(Trifluoromethyl)trimethylsilane 81290-20-2 MSDS

Section 1 - Chemical Product

MSDS Name:(Trifluoromethyl)trimethylsilane 96% Material Safety Data Sheet
Synonym:Ruppert's reagent; TMS-CF

Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content
81290-20-2	(Trifluoromethyl)trimethylsilane	96

Hazard Symbols: F
Risk Phrases: 11

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Highly flammable.
Potential Health Effects
Eye:
Causes eye irritation. May cause chemical conjunctivitis and corneal damage.
Skin:
May cause irritation and dermatitis. May cause cyanosis of the extremities.
Ingestion:
May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated. Ingestion of large amounts may cause CNS depression.
Inhalation:
Causes respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. Vapors may cause dizziness or suffocation. Can produce delayed pulmonary edema. May cause burning sensation in the chest.
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.
Skin:
Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
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 not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:
Treat symptomatically and supportively.

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. Vapors can travel to a source of ignition and flash back. 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. Containers may explode in the heat of a fire. Flammable liquid and vapor.
Extinguishing Media:
For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:
Clean up spills immediately, observing precautions in the Protective Equipment section. Cover with sand, dry lime or soda ash and place in a closed container for disposal. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 - HANDLING and STORAGE

Handling:
Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Use only in a chemical fume hood. Wash clothing before reuse. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage:
Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Refrigerator/flammables.

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 CAS# 81290-20-2: United Kingdom, WEL - TWA: (listed as silica, amorphous): 6 mg/m3 (inhalable dust); 2.4 mg/m3 TWA (respirable dust) United Kingdom, WEL - STEL: (listed as silica, amorphous): 18 mg/ STEL (inhalable dust); 7.2 mg/m3 STEL (respirable dust) Russia: (listed as silica, amorphous): 1 mg/m3 TWA 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: Liquid
Color: clear, colorless
Odor: None reported.
pH: Not available.
Vapor Pressure: Not available.
Viscosity: Not available.
Boiling Point: 55.5 - 56.0 deg C @ 760.00mmH
Freezing/Melting Point: Not available.
Autoignition Temperature: Not applicable.
Flash Point: -10 deg C (14.00 deg F)
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
Decomposition Temperature: Not available.
Solubility in water: Not available.
Specific Gravity/Density: .9567g/cm3
Molecular Formula: C4H9F3Si
Molecular Weight: 142.20

Section 10 - STABILITY AND REACTIVITY

Chemical Stability:
Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid:
Ignition sources, excess heat.
Incompatibilities with Other Materials:
Strong oxidizing agents.
Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, hydrogen fluoride gas, silicon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:
CAS# 81290-20-2 unlisted.
LD50/LC50:
Not available.
Carcinogenicity:
(Trifluoromethyl)trimethylsilane - Not listed by ACGIH, IARC, or NTP.

Section 12 - ECOLOGICAL INFORMATION

Other No information available.

Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - TRANSPORT INFORMATION

IATA
Shipping Name: FLAMMABLE LIQUID, N.O.S.*
Hazard Class: 3
UN Number: 1993
Packing Group: II
IMO
Shipping Name: FLAMMABLE LIQUID, N.O.S.
Hazard Class: 3.2
UN Number: 1993
Packing Group: II
RID/ADR
Shipping Name: FLAMMABLE LIQUID, N.O.S.
Hazard Class: 3
UN Number: 1993
Packing group: II

Section 15 - REGULATORY INFORMATION

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: F
Risk Phrases:
R 11 Highly flammable.
Safety Phrases:
S 16 Keep away from sources of ignition - No
smoking.
WGK (Water Danger/Protection)

CAS# 81290-20-2: No information available.

Canada

None of the chemicals in this product are listed on the DSL/NDSL list.

CAS# 81290-20-2 is not listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 81290-20-2 is not listed on the TSCA inventory.

It is for research and development use only.

SECTION 16 - ADDITIONAL INFORMATION

N/A