

# 1H, 1H, 2H, 2H-perfluorooctyltriethoxysilane

## Safety Data Sheet

# SDS

Conforms to Regulations (EU) No 453/2010

SDS code: WH201530032

Issue Data: 27/11/2015

### Section 1 Identification of the substance/Mixture and of the company/Undertaking

#### Product Identifier

Product name in Chinese: 1H, 1H, 2H, 2H-全氟辛基三乙氧基硅烷

Product name in English: 1H, 1H, 2H, 2H-perfluorooctyltriethoxysilane

Synonyms: ZH-1302

Chemical formula:  $C_{14}H_{19}F_{13}O_3Si$

CAS number: 51851-37-7

#### Relevant identified uses of the substance or mixture and uses advised against

Only for research and development. Not as a medicine, family, or other purposes.

#### Details of the manufacturer/importer

Enterprise: DALIAN F. T. Z. GREAT INDUSTRY & TRADE CO., LTD.

Address: 1207A HUINENG BUILDING DALIAN F. T. Z. CHINA

Tel: 86 0411 39552835

Enterprise Emergency Phone: 86 0411 39552835

### Section 2 Hazards Identification

#### Classification of the substance or mixture

Classification of dangerous goods:

Flammable liquid Category 4

Skin irritation Category 2

Eye Irritation Category 2A

Specific target organ toxicity - single exposure (Respiratory system) Category 3

Chronic aquatic toxicity Category 4

#### Label elements

CLP label elements:



Signal word: Warning

### **Hazard statement(s)**

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H227 Flammable liquid  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H413 May cause long lasting harmful effects to aquatic life.

### **Precautionary statement(s) Prevention**

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P210 Keep away from heat/sparks/open flames/hot surfaces.No smoking.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

### **Precautionary statement(s) Response**

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P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P304+P340+P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.Call a POISON CENTER or doctor/physician if you feel unwell.  
P305+P351+P338 IF IN EYES:Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.Continue rinsing.  
P332+P313 IF SKIN irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

### **Precautionary statement(s) Storage**

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P403+P233 Store in a well-ventilated place.Keep container tightly closed.  
P403+P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

### **Precautionary statement(s) Disposal**

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P501 Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration

### **Physical and chemical hazards**

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Liquid. Flammable.  
If fires produce toxic fumes.

### **Health Risk**

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Inhalation: If inhaled may be harmful; may cause respiratory irritation.

Ingestion: If swallowed may be harmful.

Skin: If absorbed through the skin may be harmful; may cause skin irritation.

Eyes: Causes serious eye irritation.

#### Environmental hazards

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Harmful to aquatic organisms.

#### Other hazards

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No

### Section 3 Composition/Information on Ingredients

#### Substances

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CAS No.	Weight	Name	GHS 危险性类别
51851-37-7	≥97%	1H, 1H, 2H, 2H-perfluorooctyl triethoxysilane	Flammable liquid Category 4 Skin irritation Category 2 Eye Irritation Category 2A Specific target organ toxicity - single exposure (Respiratory system) Category 3 Chronic aquatic toxicity Category 4

### Section 4 First Aid Measures

#### Description of first aid measures

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General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Indication of any immediate medical attention and special treatment needed: no data available.

### Section 5 Firefighting Measures

### **Extinguishing media**

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Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **Special hazards arising from the substrate or mixture**

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Carbon oxides, Hydrogen fluoride, silicon oxides

### **Advice for firefighters**

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Wear self-contained breathing apparatus for firefighting if necessary.

### **Further information**

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Use water spray to cool unopened containers.

## **Section 6 Accidental Release Measures**

### **Personal precautions, protective equipment and emergency procedures**

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Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### **Environmental precautions**

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Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **Methods and materials for containment and cleaning up**

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Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

### **Reference to other sections**

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For disposal see section 13.

## **Section 7 Handling and Storage**

### **Precautions for safe handling**

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Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

### **Conditions for safe storage, including any incompatibilities**

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Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

### Specific end use(s)

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no data available.

## Section 8 Exposure Control / Personal Protection

### Control parameters

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Maximum allowable concentration: not established.

