FERRO

MATERIAL SAFETY DATA SHEET

Ferro Corporation, Polymer Additives Division
Walton Hills Operation
7050 Krick Road
Walton Hills, Ohio 44146-4494 USA

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 OF THE COMPANY/UNDERTAKING

Product Name: Therm-Chek® 705 450 Lb Drm
Chemical Family: Polymer Additive
Chemical Name: Zinc Complex Mixture
CAS-No.: Mixture
Product Code: 1035455

Date of Preparation: 07/20/2010

2. HAZARDS IDENTIFICATION

Emergency Overview
Warning
Combustible! Vapors may travel to a source and flash back . Avoid breathing vapors or mists. May cause respiratory tract, eye and skin irritation.

		HMIS	NFPA 704
		1	1
Color:	Amber	2	2
Physical state:	Liquid	0	0
Odor:	Solvent-like	G	

Potential Health Effects

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

Eye contact: May cause irritation.

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

Inhalation: Inhalation of high vapor concentrations can cause CNS-depression and narcosis.

Ingestion: May irritate digestive tract. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %
Zinc compounds		70 - 80%
Organic solvent		20 - 30%

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

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 symptoms persist, call a physician.

Ingestion: Clean mouth with water and drink afterwards plenty of water. Consult a physician.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point (°C): 43 (109°F) Method: PMCC

Suitable extinguishing media: Use dry chemical, CO2, water spray or "alcohol" foam. Do not use a solid water stream as it may scatter and spread fire. Cool containers / tanks with spray water.

Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Hydrocarbons. Heavy metal compounds.

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: Flash back possible over considerable distance. Risk of explosion if heated under confinement. Vapours may form explosive mixture with air. Vapors are heavier than air and may spread along floors. Vapor may travel considerable distance to source of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Evacuate area of all unnecessary personnel. Combustible material. Remove all sources of ignition. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not breathe vapors/dust. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up: Wear personal protective equipment. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Clean contaminated surface thoroughly. Dispose of promptly.

7. HANDLING AND STORAGE

Handling:
Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage:
Keep product and empty container away from heat and sources of ignition. Keep tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits
No TLV assigned. Minimize exposure in accordance with good hygiene practice.

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

Eye protection: Safety glasses with side-shields. If splashes are likely to occur, wear:. Face-shield.

Skin and body protection: Long sleeved 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

Color:	Amber	**Physical state:**	Liquid
Odor:	Solvent-like	**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):**	0.95
Vapor pressure (mmHg):	No data available	**Evaporation Rate (Water = 1)**	< 1.00
Water solubility:	Insoluble	**VOC content (%)**	No data available

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions.

Polymerization Will not occur.

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

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

Conditions to avoid Heat, flames and sparks.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Information given is based on data on the components and the toxicology of similar products

Component information, if any, is listed below

Organic solvent

LD50s and LC50s:
Dermal LD50 (Rabbit) = 3000 mg/kg
Inhalation LC50 (Rat) = 5.28 mg/L
Oral LD50 (Rat) = 5000 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic toxicity: No data is available on the product itself. Information given is based on data on the components and the ecotoxicology of similar products.

Organic solvent

Ecotoxicity - Fish Species Data:
96 h LC50 (Pimephales promelas) = 800 mg/L static
Ecotoxicity - Water Flea Data:
48 h EC50 (Daphnia magna) = 100 mg/L
Ecotoxicity - Freshwater Algae Data:
96 h EC50 (Pseudokirchneriella subcapitata) = 450 mg/L

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.)

14. TRANSPORT INFORMATION

UN/ID No:	UN1993
Proper shipping name:	Flammable liquid, n.o.s. (Naphtha)
U.S. DOT - Hazard Class:	3
Packing group:	III
ERG No:	128

TDG (Canada)

Proper shipping name:	Flammable liquid, n.o.s. (Naphtha)
Hazard class:	3
Packing group:	III

15. REGULATORY INFORMATION

U.S. Regulations:

TSCA: Not subject to TSCA 12(b) Export Notification

SARA 313:

Components	SARA 313:
Zinc compounds (70 - 80%)	1.0 % de minimis concentration (Chemical Category N982)

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
Zinc compounds	Listed (NJRTK) Listed (PARTK)
Organic solvent	Listed (NJRTK)

Canadian WHMIS

WHMIS hazard class: B3 Combustible liquid, D2B Toxic materials.

International Inventories

TSCA 8(b):	Listed or exempt.
Canadian DSL:	Listed or exempt.
EC-No.	Listed or exempt.
Philippines (PICCS):	Listed.
Japan (ENCS):	One or more ingredient(s) are not on the ENCS list.
Korea (KECL):	Listed.
China (IECS):	Listed.
Australia (AICS):	Listed.
New Zealand (NZIoC):	Listed.

16. OTHER INFORMATION

For Industrial Use Only

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