

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.06.2021

Revision: 22.06.2021

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

· **1.1 Product identifier**

· **Trade name:** Repel Silane

· **Article number:** 30-82-50

· **Registration number** Mixture

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

· **Sector of Use** SU24 Scientific research and development

· **Product category** PC21 Laboratory chemicals

· **Application of the substance / the mixture** Laboratory chemicals

· **Uses advised against**

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Any use involving aerosol formation or vapour or dust release in excess of the assigned workplace exposure limits where workers are exposed without suitable respiratory protective equipment (RPE).

Processes where workers who may be pregnant or breastfeeding could potentially come into direct contact with the undiluted product.

Processes involving extreme heat use advised against.

The product is strictly intended for industrial or professional use only.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Severn Biotech Ltd.

Unit 2,

Park Lane,

Kidderminster,

Worcestershire.

DY11 6TJ

UK

Tel: 0044 1562 825286

Fax: 0044 1562 825284

email: info@severnbiotech.com

· **Further information obtainable from:** Product safety department.

· **1.4 Emergency telephone number:**

UK National Poisons Information Service. E-mail: npis.birmingham@nhs.net; Tel: +44 (0)344 892 0111

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



flame

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



health hazard

Repr. 2 H361f Suspected of damaging fertility.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

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



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

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Skin Irrit. 2 H315 Causes skin irritation.
 STOT SE 3 H336 May cause drowsiness or dizziness.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms** GHS02, GHS07, GHS08, GHS09
- **Signal word** Danger

· Hazard-determining components of labelling:

n-Hexane

· Hazard statements

H225 Highly flammable liquid and vapour.
 H315 Causes skin irritation.
 H361f Suspected of damaging fertility.
 H336 May cause drowsiness or dizziness.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H304 May be fatal if swallowed and enters airways.
 H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

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 mist/vapours/spray.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P308+P313 IF exposed or concerned: Get medical advice/attention.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 110-54-3 EINECS: 203-777-6	n-Hexane ⚠ Flam. Liq. 2, H225; ⚠ Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	>50-≤100%
CAS: 75-78-5 EINECS: 200-901-0	dimethyldichlorosilane ⚠ Flam. Liq. 2, H225; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	>2.5-≤10%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.

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- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
DO NOT DELAY!
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
DO NOT DELAY!
Wash mouth out with water
Do not induce vomiting; call for medical help immediately.
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
- **Information for doctor:** Treat symptomatically and supportively.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Vapours may form explosive mixtures with air.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear fully protective suit.
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information**
Highly flammable liquid.
Vapours form explosive mixtures with air.
Practically insoluble in water.
Lighter than water.
Highly volatile.
Electrostatic chargeable fluid.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Particular danger of slipping on leaked/spilled product.
Keep ignition sources away - no smoking.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Welding and other hot work operations in the work area must only be permitted under supervision.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

· 7.2 Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles:

Store in a cool location.

Prevent any seepage into the ground.

· Information about storage in one common storage facility: Not required.

· Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Store in a bunded area.

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters
· Additional information about design of technical facilities: No further data; see item 7.

· Ingredients with limit values that require monitoring at the workplace:
110-54-3 n-Hexane
WEL | Long-term value: 72 mg/m³, 20 ppm
· Additional information: The lists valid during the making were used as basis.

· 8.2 Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Do not eat or drink while working.

Keep away from tobacco products.

Pregnant women should strictly avoid inhalation or skin contact.

A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

Take note of assigned Workplace Exposure Limits.

· Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

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Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**

Solvent resistant protective clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Clear

· **Odour:** Solvent-like

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: -95 °C

Initial boiling point and boiling range: 69 °C

· **Flash point:** -26 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 240 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not self-igniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: 1.2 Vol %

Upper: 7.4 Vol %

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· Vapour pressure at 20 °C:	160 hPa
· Density at 20 °C:	0.7 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water at 20 °C:	<0.1 g/l
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· 9.2 Other information	NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
 - Strong oxidising agents.
 - Halogens
 - Sodium peroxide
 - Dinitrogen tetroxide
- **10.6 Hazardous decomposition products:**
 - Carbon monoxide and carbon dioxide
 - Formaldehyde
 - Hydrogen
 - Chlorine compounds

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation**
 - Causes skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity**
 - Suspected of damaging fertility.
- **STOT-single exposure**
 - May cause drowsiness or dizziness.
- **STOT-repeated exposure**
 - May cause damage to organs through prolonged or repeated exposure.

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- **Aspiration hazard**
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Recommended Hierarchy of Controls:
 - Minimise waste;
 - Reuse if not contaminated;
 - Recycle, if possible; or
 - Safe disposal (if all else fails).
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Container remains hazardous when empty. Continue to observe all precautions.
Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | UN1139 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR | 1139 COATING SOLUTION, ENVIRONMENTALLY HAZARDOUS, special provision 640D |

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<ul style="list-style-type: none"> · IMDG · IATA 	<p>COATING SOLUTION (HEXANES), MARINE POLLUTANT</p> <p>COATING SOLUTION</p>
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- **14.3 Transport hazard class(es)**

- **ADR, IMDG**



<ul style="list-style-type: none"> · Class · Label 	<p>3 Flammable liquids.</p> <p>3</p>
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- **IATA**



<ul style="list-style-type: none"> · Class · Label 	<p>3 Flammable liquids.</p> <p>3</p>
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- **14.4 Packing group**

- **ADR, IMDG, IATA** II

- **14.5 Environmental hazards:** Product contains environmentally hazardous substances: n-Hexane

- **Marine pollutant:** No

- **Special marking (ADR):** Symbol (fish and tree)

- **14.6 Special precautions for user** Warning: Flammable liquids.

- **Hazard identification number (Kemler code):** 33

- **EMS Number:** F-E,S-E

- **Stowage Category** B

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

- **Transport/Additional information:**

- **ADR**

- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E2

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

- **Transport category** 2
- **Tunnel restriction code** D/E

- **IMDG**

- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E2

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation":** UN 1139 COATING SOLUTION, SPECIAL PROVISION 640D, 3, II, ENVIRONMENTALLY HAZARDOUS

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SECTION 15: Regulatory information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category
E2
P5c
- Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

· National regulations:

· Information about limitation of use:

Class	Share in %
I	95.0

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H225 Highly flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H361f Suspected of damaging fertility.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.

· Department issuing SDS: Product safety department.

· Contact:

· Abbreviations and acronyms:

- ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Flammable liquids – Category 2
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Repr. 2: Reproductive toxicity – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- Asp. Tox. 1: Aspiration hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2