



# Safety Data Sheet

EC-Legislation 91/155/EEC

## 1. CHEMICAL PRODUCT IDENTIFICATION

**Product Name:** Technirez™ FR-001  
**Common Chemical Name:** Organic Phosphonate Ester  
**Recommended use of the chemical and restrictions on use:**  
**Uses:** Flame retardant  
**Manufacturer/Supplier:**

**ACCI Specialty Materials**  
**1600 W. Blancke Street**  
**Linden, NJ 07036 USA**

**Telephone: (908) 474-9393 Fax: (908) 474-9388**  
**Web: [www.accatalysts.com](http://www.accatalysts.com)**  
**Contact: [info@ac-catalysts.com](mailto:info@ac-catalysts.com)**

**Emergency telephone number**  
 CHEMTREC (24 hours): 1-800-424-9300  
 International: +001-703-527-3887 (collect calls accept)

## 2. HAZARD IDENTIFICATION

**Risk Statements:** None

**Environmental Hazards:** No relevant information found.  
**Human Health Hazards:** No relevant information found

**Eye:** Not expected to cause significant irritation to the eyes.

**Skin:** Not expected to cause significant irritation to the skin.

**Inhalation:** Not expected to cause significant irritation to the lungs, upper respiratory tract or nose. May cause coughing, shortness of breath.

**Ingestion:** Not expected to cause significant irritation, may cause coughing.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

### Information on hazardous ingredients

Component	CAS#	Percentage
Phosphonic Acid, Methyl-(5-Ethyl-2-Methyl-2-Oxido-1,3,2-Dioxophospho)	41203-81-0	> 80%
Phosphonic Acid, Methyl-,Bis ({5-Ethyl-2-Methyl-2-Oxido-1,3,2-Dioxophospho)	42595-45-9	< 20%

## 4. FIRST AID MEASURES

**Eye Exposure:** Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention.

**Skin Exposure:** In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Seek medical attention. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.

**Inhalation:** If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues.

**Ingestion:** Wash out mouth with water and keep at rest. Seek immediate medical attention.

**MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:** No specific information found.

**NOTES TO PHYSICIAN:** All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. No specific antidote available.

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## 5. FIRE FIGHTING MEASURES

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### FIRE HAZARD DATA:

**Flash Point:** 146 C (294 F). Flammability Class: WILL BURN. **Method Used:** Setaflash Closed Cup

**Extinguishing Media:** Recommended (small fires): dry chemical, carbon dioxide, Recommended (large fire): alcohol foam, universal foam, water spray, Not recommended: water jet (frothing possible).

**Special Fire Fighting Procedures:** Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Cool containers exposed to fire with water fog.

**Unusual Fire and Explosion Hazards:** Product will burn under fire conditions.

**Hazardous Decomposition Materials (Under Fire Conditions):** oxides of phosphorus oxides of carbon. There is a possibility that this thermal decomposition may produce bicyclic phosphates and/or phosphites in combination with certain other phosphorus compounds

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## 6. ACCIDENTAL RELEASE MEASURES

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**Evacuation Procedures and Safety:** Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**Containment of Spill:** Follow procedure described below under Cleanup and Disposal of Spill.

**Cleanup and Disposal of Spill:** Recover material, if possible. Pump any free liquid into an appropriate closed container (see Section 7: Handling and Storage). Absorb with an inert absorbent. Shovel up into an appropriate closed container (see Section 7: Handling and Storage). Clean up residual material by washing area with water. Collect washings for disposal. Decontaminate tools and equipment following cleanup. The material should be properly packaged and disposed of in compliance with applicable regulations.

**Environmental and Regulatory Reporting:** Do not flush to drain. Spills may be reportable to the National Response Center (800-424-8802) and local agencies or national agencies.

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## 7. HANDLING AND STORAGE

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**Handling:** Good housekeeping is necessary for safe handling of product.

**Storage:** Store in a dry place.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Engineering Controls:** Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

### Personal Protective Equipment

**Eye/Face Protection:** Use safety glasses or, wear chemical goggles.

**Skin Protection:** No precautions other than clean body-covering clothing should be needed.

**Respiratory Protection:** When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations. For reasonably foreseeable industrial end uses of this material, respiratory protection should not be necessary.

**Exposure Guideline (s):** None established.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

**Physical Appearance:** colorless to pale yellow viscous liquid.  
**Odor:** characteristic odor.  
**pH:** Not Applicable  
**Specific Gravity:** 1.28 at 20 C (68 F).

