

## Safety Data Sheet

### TorrLube PFPE Oils TLC 10 - 13 - 15

This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements of other countries.

| SECTION 1. PRODUCT AND COMPANY INFORMATION   |   |  |
|--|---|--|
| Product Name   | TorrLube® PFPE Oils   |  |
| Product Grade Type   | TLC 10 - 13 - 15  |  |
| MSDS Number  | 3000001868  |  |
| Product Use  | Vacuum Lubricant  |  |
| Manufacturer   | The TorrLube Company, LLC 3769 Constellation Rd., Suite F, Vandenberg Village, CA 93436   |  |
| SECTION 2. HAZARDS IDENTIFICATION  |   |  |
| Emergency Overview   | The product as such is not hazardous. Inhalation of decomposition products from overheating may cause lung irritation or shortness of breath. |  |
| <b>Potential Health Effects</b>  |   |  |
| Perfluoropolyether   | Skin  | May cause skin irritation. May cause itching, discomfort, redness, and swelling. |
|  | Eyes  | May cause eye irritation. May cause tearing, redness, discomfort.                |
| Carcinogenicity  | None of the components present in this material at concentrations to or greater than 0.1% is listed by IARC, NTP, or OSHA, as a carcinogen.   |  |
| SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS  |   |  |
| Component  | CAS-No.   | Concentration  |
| Perfluoropolyether   |   | 100%   |
| SECTION 4. FIRST AID MEASURES  |   |  |
| Skin contact   | Wash with soap and water as a precaution  |  |
| Eye contact  | Rinse with plenty of water. If eye irritation persists consult a specialist.  |  |
| Inhalation   | Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.   |  |
| Ingestion  | Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to by a physician or poison control center.     |  |
| General Advice   | When symptoms persist or in all cases of doubt seek medical advice.   |  |
| SECTION 5. FIRE-FIGHTING MEASURES  |   |  |
| <b>Flammable Properties</b>  |   |  |
| Flashpoint   | Method: Pensky-Martens closed cup – PMCC. Does not flash.   |  |
| Thermal Decomposition  | ca. 350 C (662 F)   |  |
| Fire and Explosion Hazard  | In fire conditions, toxic decomposition products may be formed.   |  |
| Suitable Extinguishing Media   | Wear self-contained breathing apparatus. Wear suitable protective equipment. Standard procedure for chemical fires.                           |  |
| SECTION 6. ACCIDENTAL RELEASE MEASURES   |   |  |
| NOTE: Review FIREFIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up. |   |  |
| Spill Cleanup  | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  |  |
| Accidental Release Measures  | Prevent material from entering sewers, waterways, or low areas.   |  |

| <b>SECTION 7. HANDLING AND STORAGE</b>                               |  |   |
|--|--|---|
| Handling   | Avoid breathing vapors from overheated material. Practice general industrial hygiene practice.   |   |
| Storage  | No special storage conditions required. Keep container closed to prevent contamination. No decomposition if stored and applied as directed.                    |   |
| <b>SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION</b>            |  |   |
| Engineering Controls   | If the polymer is heated above 350° C (662° F), local ventilation should be used to avoid fumes.   |   |
| <b>Personal Protective Equipment</b>                                 |  |   |
| Respiratory Protection   | No personal respiratory protective equipment normally required. In the case of hazardous fumes caused by overheating, wear self-contained breathing apparatus. |   |
| Hand Protection  | No particular glove type is recommended, but nitrile may be used.  |   |
| Eye Protection   | Safety glasses   |   |
| Skin and Body Protection   | No PFPE is specified however; avoid contact with skin, eyes, and clothing. Preventive skin protection.   |   |
| Exposure Guidelines/Limit Values                                     | None Established   |   |
| <b>SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES</b>                   |  |   |
| Form   | viscous, liquid  |   |
| Color  | colorless  |   |
| pH   | neutral  |   |
| Pour Point   | -55° — 15° C (-67° — 5° F)   |   |
| Specific Gravity   | ca. 1.86 – 1.91 at 24° C (75° F)   |   |
| Water Solubility   | insoluble  |   |
| <b>SECTION 10. STABILITY AND REACTIVITY</b>                          |  |   |
| Stability  | Stable under recommended storage conditions.   |   |
| Conditions to Avoid  | Decomposition temperatures of 350° C (662° F)  |   |
| <b>Hazardous Decomposition</b>                                       | Products   | Fluorinated compounds                             |
| <b>SECTION 11. TOXICOLOGICAL INFORMATION: Perfluoropolyether</b>     |  |   |
| Dermal ALD   | ca. > 17,000 mg/kg, rabbit   |   |
| Oral LD50  | > 37,400 mg/kg, rat  |   |
| Inhalation 4 h ALC   | ca. > 19.54 mg/l, rat  |   |
| Eye irritation   | Slight irritation, rabbit  |   |
| Skin Sensitization   | Patch test on human volunteers did not demonstrate sensitization properties.   |   |
| Mutagenicity   | Did not cause genetic damage in cultured bacterial cells.  |   |
| Further information  | The substance is a polymer and is not expected to produce toxic effects.   |   |
| <b>SECTION 12. ECOLOGICAL INFORMATION: Perfluoropolyether</b>        |  |   |
| Aquatic Toxicity   | 96 h LC50  | Oncorhynchus mykiss (rainbow trout) > 1, 000 mg/l |
|  | 48 h EC50  | Daphnia magna (Water flea) > 1, 000 mg/l          |
| <b>SECTION 13. DISPOSAL CONSIDERATIONS</b>                           |  |   |
| Waste Disposal   | In accordance with local and national regulations.   |   |
| Environmental Hazards  | Dispose of container properly. If recycling is not practicable, dispose of in compliance with regulations.   |   |
| <b>SECTION 14. TRANSPORT INFORMATION</b>                             |  |   |
| Not classified as dangerous in the meaning of transport regulations. |  |   |
| <b>SECTION 15. REGULATORY INFORMATION</b>                            |  |   |
| TSCA Status  | On the inventory, or in compliance with the inventory  |   |
| Contact Person   | SDS coordinator, TorrLube® Products, Vandenberg Village, CA 93436 Phone: 805.733.1476  |   |

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