



MATERIAL SAFETY DATA SHEET

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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: TRIFLUOROMETHYLTRIMETHYLSILANE, 96%

Catalog Numbers:

1111

Synonyms:

Ruppert's reagent, TMS-CF₃

Company Identification

LEONID CHEMICALS

62/A-2 2nd Stage, Industrial Suburb

Yeshwanthpur, Bangalore -22, INDIA

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SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	81290-20-2
Chemical Name	:	TRIFLUOROMETHYLTRIMETHYLSILANE, 96%
%	:	96
EINECS#	:	unlisted
Hazard Symbols	:	F
Risk Phrases	:	11

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Highly flammable.

Potential Health Effects

The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.

SECTION 4 - FIRST AID MEASURES

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. 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. Remove contaminated clothing and shoes.

Ingestion:



If victim is conscious and alert, give 2-4 cupfuls of milk or water.
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:

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. Flammable liquid and vapor.

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use agent most appropriate to extinguish fire.

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. Clean up spills immediately, observing precautions in the Protective Equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:

Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame.

Storage:

Keep away from heat, sparks, and flame. Refrigerator/flammables.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Personal Protective Equipment

Eyes:

Wear chemical goggles. Wear safety glasses and

chemical goggles if splashing is possible.

Skin:

Wear appropriate protective gloves and clothing to prevent skin exposure. Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

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 a respirator's use. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear liquid

Color: colorless

Odor: Not available.

pH: Not available.

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: 55.5 - 56.0 deg C @ 760.00mmH

Freezing/Melting Point: 0 deg C

Autoignition Temperature: Not available.

Flash Point: -10 deg C (14.00 deg F)

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature:

Solubility in water:

Specific Gravity/Density: .9567g/cm³

Molecular Formula: C₄H₉F₃Si

Molecular Weight: 142.20

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Strong oxidants.

Incompatibilities with Other Materials:

Not available.

Hazardous Decomposition Products:

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, hydrogen fluoride gas, silicon oxide.

Hazardous Polymerization: Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 81290-20-2 unlisted.

LD50/LC50:

Not available.

Carcinogenicity:

TRIFLUOROMETHYLTRIMETHYLSILANE, 96% -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

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

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.
United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

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.

Exposure Limits

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

MSDS Creation Date: 7/16/1996 Revision #0 Date: Original.

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 way 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.