

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : Ultra-Durable Hydrophobic Coating v4
 Product code : EXO

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Automotive Coating

1.3. Supplier

GTECHNIQ LTD Bridge Business Park Upper Heyford Northampton, NN7 3FA - United Kingdom T +44 (0)1604 962 553 uk@gtechniq.com - www.gtechniq.com	GTECHNIQ NORTH AMERICA 4780 Hammond Industrial Drive Suite 100 Cumming GA 30041 T (855) 483-2401 infona@gtechniq.com - www.gtechniq.com
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1.4. Emergency telephone number

Emergency number : +44 (0)1933 445 260
 For Chemical Emergency Call 24hr / day, 7 days / week.

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 3	H226 Flammable liquid and vapor
Skin corrosion/irritation Category 2	H315 Causes skin irritation
Serious eye damage/eye irritation Category 1	H318 Causes serious eye damage
Skin sensitization, Category 1	H317 May cause an allergic skin reaction
Specific target organ toxicity (single exposure) Category 3	H335 May cause respiratory irritation
Specific target organ toxicity (repeated exposure) Category 2	H373 May cause damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412 Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

: Danger

Hazard statements (GHS US) :

: H226 - Flammable liquid and vapor
 H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H335 - May cause respiratory irritation
 H373 - May cause damage to organs through prolonged or repeated exposure
 H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US) :

: P102 - Keep out of reach of children.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 - Do not breathe fume, mist, spray, vapors.
 P280 - Wear eye protection, protective clothing, protective gloves.
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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 doctor, a POISON CENTER.

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P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Solvent naphtha (petroleum), heavy aliph.	(CAS-No.) 64742-96-7	20 – 80	Asp. Tox. 1, H304
siloxane	(CAS-No.) proprietary	20 – 60	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
silane	(CAS-No.) proprietary	10 – 40	Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Chronic 2, H411
silane	(CAS-No.) proprietary	1 – 10	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Skin Sens. 1, H317

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately. Get medical advice/attention if you feel unwell. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting. Call a physician immediately. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects	: Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation	: May be irritating to the respiratory system.
Symptoms/effects after skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Ingestion may cause nausea, vomiting and diarrhea. May cause irritation to the digestive tract.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically. Call a doctor.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: Flammable liquid and vapor.
Explosion hazard	: Explosion risk in case of fire.
Reactivity in case of fire	: Not known.

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Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon monoxide. Carbon dioxide. hydrocarbons.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Exercise caution when fighting any chemical fire.
Firefighting instructions : Fight fire with normal precautions from a reasonable distance. Use water spray or fog for cooling exposed containers.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not attempt to take action without suitable protective equipment.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. In case of insufficient ventilation, wear suitable respiratory equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes. Avoid breathing fume, mist, spray, vapors.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Ventilate area. Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spillage.
Methods for cleaning up : Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).
Other information : This material and its container must be disposed of as hazardous waste.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Avoid breathing fume, vapors, mist, spray. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry place. Store in a closed container. Store locked up. Keep cool.
Incompatible materials : Strong acids. Strong bases. Strong oxidizing agents.
Heat-ignition : No flames, no sparks. Eliminate all sources of ignition.
Storage area : Store in a well-ventilated place.
Packaging materials : Keep only in original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

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silane (proprietary)
No additional information available
siloxane (proprietary)
No additional information available
silane (proprietary)
No additional information available
Solvent naphtha (petroleum), heavy aliph. (64742-96-7)
No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. PPE compliant to the recommended EN/ISO or equivalent standards should be selected.

Materials for protective clothing:

Wear suitable coveralls to prevent exposure to the skin

Hand protection:

Protective gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection. Where exposure through inhalation may occur from handling or use, respiratory protection equipment is required. Exposure limits for airborne contaminants must not be exceeded.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear to slightly milky.
Color	: Colorless
Odor	: characteristic
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 60 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.875
Solubility	: Reacts with water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: 80 vol %
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

VOC content	: ≤ 5 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

silane (proprietary)	
ATE US (oral)	500 mg/kg body weight

silane (proprietary)	
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Reproductive toxicity	: Not classified
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STOT-single exposure	: May cause respiratory irritation.
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siloxane (proprietary)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
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silane (proprietary)	
LOAEL (oral, rat, 90 days)	600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

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silane (proprietary)	
NOAEL (oral,rat,90 days)	200 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

silane (proprietary)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects	: Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation	: May be irritating to the respiratory system.
Symptoms/effects after skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Ingestion may cause nausea, vomiting and diarrhea. May cause irritation to the digestive tract.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects. Before neutralisation, the product may represent a danger to aquatic organisms.
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silane (proprietary)	
LC50 fish 1	> 934 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 Daphnia 1	331 mg/l Test organisms (species): Daphnia magna

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information	: Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN1993 Flammable liquids, n.o.s. (Organic Polysilazane mixture), 3, II
UN-No.(DOT)	: UN1993
Proper Shipping Name (DOT)	: Flammable liquids, n.o.s. Organic Polysilazane mixture

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Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT) : II - Medium Danger
Hazard labels (DOT) : 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F).
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Emergency Response Guide (ERG) Number : 128
Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport document description : UN1993 FLAMMABLE LIQUID, N.O.S. (Organic Polysilazane mixture), 3, II
UN-No. (TDG) : UN1993
Proper Shipping Name (Transportation of Dangerous Goods) : FLAMMABLE LIQUID, N.O.S.
TDG Primary Hazard Classes : 3 - Class 3 - Flammable Liquids
Packing group : II - Medium Danger
TDG Special Provisions : 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks).
(2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name:
(a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S.;
(b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S.;
(c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S.;
(d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.; or
(e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S.
(3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment:
(a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or
(b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS, 150 - An approved ERAP is required for the dangerous goods referred to in paragraph 7.2(1)(f) of Part 7 (Emergency Response Assistance Plan).

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Explosive Limit and Limited Quantity Index : 1 L
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 5 L

Transport by sea

Transport document description (IMDG) : UN 1993 FLAMMABLE LIQUID, N.O.S. (Organic Polysilazane mixture), 3, II
UN-No. (IMDG) : 1993
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : II - substances presenting medium danger
Limited quantities (IMDG) : 1 L

Air transport

Transport document description (IATA) : UN 1993 Flammable liquid, n.o.s. (Organic Polysilazane mixture), 3, II
UN-No. (IATA) : 1993
Proper Shipping Name (IATA) : Flammable liquid, n.o.s.
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

silane (proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
siloxane (proprietary)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	
silane (proprietary)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
Solvent naphtha (petroleum), heavy aliph. (64742-96-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. International regulations

CANADA

silane (proprietary)	
Listed on the Canadian DSL (Domestic Substances List)	
siloxane (proprietary)	
Listed on the Canadian NDSL (Non-Domestic Substances List)	
silane (proprietary)	
Listed on the Canadian DSL (Domestic Substances List)	
Solvent naphtha (petroleum), heavy aliph. (64742-96-7)	
Listed on the Canadian DSL (Domestic Substances List)	

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

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Full text of H-phrases:

H226	Flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.