

Product Information

Internet:
www.siridion.com
E-mail:
siridion@evonik.com

Evonik Degussa GmbH
Aerosil & Silanes

Weissfrauenstraße 9
D-60287 Frankfurt am Main
Germany

Phone: +49-69-218-5656
Fax: +49-69-218-3496

Evonik Degussa Corporation
Aerosil & Silanes
379 Interpace Parkway
P.O. Box 677
Parsippany
NJ 07054-0677
USA

Phone:
800-828-8772 (Toll Free)
+1-973-541-8513
Fax: +1-973-541-8501

Evonik Degussa (China) Co.,
Ltd.
Aerosil & Silanes
55, Chundong Road
Xinzhuan Industry Park
Shanghai 201108
P.R. China

Phone: +86-21-6119-1052
Fax: +86-21-6119-1075



Siridion® STC

Silicon tetrachloride, Tetrachlorosilane, Siltet, STC

Chemical Formula



Description

Silicon tetrachloride (SiCl_4) is a chlorosilane which is formed by reaction of metallic silicon or ferrosilicon with hydrogen chloride or chlorine.

Technical data

| Property | Value | Unit | Method |
|--|--------------------------|-------------------|--|
| molecular weight | 169.89 | - | - |
| density (20 °C) | 1.48 | g/cm ³ | DIN 51757 |
| refractive index (n_D^{20} C) | 1.413 | - | DIN 51423 |
| boiling point (1 bar) | 56.7 (134) | °C (°F) | DIN 51751 |
| melting point | -68 (-90) | °C (°F) | - |
| flash point | non-flammable | - | DIN 51755 |
| purity | min. 99.8 | % | GC (Degussa) |
| appearance | clear, colourless liquid | - | - |
| The values given in this Product Information are intended to describe the product. | | | Decisive documents are agreed specifications and the Material Safety Data Sheets (MSDS). |

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

® = registered trademark

Product Information

Internet:
www.siridion.com
E-mail:
siridion@evonik.com

Evonik Degussa GmbH
Aerosil & Silanes

Weissfrauenstraße 9
D-60287 Frankfurt am Main
Germany

Phone: +49-69-218-5656
Fax: +49-69-218-3496

Evonik Degussa Corporation
Aerosil & Silanes
379 Interpace Parkway
P.O. Box 677
Parsippany
NJ 07054-0677
USA

Phone:
800-828-8772 (Toll Free)
+1-973-541-8513
Fax: +1-973-541-8501

Evonik Degussa (China) Co.,
Ltd.
Aerosil & Silanes
55, Chundong Road
Xinzhuan Industry Park
Shanghai 201108
P.R. China

Phone: +86-21-6119-1052
Fax: +86-21-6119-1075



Reactivity

Silicon tetrachloride is sensitive to hydrolysis and must be stored and transported in closed containers excluding moisture and air. Protection from direct sunlight and heat is necessary.

The containers must be closed tightly after each time that material is taken out.

Chlorosilanes and their vapours decompose in presence moisture to form SiO₂ gel and hydrochloric acid. They react vigorously with water or aqueous solutions and with alcohols or compounds containing active hydrogen atoms.

Chlorosilanes are classified as highly corrosive. Inhalation of the product must be avoided. When handling the products, skin and eyes must be protected by the wearing of impermeable gloves, eye protection and, if appropriate, a breathing mask. Should splashes nevertheless get onto the skin or into the eyes, the affected area must first be rinsed with plenty of water and, if contact with the eyes has occurred, an eye specialist should be consulted.

Applications

Silicon tetrachloride is used in large scale for the production of pyrogenic silica. In addition, it is used for crosslinking styrene-butadiene-rubber (SBR) and for production of silicic acid esters and ester hydrolysates. The corresponding Degussa products are marketed under the **Dynasylan**[®] trademark.

High-purity silicon tetrachloride is used in the manufacturing of optical fibres, fused silica tubes and other fused silica articles.

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

® = registered trademark

Product Information

Internet:
www.siridion.com
E-mail:
siridion@evonik.com

Evonik Degussa GmbH
Aerosil & Silanes

Weissfrauenstraße 9
D-60287 Frankfurt am Main
Germany

Phone: +49-69-218-5656
Fax: +49-69-218-3496

Evonik Degussa Corporation
Aerosil & Silanes
379 Interpace Parkway
P.O. Box 677
Parsippany
NJ 07054-0677
USA

Phone:
800-828-8772 (Toll Free)
+1-973-541-8513
Fax: +1-973-541-8501

Evonik Degussa (China) Co.,
Ltd.
Aerosil & Silanes
55, Chundong Road
Xinzhuang Industry Park
Shanghai 201108
P.R. China

Phone: +86-21-6119-1052
Fax: +86-21-6119-1075



Registration

| | |
|----------------------|-----|
| EINECS/ELINCS (EU): | Yes |
| AICS (Australia): | Yes |
| DSL (Canada): | Yes |
| PICCS (Philippines): | Yes |
| TSCA (USA): | Yes |
| IECSC (P.R. China): | Yes |
| ENCS (Japan): | Yes |
| ECL (South Korea): | Yes |

Safety and Handling

Before considering the use of any chemical thoroughly read its Material Safety Data Sheet (MSDS) for safety and toxicological data as well as for information on proper transportation, storage and use. The Material Safety Data Sheet is available after registration on our website <http://www.siridion.com> or upon request from your local representative.

Silicon tetrachloride:

Hazard symbol: C = corrosive
(Safety phrases: 7/9-26-36/37/39-45)

Keep container tightly closed and dry. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Information on the classification of the products under dangerous goods regulations and the German regulation on dangerous substances, safety data and data on toxicology and storage may be found in our material safety data sheets (MSDS).

Packaging and Storage

- Stainless steel can, content: 25 kg
- Stainless steel drum, content: 275 kg
- Tank container, content: 1.050 kg
- Rail tank car/ ISO-container, contents: about 20 tons

Siridion® STC-EN-2007-12

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

® = registered trademark