



SAFETY DATA SHEET FC - SS

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME FC - SS

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2. HAZARDS IDENTIFICATION



Class/Description
Routes of Exposure : Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Health Hazards : May cause moderate irritation to skin. Repeated exposure may cause skin dryness or cracking. Harmful: may cause lung damage if swallowed.

Signs and Symptoms : If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.

Aggravated Medical Condition : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.

Safety Hazards : Combustible liquid and vapour. In use, may form flammable/explosive vapour-air mixture. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Vapours are heavier than air. Vapours may travel across the ground and reach remote ignition sources causing a flashback fire danger.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL CHARACTERIZATION (PREPARATION)
Alkoxy silanes + siloxane + solvent

Name	CAS No.	Content
Solvent Naphtha (Petroleum), Heavy Aliphatic	64742-96-7	80 %
Isoctyl Trimethoxy Silane	34396-03-7	10 %
Trade secret	Not assigned	10%

Refer to Chapter 8 for Occupational Exposure Guidelines.

4. FIRST-AID MEASURES

INGESTION

If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101°F (37°C), shortness of breath, chest congestion or continued coughing or wheezing.

SKIN CONTACT

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

EYE CONTACT

Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

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ADVICE TO PHYSICIAN

Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal. Call a doctor or poison control center for guidance.

5. FIRE-FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

FLASH POINT

80°C / 176 F (Tagliabue Closed Cup)

EXPLOSION / FLAMMABILITY LIMITS IN AIR

0.5 - 4.9 %(V)

AUTO IGNITION TEMPERATURE

232°C / 450°F

HAZARDOUS COMBUSTION PRODUCTS AND SPECIFIC HAZARDS

Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. The Vapour is heavier than air, spreads along the ground and distant ignition is possible.

EXTINGUISHING MEDIA

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not discharge extinguishing waters into the aquatic environment.

UNSUITABLE EXTINGUISHING MEDIA

Do not use water in a jet.

PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear full protective clothing and self-contained breathing apparatus.

ADDITIONAL ADVICE

Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations.

PROTECTIVE MEASURES

Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Material Safety Data Sheet. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.

CLEAN UP METHODS

For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

ADDITIONAL ADVICE

See Chapter 13 for information on disposal. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

7. HANDLING AND STORAGE

GENERAL PRECAUTIONS

Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. On guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

HANDLING

Avoid contact with skin, eyes, and clothing. Handle and open container with care in a well-ventilated area. Ventilate workplace in such a way that the Occupational Exposure Limit (OEL) is not exceeded. Do not empty into drains. Avoid handling above its flashpoint otherwise the product will form flammable/explosive vapour-air mixtures

STORAGE

Must be stored in a diked (bunded) area. Bulk storage tanks should be diked (bunded). Storage Temperature: Ambient.

FC - SS**PRODUCT TRANSFER**

Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.

RECOMMENDED MATERIALS

For containers, or container linings use mild steel, stainless steel. For container paints, use epoxy paint, zinc silicate paint.

UNSUITABLE MATERIALS

Avoid prolonged contact with natural, butyl or nitrile rubbers. Container Advice: Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

ADDITIONAL INFORMATION

Ensure that all local regulations regarding handling and storage facilities are followed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational Exposure Limits**

In the absence of occupational exposure standards for this product, it is recommended that the following are adopted.

Material	Source	Type	ppm	mg/m ³	Notation
RCP Aliphatic dearom. Solvents 200 - 250	EU HSPA	TWA (8 h)		1,200 mg/m ³	

Consult local authorities for acceptable exposure limits within their jurisdiction.

ADDITIONAL INFORMATION

Wash hands before eating, drinking, smoking and using the toilet.

EXPOSURE CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers. The following information, while appropriate for the product is general in nature. The selection of Personal Protective Equipment will vary depending on the conditions of use.

RESPIRATORY PROTECTION

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapours [boiling point <65°C (149°F)] Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

HAND PROTECTION

Longer term protection: Nitrile rubber gloves
Incidental contact/Splash protection: PVC or neoprene rubber gloves
Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

EYE PROTECTION

Chemical splash goggles (chemical monogoggles).

PROTECTIVE CLOTHING

Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

MONITORING METHODS

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Examples of sources of recommended air monitoring methods are given below or contact supplier. Further national methods may be available. National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods, <http://www.cdc.gov/niosh/nmam/nmamenu.html>. Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods, <http://www.oshaslc.gov/dts/sltc/methods/toc.html>. Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances, <http://www.hsl.gov.uk/search.htm>.

