

Safety data sheet

according to 1907/2006/EC, Article 31






Printing date 06.03.2013

Revision: 06.03.2013

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

- **Product identifier**
- **Trade name:** PAGE SILANE
- **Article number:** 30-81-05
- **Registration number**
Mixture
Hexane: 01-2119480412-44
Silane: 01-2119436667-29
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Laboratory product.
- **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.
- **Emergency telephone number:** Tel: 0044 1562 825286 (not 24 hours)

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
-  GHS02 flame
 Flam. Liq. 2 H225 Highly flammable liquid and vapour.
-  GHS08 health hazard
 Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.
-  GHS09 environment
 Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
-  GHS07
 Skin Irrit. 2 H315 Causes skin irritation.
 STOT SE 3 H336 May cause drowsiness or dizziness.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
-  Xn; Harmful
 R65: Harmful: may cause lung damage if swallowed.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.03.2013

Revision: 06.03.2013

Trade name: PAGE SILANE

(Contd. of page 1)



Xi; Irritant

R38: Irritating to skin.



F; Highly flammable

R11: Highly flammable.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R67: Vapours may cause drowsiness and dizziness.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Has a narcotizing effect.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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:**

hexane, mixture of isomers (containing < 5 % n-hexane (203-777-6))

Hazard statements

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

P270 Do no eat, drink or smoke when using this product.

P260 Do not breathe the mist/vapours/spray.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances**CAS No. Description**

110-54-3 n-Hexane

Identification number(s)

EC number: 203-777-6

Index number: 601-037-00-0

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.03.2013


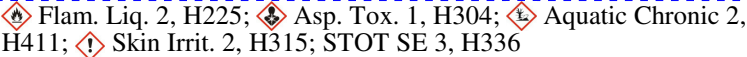

Revision: 06.03.2013

Trade name: PAGE SILANE

(Contd. of page 2)

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

- **Dangerous components:**

	hexane, mixture of isomers (containing < 5 % n-hexane (203-777-6)) 	50-100%
		
CAS: 7803-62-5 EINECS: 232-263-4	silane 	2.5-10%

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

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Potential for aspiration if swallowed.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
DO NOT DELAY!
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.
- **Information for doctor:**
Contains petroleum distillates.
Refer to section 11.
Treat symptomatically and supportively.
For ingestion, the stomach should be intubated, aspirated, and lavaged with a slurry of activated charcoal, protect the airway from aspiration of gastric contents. Monitor arterial blood gases in cases of severe aspiration.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
May accumulate static electrical charges, and may cause ignition of its own vapours.
Vapour may cause flash fire. Vapours are heavier than air and may travel to a source of ignition and flash back. Vapours can spread along the ground and collect in low or confined areas. This liquid floats on water and may travel to a source of ignition and spread fire.
- **Advice for firefighters**
- **Protective equipment:**
Wear fully protective suit.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.03.2013

Revision: 06.03.2013

Trade name: PAGE SILANE

(Contd. of page 3)

- Wear self-contained respiratory protective device.
- Do not inhale explosion gases or combustion gases.
- **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Wear protective equipment. Keep unprotected persons away.
 - Ensure adequate ventilation
 - Keep ignition sources away - no smoking.
- **Environmental precautions:**
 - Do not allow product to reach sewage system or any water course.
 - Do not allow to penetrate the ground/soil.
- **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.
 - Do not flush with water or aqueous cleansing agents
 - Use only non-sparking tools and equipment.
- **Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
 - Safety showers and eye wash facilities should be available at the work area.
 - Avoid direct contact (skin contact, ingestion and/or inhalation of fume/mist/dust) with the product.
 - Welding and other hot work operations in the work area must only be permitted under supervision.
 - Use only non-sparking tools and equipment.
 - Do NOT use compressed air for filling, discharging, or handling.
- **Information about fire - and explosion protection:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
- **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:** Store away from oxidizing agents.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Store in cool, dry conditions in well sealed receptacles.
 - Store in a bonded area.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.03.2013

Revision: 06.03.2013

Trade name: PAGE SILANE

(Contd. of page 4)

- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

7803-62-5 silane

WEL	Short-term value: 1.3 mg/m ³ , 1 ppm Long-term value: 0.67 mg/m ³ , 0.5 ppm
-----	--

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

Select PPE appropriate for the operations taking place taking into account the product properties.

