

MATERIAL SAFETY DATA SHEET

Section 1 - Chemical Product and Company Identification

MSDS Name: Octadecyltrichlorosilane, 95%
Catalog Numbers: AC147400000, AC147400250, AC147401000
Synonyms: Trichlorooctadecylsilane; Silane, octadecyltrichloro-; Silane, trichlorooctadecyl-
Company Identification: Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

Company Identification: (USA) Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 112-04-9
Chemical Name: Octadecyltrichlorosilane
%:
EINECS#: 203-930-7

Hazard Symbols: C



Risk Phrases: 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Combustible liquid and vapor. Corrosive. Air sensitive. Moisture sensitive. May cause central nervous system depression. Causes eye and skin burns. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. Target Organs: Central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye burns. May cause chemical conjunctivitis and corneal damage.
Skin: Causes skin burns. May cause cyanosis of the extremities. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color.
Ingestion: May cause severe and permanent damage to the digestive tract. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause perforation of the digestive tract. May cause systemic effects.
Inhalation: Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Aspiration may lead to pulmonary edema. May cause systemic effects. May cause burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation at high concentrations may

cause CNS depression and asphyxiation.

Chronic: Effects may be delayed.

Section 4 - First Aid Measures

- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).
- Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.
- Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
- Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Combustible liquid. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Substance may react with water, and may release corrosive and/or toxic gases. Containers may explode when heated.

Extinguishing Media: Use foam, dry chemical, or carbon dioxide. DO NOT USE WATER!

Autoignition: Not applicable.

Temperature:

Flash Point: 89 deg C (192.20 deg F)

Explosion: .40 vol %

Limits: Lower:

Explosion: Not available

Limits: Upper:

NFPA Rating: health: 3; flammability: 2; instability: 2;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Place under an inert atmosphere. Do not get water inside containers.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Do not ingest or inhale. Handle under an inert atmosphere. Do not allow contact with water. Use only in a chemical fume hood. Store and handle protected from air. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep from contact with moist air and steam.

Storage: Keep away from heat, sparks, and flame. Store in a tightly closed container. Keep under a nitrogen blanket. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Do not expose to air. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Octadecyltrichlorosilane	none listed	none listed	none listed

OSHA Vacated PELs: Octadecyltrichlorosilane: None listed

Personal Protective Equipment

- Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

- Physical State:** Clear liquid
- Color:** colorless - light yellow - brown
- Odor:** pungent odor
- pH:** Not available
- Vapor Pressure:** < 5 mm Hg @ 20 deg
- Vapor Density:** >1 (air=1)
- Evaporation Rate:** <1 (ether=1)
- Viscosity:** Not available
- Boiling Point:** 223 deg C @ 10.00mm (433.40°F)
- Freezing/Melting Point:** Not available
- Decomposition Temperature:** Not available
- Solubility in water:** decomposes in water
- Specific Gravity/Density:** .9840g/cm3
- Molecular Formula:** CH3(CH2)17SiCl3
- Molecular Weight:** 387.94

Section 10 - Stability and Reactivity

- Chemical Stability:** Stable under normal temperatures and pressures.
- Conditions to Avoid:** Incompatible materials, ignition sources, moisture, exposure to air, excess heat, exposure to moist air or water.
- Incompatibilities with Other Materials** Water, strong oxidizing agents, strong acids, strong bases, moisture, air.

Hazardous Decomposition Products Hydrogen chloride, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, silicon dioxide.
Hazardous Polymerization Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 112-04-9: None listed
LD50/LC50: RTECS: Not available.
Carcinogenicity: Octadecyltrichlorosilane - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Epidemiology: No information found
Teratogenicity: No information found
Reproductive: No information found
Neurotoxicity: No information found
Mutagenicity: No information found
Other: Not available

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. RCRA P-Series: None listed. RCRA U-Series: None listed.

Section 14 - Transport Information

US DOT
Shipping Name: OCTADECYLTRICHLOROSILANE
Hazard Class: 8
UN Number: UN1800
Packing Group: II
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 112-04-9 is listed on the TSCA Inventory.

Health & Safety Reporting List None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules Section 12b None of the chemicals in this product are under a Chemical Test Rule.
TSCA Significant New Use Rule None of the chemicals are listed under TSCA Section 12b.
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous None of the chemicals in this product have a TPQ.

Substances

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

STATE

Octadecyltrichlorosilane can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

California Prop 65

California No Significant None of the chemicals in this product are listed.

Risk Level:

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 34 Causes burns.

Safety Phrases:

S 25 Avoid contact with eyes.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 112-04-9: Not available

Canada

CAS# 112-04-9 is listed on Canada's NDSL List

Canadian WHMIS Classifications: B3, E, F

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 112-04-9 is listed on Canada's Ingredient Disclosure List

Section 16 - Other Information

MSDS Creation Date: 9/02/1997

Revision #8 Date 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.