

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

- **Identification of the substance or preparation**

Product name: Fluoronox 2150

Use of the substance/preparation: Lubricating fluid

- **Company/undertaking identification**

- **Manufacturer/Supplier:**

TECCEM GmbH

Fröhliche-Mann-Str. 3

98528 Suhl

Germany

Tel.: +49 3681 45 898 0

Fax: +49 3681 45 898 9

Internet: www.teccem.de

- **Emergency telephone number:**

Poison Control Centre: Consult local telephone directory for emergency number(s)

2. HAZARDS IDENTIFICATION

- The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
- **Classification:** Not classified.
- **Information pertaining to special dangers for human and environment:** Thermal decomposition may result in toxic and corrosive fumes. None at appropriate handling and storage.

3. COMPOSITION/INFORMATION ON INGREDIENTS

- **Substance/preparation:** Preparation of Perfluoropolyether
- **Hazardous ingredients:** There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. FIRST AID MEASURES

- **Inhalation:** Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Obtain medical attention if symptoms occur.

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- **Ingestion:** Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Obtain medical attention if symptoms occur.
 - **Skin contact:** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur.
 - **Eye contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
 - **Protection of first-aiders:** No action shall be taken involving any personal risk or without training.
 - **Notes to physician:** No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See section 11 for more detailed information on health effects and symptoms.

5. FIRE-FIGHTING MEASURES

- **Extinguishing media:**
Suitable: Use an extinguishing agent suitable for the surrounding fire.
Not suitable: None known.
 - **Special exposure hazards:** The product is not flammable. In case of thermal decomposition due to fire or heat (see section 10), toxic and corrosive fumes may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
 - **Products of combustion/thermal decomposition:** Fumes of fluoro hydro (HF), carbonyl fluoride (COF₂), carbon monoxide (CO), carbon dioxide (CO₂), Perfluoroisobutylene (PFIB) and other fluorine compounds.
 - **Special protective equipment for fire-fighters:** Fire-fighters should wear acid resistant protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
 - **Remark:** Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
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6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment (see section 8).
 - **Environmental precautions:** Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
 - **Methods for cleaning up:**
 - **Small spill:** Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
 - **Large spill:** Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.
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7. HANDLING AND STORAGE

- **Handling:** Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.
- **Storage:** Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
- **Storage Stability:** The product stability is at least 7 years, when stored in closed containers, at temperatures below +25°C.
- **Recommended Packaging Materials:** Use original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Exposure limit values:**
Ingredient name: No exposure limit value known.
- **Occupational exposure limits:**
Recommended monitoring: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.
- **Exposure controls:**
- **Occupational exposure:** No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- **Hygiene measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Keep away from tobacco.
- **Respiratory protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter.
- **Hand protection:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Recommended: latex, neoprene, nitrile, polyvinyl alcohol (PVA), Viton.
- **Eye protection:** Safety eye wear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- **Skin protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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- **Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
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9. PHYSICAL AND CHEMICAL PROPERTIES

- **General information:**
 - Physical state:** Fluid.
 - Colour:** Clear, colourless.
 - Odour:** None.
 - **Important health, safety and environmental information:**
 - Pour Point:** Approximately -50°C (-58°F).
 - Flash point:** None.
 - Auto-ignition temperature:** None.
 - Relative density:** 1.91 - 1.93 kg/cm³ @ 20°C (68°F).
 - Solubility in water:** Insoluble in water.
 - Solubility:** Soluble in highly fluorinated solvents, like Hydrofluoroether, Perfluoropolyether.
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10. STABILITY AND REACTIVITY

- **Chemical stability:** The product is stable.
 - **Materials to avoid:** Reactive with alkalis.
 - **Hazardous decomposition products:** Thermal decomposition due to heat above 260°C (500°F) may release toxic fluorine compounds, like fluoro hydro (HF), carbonyl fluoride (COF₂) and carbon monoxide (CO), carbon dioxide (CO₂), Perfluoroisobutylene (PFIB) and other compounds.
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11. TOXICOLOGICAL INFORMATION

- **Potential acute health effects:**
- **Inhalation:** No known significant effects or critical hazards.
- **Ingestion:** No known significant effects or critical hazards.
- **Skin contact:** No known significant effects or critical hazards.
- **Eye contact:** No known significant effects or critical hazards.
- **Acute toxicity:**
- **Conclusion/Summary:** No known significant effects or critical hazards..
- **Potenatial chronic health effects**
- **Chronic toxicity**
- **Conclusion/Summary:** No known significant effects or critical hazards.
- **Irritation/Corrosion**
- **Conclusion/Summary:** No known significant effects or critical hazards.
- **Sensitiser**
- **Conclusion/Summary:** No known significant effects or critical hazards.
- **Carcinogenicity**
- **Conclusion/Summary:** No known significant effects or critical hazards.
- **Mutagenicity**

Conclusion/Summary:	No known significant effects or critical hazards.
<u>Teratogenicity</u>	
Conclusion/Summary:	No known significant effects or critical hazards.
<u>Reproductive toxicity</u>	
Conclusion/Summary:	No known significant effects or critical hazards.
Chronic effects:	No known significant effects or critical hazards.
Carcinogenicity:	Not listed as carcinogenic by OSHA, NTP or IARC.
Mutagenicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Developmental effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.
<u>Over-exposure signs/symptoms</u>	
Inhalation:	No specific data.
Ingestion:	Ingestion may result in diarrhea or vomiting.
Skin:	Prolonged and repeated exposure to skin may result in irritation or dermatitis.
Eyes:	No specific data.

12. ECOLOGICAL INFORMATION

- **Environmental effects:** No known significant effects or critical hazards.
 - **Aquatic ecotoxicity:**
 - **Conclusion/Summary:** Not available.
 - **Biodegradability:**
 - **Conclusion/Summary:** Not available.
 - **Other adverse effects** No known significant effects or critical hazards.
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13. DISPOSAL CONSIDERATIONS

- **Methods of disposal:** The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
 - **Hazardous waste:** Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.
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14. TRANSPORT INFORMATION

- **Land, inland transport ADR/RID and GGVS/GGVE:**
- **ADR/RID-GGVS/GGVE Class:** No hazardous material as defined by the descriptions.
- Not restricted.
- **Sea and ocean transport IMDG/GGVSea:**
- **IMDG/GGVSea-Class:** No hazardous material as defined by the descriptions.
- Not restricted.
- **Air transport ICAO-TI and IATA-DGR:**

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- **ICAO/IATA-Class:** No hazardous material as defined by the descriptions.
Not restricted.
 - **Further information:** No hazardous material as defined by the descriptions.
Not restricted.
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15. REGULATORY INFORMATION

- **EU regulations:** Classification and labelling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.
 - **Remarks for Labelling:** The product does not require a hazard warning label in accordance with EC directives/German regulations.
 - **Risk phrases:** This product is not classified according to EU legislation.
 - **International regulations:**
 - Europe inventory:** All components are listed or exempted.
 - Canada inventory:** All components are listed or exempted.
 - United States inventory:** All components are listed or exempted.
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16. OTHER INFORMATION

- **Sources of key data used** Material Safety Data Sheets of raw materials.
- **History**
- Date of printing: 27.July 2010
- Date of issue/Date of revision: 27.July 2010
- Date of previous issue: No previous validation.
- Prepared by: Product Safety.

**** Indicates information that has changed from previously issued version.**

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.
