

Section I: Identification

PRORPRIETARY – FULL DISCOLOUSRE SDS

Product Name/Number: Tribosyn® 825-5R
 Chemical Family: Fluorinated Lubricating Oil
 Manufacturer:

Triboscience & Engineering, Inc.
 520 Sykes Road
 Fall River, MA 02720

Emergency Telephone Number:
 508-674-9116
 Email: PABessette@tselubes.com

Section II: Hazards Identification

GHS Classification:

None

GHS Label Elements:

Hazard Pictograms: None
 Signal Word: None
 Hazard Statements: None

Precautionary Statements: P260 Do not breathe dust, mist, or vapors.
 P281 Use personal protective equipment as required.
 P314 Get medical attention if you feel unwell.
 P402 + P404 Store in a dry place, in a closed container.
 P501 Dispose of content and container according to local and national regulations.

Section III: Composition

<u>CAS Number</u>	<u>Chemical Name</u>	<u>Content by Mass</u>
-	Perfluoropolyether oil	100%

Section IV: First-Aid Measures

Eye Contact: Flush thoroughly with clear water for 15 minutes or until irritation subsides. Remove contact lenses if easy to do. If signs or symptoms persist, get medical attention.

Skin Contact: Wash with soap and water. Remove any contaminated clothing and wash with soap and warm water. Get medical attention if symptoms occur.

Inhalation: Move to fresh air. If you feel unwell, get medical attention.

Injection: Consult physician immediately.

Ingestion: Rinse mouth. Do not induce vomiting. Contact physician immediately.

Other: Exercise ordinary measures of personal hygiene.

Section V: Fire-Fighting Measures

Extinguishing Media: Non-combustible. Use material suitable for the surrounding fire.

Unusual Fire or Explosion Hazards: Dense smoke can form in a fire. In a fire, decomposition of fluorinated compounds can generate hydrogen fluoride, fluorophosgene, and carbon monoxide.

Special Fire-Fighting Measures: Avoid smoke inhalation. Water or foam may cause frothing. Cool exposed containers with water. Use air supplied rescue equipment for enclosed areas.

Section VI: Accidental Release Measures

Spill or Leak Procedures: Wipe or scrape up spillage and place it in a container for disposal. Product may be absorbed with an inert material such as sand, soil, or vermiculite. Wash walking surfaces thoroughly with detergent and water to reduce slipping hazard. Keep out of sewers and water courses. Advise authorities if product has or may enter sewers or water courses.

Waste Management and Disposal: Assure conformity with applicable regulations. Consult local, state and federal regulations applicable to your area.

Section VII: Handling and Storage

Handling: Avoid contact with skin and eyes. Enforce No Smoking in areas where fluoropolymers are handled or stored.

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

Storage: Keep container closed and in a dry, well-ventilated place. Store away from heat, acids, strong bases.

Section VIII: Exposure Controls and Personal Protection

Control Parameters:

Exposure Guidelines: Particulates Not Otherwise Regulated (PNOR)
 OSHA PEL: 15 mg/m³ (Total Dust), 5 mg/m³ (Respirable Particulate)
 ACIGIH TLV: 10 mg/m³ (Inhalable Particulate)

Exposure Controls:

Ventilation: Provide local exhaust if product is heated. In situations where the product may be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Exposure Limits and to control mist.

Personal Protective Equipment:

Goggles: Safety glasses recommended.
 Gloves: Oil resistant gloves recommended, especially to avoid prolonged or repeated skin contact.
 Respirator: Not required unless mists, smoke or vapors are produced at high Temperatures or if vapor concentration exceeds Exposure Limits.
 Other: Use oil resistant apron, if needed.

Section IX: Physical and Chemical Properties

Appearance:	Liquid
Color:	Colorless
Odor:	None
Odor Threshold:	Not available
Physical State:	Liquid
pH:	Not applicable
Melting Point:	Approx -50°C (pour point)
Initial Boiling Point:	Approx 400°C
Flash Point:	None
Auto-ignition Temperature:	None
Evaporation Rate:	Negligible
Lower Explosive Limit:	None

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Upper Explosive Limit:	None
Vapor Pressure:	Negligible
Vapor Density:	Not determined
Specific Gravity:	1.9 at 25°C
Solubility in Water:	Insoluble
Partition Coefficient:	Not determined
Autoignition Temperature	Decomposes
Decomposition Temperature:	Not available
Viscosity:	Approx 180 cSt at 20°C

Section X: Stability and Reactivity

Reactivity: Stable

Hazardous Polymerization: Will not occur.

Chemical Incompatibilities: Avoid contact with strong oxidizing agents, strong acids and strong bases.

Hazardous Decomposition Products: Burning may produce carbon monoxide, carbon dioxide, hydrogen fluoride, fluorophosgene, carbonyl fluoride, perfluoroisobutylene and other fumes.

Other: Avoid contamination of cigarettes or other tobacco products.

Section XI: Toxicological Information

Perfluoropolyether oil: Acute Oral LD50 (rat) >37,400 mg/kg

Acute Dermal ALD (rabbit) >17,000 mg/kg

Inhalation: ALC (rat) > 19.54 mg/l, 4h

Thermal decomposition (above 300°C) can cause polymer fume fever with flu-like symptoms in humans.

Skin: Irritation (rabbit): Not classified as irritant, slight irritation

Sensitization (human): Not a skin sensitizer. Patch test on human volunteers did not demonstrate sensitization properties. Modified Draize Test.

Eye: Irritation (rabbit): Not classified as irritant, slight irritation.

Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity: No components classifiable as a human carcinogen.

Aspiration hazard: Not classified

Section XII: Ecological Information

Perfluoropolyether oil: Acute LC50 (oncorhynchus mykiss): >1,000 mg/l

Acute EC50 (daphnia magna): >1,000 mg/l

This substance is a polymer and is not expected to produce toxic effects.

Persistence and degradability: Not readily biodegradable.

Section XIII: Disposal Considerations

According to RCRA (40 CFR 261), this material is not hazardous waste when the as received lubricant is discarded.

Dispose of in accordance with all local, state, provincial, and federal regulations.

Section XIV: Transport Information

DOT (49 CFR 171.101): Not hazardous

IMDG (ocean): Not hazardous

IATA (air): Not hazardous

Section XV: Regulatory Information

Contents of this MSDS comply with OSHA HAZARD Communication Standard 29 CFR 1910.1200.

EPA SARA Title III Chemical Listing:

This product contains no extremely hazardous or hazardous substances

CERCLA Hazardous Substances: None

TSCA Status: All chemical substances listed are included or exempt from listing on TSCA.

Section XVI: Other Information

While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Triboscience & Engineering, Inc. makes no warranty with respect thereto and disclaims all liability with respect thereon.