



MATERIAL SAFETY DATA SHEET

Ferro Corporation, Polymer Additives Division
Walton Hills Operation
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Emergency telephone number
CHEMTREC: 1-800-424-9300
CHEMTREC (outside U.S.): 1-703-527-3887
Plant Number: 1-216-750-6708

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

Product Name: Therm-Chek® SP1998 450 Lb Drm **Date of Preparation:** 05/06/2008
Chemical Family: Polymer Additive
Chemical Name: Barium, Zinc Complex Mixture
CAS-No.: Mixture
Product Code: 1035637

2. HAZARD IDENTIFICATION

Emergency Overview

CAUTION

May cause eye/skin irritation. Avoid contact with the skin and the eyes. May be harmful if absorbed through skin.

NFPA 704

Colour: Amber **Health:** 1
Physical state: Liquid **Fire:** 2
Odour: Mild **Instability:** 0

Potential Health Effects

Principle routes of exposure: Eye contact. Skin contact. Inhalation.

Eye contact: May cause slight irritation.

Skin contact: Prolonged skin contact may cause skin irritation and/or dermatitis. May be harmful if absorbed through skin.

Inhalation: May cause irritation of respiratory tract.

Ingestion: May irritate digestive tract.

Chronic toxicity: Prolonged skin contact may cause skin irritation and/or dermatitis.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %
Barium compound		10 - 20%
Zinc compound		10 - 20%
Phenol	108-95-2	1 - 5%
Petroleum based hydrocarbon		1 - 5%

The specific chemical identities are being withheld as a trade secret (29CFR1910.1200).

This material contains organo phosphorous compounds which may decompose from hydrolysis with water (moisture in air) to produce phenol, aliphatic alcohol, and phosphoric acid.

4. FIRST AID MEASURES

Eye contact: Rinse immediately with plenty of water, also under the eyelids. Get medical attention if irritation develops.

Skin contact: Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms persist, call a physician.

Ingestion: Drink plenty of water. Consult a physician if necessary. Do not induce vomiting without medical advice.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point (°C): 104 °C (219°F) Method: PMCC

Suitable extinguishing media: Use dry chemical, CO2, water spray or "alcohol" foam.

Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapors.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

Unusual hazards: Material may change or decompose on exposure to moisture.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Evacuate area of all unnecessary personnel. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up: Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Dispose of promptly. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage: Keep container tightly closed in a dry and well-ventilated place. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

Components	OSHA	ACGIH
Phenol	5 ppm TWA 19 mg/m ³ TWA	Skin - potential significant contribution to overall exposure by the cutaneous route 5 ppm TWA
Barium compound (as Ba)	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA
Petroleum based hydrocarbon	5 mg/m ³ TWA (mineral oil mist)	5 mg/m ³ TWA (mineral oil mist)
Triphenyl phosphate	3 mg/m ³ TWA	3 mg/m ³ TWA

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Eye protection: Safety glasses with side-shields.

Skin and body protection: Lightweight protective clothing.

Hand protection: Impervious gloves.

Respiratory protection: Use NIOSH approved respirator when ventilation is inadequate.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are proximal to the work-station location. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Colour:	Amber	Physical state:	Liquid
Odour:	Mild	Molecular weight:	No data available
Boiling point/range (°C):	No data available	pH:	No data available
Melting point/range (°C):	No data available	Specific gravity (Water =1):	1.080
Vapor pressure (mmHg):	No data available	Evaporation Rate (Water = 1)	< 1.00
Water solubility (mg/l):	Insoluble	VOC content (%)	No data available

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions.

Polymerization: Will not occur.

Hazardous decomposition products: None under normal use. Possible decomposition products from hydrolysis: phenol, aliphatic alcohol, phosphoric acid.

Materials to avoid: Strong oxidizing agents. Strong acids and strong bases. Water.

Conditions to avoid: Exposure to moisture.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: No data is available on the product itself

Target Organ Effects: Barium compound: Heart, gastrointestinal tract. Phenol: Central nervous system, liver, kidneys.

12. ECOLOGICAL INFORMATION

Aquatic toxicity: Not determined

Persistence and degradability: Not determined

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Waste must be disposed of in accordance with federal, state and local environmental control regulations. Where possible recycling is preferred to disposal or incineration.

14. TRANSPORT INFORMATION

DOT (U.S.)

UN/ID No: UN3082

Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (Triphenyl phosphate mixture containing 5-10% triphenyl phosphate)

U.S. DOT - Hazard Class: 9 Severe marine pollutant

Packing group: III

ERG No: 171

Other shipping information: This material meets the definition of a severe marine pollutant. Applies to containers for shipments in bulk or via water transportation.

TDG (Canada)

Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (Triphenyl phosphate mixture containing 5-10% triphenyl phosphate)

Hazard class: 9 Marine pollutant

Packing group: III

15. REGULATORY INFORMATION**U.S. Regulations:**

Not subject to TSCA 12(b) Export Notification

Components	SARA 313:
Barium compound (10 - 20%)	1.0% de minimis concentration (Chemical Category N040)
Barium compound (as Ba) (1 - 5%)	1.0% de minimis concentration (Chemical Category N040)
Zinc compound (10 - 20%)	1.0% de minimis concentration (Chemical Category N982)
Zinc compound (as Zn) (1 - 5%)	1.0% de minimis concentration (Chemical Category N982)
Phenol (1 - 5%)	1.0% de minimis concentration

State Regulations

This product or its ingredients have been evaluated for New Jersey, Pennsylvania, and California Prop 65 supplier notification requirements. Substances that are subject to notification requirements, if any, are listed below.

Components	State Regulations - NJ; PA; CA Prop65
Barium compound	Listed (NJRTK) Listed (PARTK)
Zinc compound	Listed (PARTK) Listed (NJRTK)
Phenol	Listed (NJRTK) Listed (PARTK)
Benzoic acid	Listed (NJRTK) Listed (PARTK)
Triphenyl phosphate	Listed (NJRTK) Listed (PARTK)

Canadian WHMIS

WHMIS hazard class: D2B Toxic materials.

Canadian Ingredient Disclosure List (IDL):

Components	WHMIS Ingredient Disclosure:
Triphenyl phosphite	1%
Phenol	1%
Benzoic acid	1%
Triphenyl phosphate	1%

International Inventories

TSCA 8(b): Listed or exempt.

Canadian DSL: Listed or exempt.

EC-No. Listed or exempt.

Phillipines (PICCS): Listed.

Japan (ENCS): Not listed.

Korea (KECL): Listed.

China (IECS): Listed.

Australia (AICS): Listed.

16. OTHER INFORMATION**For Industrial Use Only****HMIS**

Health: 1

Fire: 2

Physical hazard: 0

PPE: B

Prepared by: Ferro Technical Center

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.

End of Safety Data Sheet