<b>Density:</b>	1.26 to 1.3 g/ml at 20 C (68 F).
<b>Water Solubility:</b>	soluble
<b>Melting Point Range:</b>	Not Available
<b>Boiling Point Range:</b>	> 240 C (464 F) at 760 mmHg
<b>Vapor Pressure:</b>	Not Available
<b>Vapor Density:</b>	Not Available
<b>Viscosity:</b>	viscosity (centipoises) : 15000 cps at 40 C (104 F). viscosity (centipoises) : 150000 cps at 20 C (68 F)

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## 10. STABILITY AND REACTIVITY

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**Chemical Stability:** This material is stable under normal handling and storage conditions described in Section 7. Thermal decomposition may liberate dimethyl methylphosphonate (CAS No 756-79-6), which is regarded as a potential mutagen.

**Conditions To Be Avoided:** heat

**Materials/Chemicals To Be Avoided:** strong oxidizing agents

**Decomposition Temperature Range:** > 200 C (392 F)

**The Following Hazardous Decomposition Products Might Be Expected:**

**Decomposition Type: thermal:** oxides of phosphorus, oxides of carbon, Acids of phosphorus , dimethyl methylphosphonate

**Hazardous Polymerization Will Not Occur.**

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## 11. TOXICOLOGICAL INFORMATION

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### Acute Eye Irritation:

**Toxicological Information and Interpretation:**

eye - eye irritation, rabbit. This material is not expected to cause significant irritation to the eyes.

### Acute Skin Irritation:

**Toxicological Information and Interpretation:**

skin - skin irritation, rabbit. This material is not expected to cause significant irritation to the skin.

skin - sensitization, human. Not sensitizing.

### Acute Dermal Toxicity:

**Toxicological Information and Interpretation:**

LD50 - lethal dose 50% of test species, > 2000 ml/kg, rabbit.

### Acute Respiratory Irritation:

**Toxicological Information and Interpretation:**

lung - lung irritation (qualitative), human. This material is not expected to cause significant irritation to the respiratory tract.

### Acute Inhalation Toxicity:

**Toxicological Information and Interpretation:**

LC50 - lethal concentration 50% of test species, > 246 mg/l 1 hr, rat. This material is not expected to cause significant irritation.

### Acute Oral Toxicity:

**Toxicological Information and Interpretation:**

LD50 - lethal dose 50% of test species, > 5000 mg/kg, rat. Practically nontoxic.

### Chronic Toxicity:

This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens. Toxicological Information and Interpretation Ames Test: Negative. - SHORT-TERM EXPOSURE, rat. - SHORT-TERM EXPOSURE, rat. - SHORT-TERM EXPOSURE, rabbit. No significant adverse effects were observed. - SHORT-TERM EXPOSURE, rhesus monkey. - TERATOGENICITY, rat. - TERATOGENICITY, rabbit. No significant adverse effects were observed.

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicological Information:

**Ecotoxicological Information and Interpretation:**

EC50 - effective concentration 50% of test species, > 100 mg/l/48 hr, Daphnia.

LC50 - lethal concentration 50% of test species, 680 mg/l/96 hr, trout.

LC50 - lethal concentration 50% of test species, 701 mg/l/96 hr, bluegill sunfish (*Lepomis macrochirus*).

**Chemical Fate Information:** This material is readily biodegradable with respect to EC criteria. Product is not expected to bioaccumulate.

**13. DISPOSAL CONSIDERATIONS**

**DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.** All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

**14. TRANSPORT INFORMATION**

UN Number DEPARTMENT OF TRANSPORTATION (D.O.T.) and CANADIAN TDG INFORMATION: Not Hazardous

**Land - Road/Railway**

ADR/RID Class: N/A

ADR/RID Item Number : N/A

**Inland - Waterways**

ADNR Class N/A

**Sea**

IMDG Class N/A

IMDG Page Number N/A

**Air**

IATA - DGR Class N/A

National Transport Regulations : N/A

Comment : None

**15. REGULATORY INFORMATION****Inventory Status**

<b>Inventory</b>	<b>Status</b>
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	Y
AUSTRALIA (AICS)	Y
JAPAN (MITI)	Y
SOUTH KOREA (KECL)	Y

Y = All ingredients are on the inventory or exempt from listing.

**16. OTHER INFORMATION****History**

Revision date April 22, 2015  
Version 5  
MSDS prepared by Martin Czebotar

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