, smoke, oxides of nitrogen may be produced.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects	Test data are not available for the complete mixture.
Classification procedure	The method for classification of the mixture is based on ingredients of the mixture (additivity formula).
Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)	
Acute toxicity	Harmful if swallowed.

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<u>Acute toxicity estimate (ATE)</u>			
Oral		1,505	
Acute toxicity of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
organic polysilazane compound	475645-84-2	oral	301
<p>Skin corrosion/irritation Causes severe skin burns and eye damage.</p> <p>Serious eye damage/eye irritation Causes serious eye damage.</p> <p>Respiratory or skin sensitization Shall not be classified as a respiratory or skin sensitizer.</p> <p>Summary of evaluation of the CMR properties Suspected of damaging fertility. Shall not be classified as carcinogenic. Shall not be classified as germ cell mutagenic.</p> <p>Carcinogenicity · National Toxicology Program (United States): none of the ingredients are listed · IARC Monographs none of the ingredients are listed</p> <p>Specific target organ toxicity (STOT) Shall not be classified as a specific target organ toxicant.</p> <p>Aspiration hazard Shall not be classified as presenting an aspiration hazard.</p>			

12. ECOLOGICAL INFORMATION

12.1. Toxicity					
Very toxic to aquatic life with long lasting effects.					
Aquatic toxicity (acute)					
Shall not be classified as hazardous to the aquatic environment.					
Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
octamethylcyclotetrasiloxane	556-67-2	LC50	>22 µg/l	fish	96 hours
octamethylcyclotetrasiloxane	556-67-2	EC50	>1,000 mg/l	aquatic invertebrates	96 hours
organic polysilazane compound	475645-84-2	LC50	57.1 mg/l	zebra fish	96 hours
decamethylcyclopentasiloxane	541-02-6	LC50	>16 µg/l	fish	96 hours
decamethylcyclopentasiloxane	541-02-6	EC50	>2.9 µg/l	aquatic invertebrates	48 hours
Aquatic toxicity (chronic)					
Aquatic toxicity (chronic) of components of the mixture					

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Name of substance	CAS No	Endpoint	Value	Species	Exposure time
octamethylcyclotetrasiloxane	556-67-2	LC50	10 µg/l	fish	14 d
octamethylcyclotetrasiloxane	556-67-2	EC50	>500 mg/l	aquatic invertebrates	24 h
decamethylcyclopentasiloxane	541-02-6	LC50	>16 µg/l	fish	14 d
decamethylcyclopentasiloxane	541-02-6	EC50	>15 µg/l a	aquatic invertebrates	21 d
octamethylcyclotetrasiloxane	556-67-2	carbon dioxide generation	3.7 %		29 d
decamethylcyclopentasiloxane	541-02-6	carbon dioxide generation	0.14 %		28 d

12.3. Bioaccumulative potential :

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
octamethylcyclotetrasiloxane	556-67-2	12,400	4.45	—
decamethylcyclopentasiloxane	541-02-6	7,060	4.76	—

12.4. Mobility in soil :

When released into the soil will evaporate and seep into the ground.

12.5. Results of PBT and vPvB assessment

Data are not available

12.6. Other adverse effects :

Data are not available.

13. DISPOSAL CONSIDERATIONS

Disposal of chemical product : As far as possible recycling or recycle. Identifying the toxicity and physical properties of produced materials is convenient to formulate the suitable regulations of waste separation and waste disposal. It is the responsibility of waste producers. Use with afterburners and filters for chemical incineration.

Disposal of container : Completely emptying the container, and ventilate at a safe place without spark. Before handling the product or container, please refer to Chapter 7 of the instructions. If heated to temperatures above flash point, residue may have caused the explosion. Do not puncture, cut or weld the no clean container. Give the container to the barrel or metal recyclers.

14. TRANSPORT INFORMATION

14.1. UN NO : UN2924

14.2. UN proper shipping name : Corrosive liquid, flammable, n.o.s.



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14.3. Transport hazard class : 3

14.4. Packaging group : II

14.5. Marine pollutant (Yes / No) : NO

14.6. Special transport method and precaution : UN2924

15. REGULATORY INFORMATION

The control information is not complete, and there are other regulations apply to this product.

Applicable regulations :

Occupational Safety and Health Act

Occupational Safety and Sanitation Rules

Regulation of Labelling and Hazard Communication of Dangerous and Harmful Materials

Rules on Organic Solvent Poisoning Prevention

Standards of Permissible Exposure Limits of Airborne Hazardous Substances in Workplace

Rules on Road Traffic Safety

Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial

Public Hazardous Substances & Flammable Pressurized Gases Establishment Standards & Safety Control

Regulations

16. OTHER INFORMATION

References : Database of hazardous chemical substances (Occupational Safety and Health Administration, Ministry of Labor)

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Date : 2021/03/17

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N/A(-----):No information is available