



Material Safety Data Sheet

TE-N Perfluoroalkyl Ethylenes

Revised 03- November-2009

1. PRODUCT AND COMPANY IDENTIFICATION

Material Identification:

Product name: TE-N
Chemical name: Perfluoroalkyl ethylenes (narrow distribution)
Chemical formula: $\text{CH}_2=\text{CH}(\text{CF}_2\text{CF}_2)_n\text{F}$ (n = 3, 4, 5, ...); mostly n = 4

Company Identification:

Distributor Top Fluorochem Co., Ltd.
Building C2, 3rd Floor
479 Chun Dong Road
XinZhuang Industrial Park
Minhang District
Shanghai, P. R. China 201108

Manufacturer Fuxin Hengtong Fluorine Chemicals Co., Ltd.
Fuxin Chemicals Community
West Pingan St.
Haizhou District
Fuxin City, Liaoning Province, P. R. China

Emergency Call +86-21-54833399

2. COMPOSITION AND INFORMATION ON COMPONENTS

Material	Molecular Weight	Weight Percent	EINECS #	CAS #
Perfluoroalkyl ethylenes	mixture		NA	97659-47-4
4- <i>tert</i> -Butylcatechol (inhibitor)	166.22	30 ppm	202-653-9	98-29-3

3. HAZARDS IDENTIFICATION

Irritant Harmful by inhalation, ingestion, and skin absorption. Irritating to skin, eyes, and respiratory system. Do not breathe vapor. Use caution when handling. To the best of our knowledge, the health hazards of this material have not been fully investigated.

4. FIRST AID MEASURES

Potential Effects Of Exposure:

Inhalation: Remove victim from source of exposure to fresh air.

	If breathing is difficult administer oxygen. Seek medical attention.
Eye contact:	Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes while keeping eyes open. COLD water may be used. Seek medical attention.
Skin contact:	After contact with skin, wash with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. COLD water may be used. Cover the irritated skin with an emollient. Seek medical attention. Wash any contaminated clothing before reusing.
Ingestion:	Do not induce vomiting. Give water to victim to drink. Seek medical attention.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash point:	> 110 °C
Autoignition temp:	N/A
Flammability:	none

Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, or appropriate foam.

Fire fighting instructions: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific hazard(s): Emits toxic fumes under fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken if

Material is Released or Spilled: Wear appropriate respirator, rubber boots and heavy rubber gloves. Scoop up and place in an appropriate container. Ventilate area and wash spill site after pickup is complete. Wash skin immediately with plenty of water. Absorb on sand or vermiculite and place in closed containers for disposal.

7. HANDLING AND STORAGE

Irritant

AVOID PROLONGED USE
AVOID ALL DIRECT CONTACT WITH MATERIAL
Wash thoroughly after handling.
Do not breathe dust or vapor.
Have safety shower and eye wash available.
Do not get in eyes, on skin, on clothing.
Keep container tightly closed.
Ensure adequate ventilation during use.
Use only in a chemical fume hood.
Avoid sources of ignition.

Storage: Store in a cool, dry, well-ventilated area.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Fire And Explosion Protection:	Do not spray on a naked flame or any other incandescent material. Store in tightly sealed containers in a cool, well-ventilated place.
Respiratory Protection:	In case of mist, spray, or aerosol exposure wear suitable personal respiratory protection and protective suit.
Eye Protection:	Tightly fitting safety goggles.
Hand Protection:	Wear impervious gloves. Wash hands thoroughly after handling.
Skin and Body Protection:	Wear lightweight protective clothing. Avoid contact with skin and eyes. Wash hands immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	149 °C @ 760 mm Hg (n = 4)
Specific Gravity	1.677 g/ml @ 25 °C(n = 4)
pH	Not measured
Form	Liquid
Color	Colorless
Flash Point	> 110 °C (closed cup)
Melting Point	No data
Refractive index	No data
Solubility in Water	Negligible

10. STABILITY AND REACTIVITY

Stability:	Stable.
Materials to Avoid:	Strong acids, strong bases and oxidizing agents.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, hydrogen fluoride.
Hazardous Polymerization:	May occur.
Hazardous Polymerization Reactions:	Homopolymerization will not occur. Copolymerization can occur in the presence of free radical sources, heat or UV light.

11. TOXICOLOGICAL INFORMATION

Acute Effects:	Harmful, irritant Causes skin and eye irritation. Material is irritating/harmful to mucous membranes and upper respiratory tract. To the best of our knowledge, the toxicological properties of this product have not been fully determined.
-----------------------	---

12. ECOLOGICAL INFORMATION

General

Prevent chemicals from entering the ground, water courses, or drainage system.

13. DISPOSAL CONSIDERATIONS

Disposal:

Dissolve in or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local laws.

14. TRANSPORTATION INFORMATION

Shipping Information:

Not regulated as a hazardous material by DOT, IMO, or IATA.

DOT Proper Shipping Name:

None. Non-hazardous for transport.

UN Number:

None. Non-hazardous for transport.

15. OTHER INFORMATION

Legal Disclaimer:

For R&D use only. Not for drug, household, or other uses. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. Unless noted to the contrary, the technical information applies only to pure product.

To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither Top Fluorochem, nor any of its affiliates makes any warranty, express or implied, or accepts any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes.

End of MSDS