ENVIRONMENTAL EXPOSURE CONTROLS

Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

FC - SS**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Liquid.
Odour threshold	Data not available.
pH	Not applicable.
Boiling point	200 - 300°C / 392 - 572°F
Vapourpressure	< 0.02 kPa at 20.0°C / 68.0°F
Specific gravity	0.80 at 15.6°C / 60.0°F
n-octanol/water partition coefficient (log Pow)	> 6
Vapour density (air=1)	7.1
Stability	Stable.
Volatile organic content	Approx.90.0 %
Evaporation rate (nBuAc=1)	Data not available.

10. STABILITY AND REACTIVITY**STABILITY**

Stable under normal conditions of use.

CONDITIONS TO AVOID

Avoid heat, sparks, open flames and other ignition sources.

MATERIALS TO AVOID

Strong oxidising agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

HAZARDOUS POLYMERISATION

No, hazardous, exothermic polymerization cannot occur.

SENSITIVITY TO MECHANICAL IMPACT

Data not available.

SENSITIVITY TO STATIC DISCHARGE

Yes, in certain circumstances product can ignite due to static Electricity.

11. TOXICOLOGICAL INFORMATION**BASIS FOR ASSESSMENT**

Information given is based on product testing, and/or similar products, and/or components.

ROUTES OF EXPOSURE

Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Routes of Exposure	Material	Values
Oral	Solvent Naphtha (Petroleum), Heavy Aliphatic	LD 50: > 2,000 mg/kg, Rat
Dermal	Solvent Naphtha (Petroleum), Heavy Aliphatic	LD 50: > 2,000 mg/kg, Rat
Inhalation	Solvent Naphtha (Petroleum), Heavy Aliphatic	Lc50: > 6 mg/l / 4 hours, Rat

ACUTE ORAL TOXICITY

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

ACUTE INHALATION TOXICITY

LC50 greater than near-saturated vapour concentration. (Solvent Naphtha (Petroleum), Heavy Aliphatic)

SKIN IRRITATION

May cause moderate skin irritation (but insufficient to classify). Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

EYE IRRITATION

Essentially non-irritating to eyes.

FC - SS**RESPIRATORY IRRITATION**

Not expected to be a respiratory irritant.

SENSITISATION

Not expected to be a skin sensitiser.

REPEATED DOSE TOXICITY

Kidney: caused kidney effects in male rats which are not considered relevant to humans

REPEATED DOSE TOXICITY**MUTAGENICITY**

Not expected to be mutagenic.

CARCINOGENICITY

Repeated exposure may cause skin tumour promotion in experimental animals.

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY

Not expected to be a developmental toxicant.

Not expected to impair fertility.

12. ECOLOGICAL INFORMATION**Acute Toxicity**

Aquatic Invertebrates	:	Expected to have low toxicity: LC/EC/IC50 > 1000 mg/l
Algae	:	Expected to have low toxicity: LC/EC/IC50 > 1000 mg/l
Microorganisms	:	Expected to have low toxicity: LC/EC/IC50 > 1000 mg/l
Mobility	:	Adsorbs to soil and has low mobility. Floats on water.
Persistence/degradability	:	Expected to be readily biodegradable. Oxidises rapidly by photo-chemical reactions in air.
Bioaccumulation	:	Has the potential to bioaccumulate.

13. DISPOSAL CONSIDERATIONS**MATERIAL DISPOSAL**

Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.

CONTAINER DISPOSAL

Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard if heated above the flash point. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.

LOCAL LEGISLATION

Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

14. TRANSPORT INFORMATION

LAND (DOT) Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S. Hazard Class & Division: COMBUSTIBLE LIQUID ID Number: 1268 Packing Group: III ERG Number: 128 Label(s): NONE Transport Document Name: PETROLEUM DISTILLATS N.O.S., COMBUSTIBLE LIQUID UN 1268 PG III Footnote: This material is not regulated under 49 CFR in a container of 119 gallon capacity or less when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

Land transport DOT

UN number :1268

Proper Shipping Name: Petroleum distillates, n.o.s.

Hazard class : 3

Packing group: III

Sea transport IMDG

UN number : 1268

Proper shipping name: Petroleum distillates, n.o.s.

Transport hazard :Class 3

Packing group III

Air transport IATA-DGR:

UN number : 1268

Proper Shipping Name: Petroleum distillates, n.o.s.

Transport hazard : Class 3

Packing group III

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

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

WHMIS Class/Description : Class B3 Combustible Liquid

Inventory Status

AICS : Listed.

DSL : Listed.

INV (CN) : Listed.

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TSCA : Listed.
EINECS : Listed. 265-150-3
KECI(KR) : Listed. KE-25622
PICCS (PH) : Listed.

16. OTHER INFORMATION

TRAINING ADVICE : The details of this data sheet must be passed on to all personnel handling the product.

DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.