- **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.

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

Do not eat, drink, smoke or sniff while working.

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.

Ensure that eyewash stations and safety showers are close to the workstation location.

Take note of assigned Workplace Exposure Limits.

Depending on the degree of exposure, periodic medical examination is suggested.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Use filter respirator for organic gases and vapours adapted to the airborne concentration of the substance.

- **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

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Colourless

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.03.2013

Revision: 06.03.2013

Trade name: PAGE SILANE

(Contd. of page 5)

· Odour:	Solvent-like
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	-154 °C
Boiling point/Boiling range:	68 °C
· Flash point:	-20 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	225 °C
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	1.1 Vol %
Upper:	7.5 Vol %
· Vapour pressure at 20 °C:	133 hPa
· Density at 20 °C:	0.63 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water at 20 °C:	0.01 g/l
· Partition coefficient (n-octanol/water):	Hexane: 4 log POW
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
 No decomposition if used and stored according to specifications.
 To avoid thermal decomposition do not overheat.
 May accumulate static electrical charges, and may cause ignition of its own vapours.
 Vapour may cause flash fire. Vapours are heavier than air and may travel to a source of ignition and flash back. Vapours can spread along the ground and collect in low or confined areas. This liquid floats on water and may travel to a source of ignition and spread fire.
- **Possibility of hazardous reactions**
 Reacts with strong oxidants. This generates fire and explosion hazard.
 Attacks some plastics, rubber and coatings.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong oxidising agents.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.03.2013

Revision: 06.03.2013

Trade name: PAGE SILANE

(Contd. of page 6)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:**
Irritant to skin and mucous membranes.
Will defat and dry the skin.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**
Effects of long-term or repeated exposure: Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the central nervous system and peripheral nervous system. This may result in polyneuropathy.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
Routes of exposure: Hexane can be absorbed into the body by inhalation of its vapour and by ingestion.

Inhalation risk: A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20 °C.

Effects of short-term exposure: The product is irritating to the skin. If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. Exposure at high levels could cause lowering of consciousness.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** Product is not expected to bioaccumulate.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Recommended Hierarchy of Controls:
 - Minimise waste;
 - Reuse if not contaminated;
 - Recycle, if possible; or
 - Safe disposal (if all else fails).

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.03.2013

Revision: 06.03.2013

Trade name: PAGE SILANE

(Contd. of page 7)

Contact waste processors for recycling information.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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.

· **European waste catalogue**

Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

· **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 vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADR, IMDG, IATA 	UN1208
<ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG, IATA 	1208 HEXANES, ENVIRONMENTALLY HAZARDOUS HEXANES
<ul style="list-style-type: none"> · Transport hazard class(es) · ADR 	<div style="display: flex; align-items: center; gap: 10px;">   </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3
<ul style="list-style-type: none"> · IMDG, IATA 	
<ul style="list-style-type: none"> · Class · Label 	<div style="display: flex; align-items: center; gap: 10px;">  </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3
<ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: · Special marking (ADR): 	No Symbol (fish and tree)
<ul style="list-style-type: none"> · Special precautions for user 	Warning: Flammable liquids.
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Tunnel restriction code 	1L D/E

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.03.2013

Revision: 06.03.2013

Trade name: PAGE SILANE

(Contd. of page 8)

· **UN "Model Regulation":** UN1208, HEXANES, ENVIRONMENTALLY HAZARDOUS, 3, II

15 Regulatory information

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

· **National regulations:**

Class	Share in %
NK	97.0

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

R11 Highly flammable.

R38 Irritating to skin.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 Harmful: may cause lung damage if swallowed.

R67 Vapours may cause drowsiness and dizziness.

· **Department issuing MSDS:** Product safety department.

· **Contact:**

GB