### Exposure Control

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Engineering control: Process controls which involve changing the way a job activity or process is done to reduce the risk. The sources closed or isolated to the target hazard and physical isolation of workers, and the ability to strategically for the workplace, "the addition of fresh air", "Remove the dirty air" ventilation system. The design of the ventilation system must meet specific process and require the use of chemicals or contaminants in. Generally need to take local exhaust ventilation. If there is the risk of overexposure, wear appropriate respirator. Under special circumstances, you may need to use air-supplied respirator. In some cases, you may need to use the appropriate self-contained breathing apparatus. In warehouses and enclosed storage areas to provide adequate ventilation.



Personal protection:

Eye/face protection: Wear safety glasses.

Skin protection: Handle with gloves. Wear safety shoes or safety boots

Body Protection: Wear impervious overalls

Respiratory protection: Wear masks.

## Section 9 Physical and Chemical Properties

### Information on basic physical and chemical properties

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Appearance: Colorless liquid

Odour: Little odor

pH: 5

Melting point (°C) : no data available

Viscosity(20°C, mPa•S): no data available

Flash point(closed cup, °C):62

Density (20°C, g/ml): 1.339  
Vapour pressure (kPa) (10°C) : no data available  
Vapour density: no data available  
Critical temperature (°C): no data available  
Critical pressure (MPa): no data available  
Partition coefficient: noctanol/water: no data available  
Autoignition temperature (°C): no data available  
Decomposition temperature (°C): no data available  
Heat of combustion (kJ/mol) : no data available  
Upper explosive limit %(V/V): no data available  
Lower explosive limit %(V/V): no data available  
Water solubility: Slightly soluble in water

## Section 10 Stability and Reactivity

Reactivity: no data available  
Chemical stability: Under normal conditions, it is stable.  
Possibility of hazardous reactions: no data available  
Conditions to avoid: Direct sources of heat. Heat, flames and sparks.  
Incompatible materials: no data available  
Hazardous decomposition products: no data available

## Section 11 Toxicological Information

Acute toxicity: LD<sub>50</sub> Oral - rat - no data available  
LC<sub>50</sub> inhalation - rat - no data available  
Skin corrosion/irritation: no data available  
Serious eye damage/eye irritation: no data available  
Respiratory or skin sensitization: no data available  
Germ cell mutagenicity: no data available  
Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
Reproductive toxicity: no data available  
Specific target organ toxicity (single exposure) : Inhalation - May cause respiratory irritation.  
Specific target organ toxicity (repeated exposure) : no data available  
Aspiration hazard: no data available  
Potential health effects:  
Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.  
Ingestion - May be harmful if swallowed.  
Skin - May be harmful if absorbed through skin. May cause skin irritation.  
Eyes - Causes serious eye irritation.

## Section 12 Ecological Information

Eco-toxicity: No data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Other adverse effects: no data available

## Section 13 Disposal Consideration

### Waste treatment methods

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Product/Packaging disposal: This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Dispose of as unused product.

Waste treatment: Disposal before should refer to the local environmental protection department of the relevant provisions. Suggest to the qualified chemical waste management disposal.

Sewage disposal: Not Available

## Section 14 Transport Information

### Labels Required

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Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS.

Air transport (ICAO-IATA/DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS.

Sea transport (IMDG-Code/GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS.

### Note transport issues

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Packing method: See section 7

The user's special precautions: transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency treatment equipment for leakage.

## Section 15 Regulatory Information

1H, 1H, 2H, 2H-perfluorooctyltriethoxysilane is uncatalogued in: "EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)", "European Customs Inventory of Chemical Substances ECICS (English)", "European Trade Union Confederation (ETUC) Priority List for REACH Authorisation", "EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances", "European

List of Notified Chemical Substances (ELINCS)", "UK Workplace Exposure Limits (WELs)", other.

## Section 16 Other Information

Prepared on: Nov 27, 2015

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Reference: UN TRANSPORT OF DANGEROUS GOODS Model Regulations  
UN Globally Harmonized System Of Classification And Labelling  
Of Chemicals (GHS)  
Regulations (EU) No 453/2010

Other information:

This SDS is prepared in accordance with the standard of Regulations (EU) No 453/2010 in our best knowledge. The product receiver / user shall work out safety operation procedures based on this SDS or product instruction, observe prevailing laws and regulations and take corresponding responsibilities.