# MATERIAL SAFETY DATA SHEET

Ferro Corporation, Polymer Additives Division
Cleveland Operation
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Cleveland, Ohio 44112 USA

**Emergency telephone number**
CHEMTREC: 1-800-424-9300
CHEMTREC (outside U.S.): 1-703-527-3887
Plant Number: 1-216-531-6010

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

**Product Name:** Therm-Chek® 704 35x50 Lb Bag
**Chemical Family:** Polymer Additive
**Chemical Name:** PVC Powder Stabilizer
**CAS-No.:** Mixture
**Product Code:** 1035913

**Date of Preparation:** 06/09/2011

## 2. HAZARDS IDENTIFICATION

**Emergency Overview**
Warning
May cause respiratory tract, eye and skin irritation. Concentrated airborne dust may present an explosion hazard. May cause sensitization by skin contact.

| | | HMIS | NFPA 704 |
|---|---|---|---|
| **Color:** | White | 2 | 2 |
| **Physical state:** | Powder | 1 | 1 |
| **Odor:** | Mild | 0 | 0 |
| | | E | |

**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 cause sensitization by skin contact.

**Inhalation:** Product dust may be irritating to eyes, skin and respiratory system. Over-exposure by inhalation may cause respiratory irritation.

**Ingestion:** May irritate digestive tract.

**Chronic toxicity:** Excessive inhalation of dust may cause chemical pneumonitis, cyanosis, and pulmonary edema.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS Number | Weight % |
|---|---|---|
| Calcium compounds | | 30 - 40% |
| Stearate | | 20 - 30% |
| Inorganic compounds | | 10 - 20% |
| Zinc compounds | | 10 - 20% |
| Bisphenol A | 80-05-7 | 1 - 5% |
| Hydrotalcite | 11097-59-9 | 1 - 5% |
| Dibenzoylmethane | 120-46-7 | 1 - 5% |
| Quartz silica | 14808-60-7 | <0.05% |

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:** Drink plenty of water. Do not induce vomiting. Consult a physician if necessary.

**Notes to physician:** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Flash point (°C):** > 260 ( 500°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. Heavy metal compounds. Carbon oxides. ZnO.

**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:** Concentrated airborne dust may present an explosion hazard.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Evacuate area of all unnecessary personnel. Avoid dust formation. Avoid contact with skin, eyes and clothing. Do not breathe vapors/dust. Wear 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:** Use approved industrial vacuum cleaner for removal. Wear personal protective equipment. Dispose of promptly.

## 7. HANDLING AND STORAGE

**Handling:**
Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from open flames, hot surfaces and sources of ignition.

**Storage:**
Keep container tightly closed in a dry and well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure limits**

Minimize exposure in accordance with good hygiene practice

| Components | OSHA | ACGIH |
|---|---|---|
| Calcium compounds | 15 mg/m³ TWA total dust<br>5 mg/m³ TWA respirable fraction | 5 mg/m³ TWA |
| Stearate | Not established | 10 mg/m³ TWA except stearates of toxic metals |
| Hydrotalcite | Not established | 1 mg/m³ TWA respirable fraction |
| Magnesium Oxide | 15 mg/m³ TWA fume, total particulate | 10 mg/m³ TWA inhalable fraction |
| Quartz silica | Listed | 0.025 mg/m³ TWA respirable fraction |

| | |
|---|---|
| **Engineering measures:** | Provide appropriate exhaust ventilation at machinery and at places where dust or fumes can be generated. Ensure adequate ventilation, especially in confined areas. |
| **Eye protection:** | Safety glasses with side-shields, goggles or face shield. |
| **Skin and body protection:** | Impervious clothing. Remove and wash contaminated clothing before re-use. Contaminated work clothing should not be allowed out of the workplace. |
| **Hand protection:** | Impervious gloves. |
| **Respiratory protection:** | Use NIOSH approved respirator when ventilation is inadequate. |
| **Hygiene measures:** | Ensure that eyewash stations and safety showers are proximal to the work-station location. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Color:** | White | **Physical state:** | Powder |
| **Odor:** | 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 |
| **Vapor pressure :** | No data available | **Water solubility:** | 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. Thermal decomposition can lead to release of irritating gases and vapors. Heavy metal compounds. Carbon oxides. |
| **Materials to avoid:** | Strong oxidizing agents. |
| **Conditions to avoid** | Avoid dust formation. |

## 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**

**Calcium compounds**

**LD50s and LC50s:** Oral LD50 (Rat) = 7340 mg/kg

**Stearate**

**LD50s and LC50s:** Oral LD50 (Rat) = 10 g/kg

**Inorganic compounds**

**LD50s and LC50s:**
Inhalation LC50 (Rat) = 2.4 mg/L
Oral LD50 (Rat) = 5000 mg/kg
Dermal LD50 (Rabbit) = 2000 mg/kg

**Bisphenol A**

**LD50s and LC50s:**
Dermal LD50 (Rabbit) = 3000 mg/kg
Oral LD50 (Rat) = 3200 mg/kg

**Quartz silica**

**LD50s and LC50s:** Oral LD50 (Rat) = 500 mg/kg
**OSHA - Select Carcinogens:** Present
**NTP:** Known Human Carcinogen
**IARC - Group 1:** Listed

## 12. ECOLOGICAL INFORMATION

**Aquatic toxicity:** Information given is based on data on the components and the ecotoxicology of similar products

**Calcium compounds**

Ecotoxicity - Fish Species Data:
96 h LC50 (Gambusia affinis) = 160 mg/L static

**Inorganic compounds**

Ecotoxicity - Fish Species Data:
96 h LC50 (Poecilia reticulata) = 1800-3200 mg/L semi-static
96 h LC50 (Oryzias latipes) = 3200-5600 mg/L semi-static
96 h LC50 (Brachydanio rerio) = 1800 mg/L semi-static
Ecotoxicity - Water Flea Data:
48 h EC50 (Daphnia magna) = 1000 - 1800 mg/L
Ecotoxicity - Freshwater Algae Data:
96 h EC50 (Desmodesmus subspicatus) = 18 mg/L

**Bisphenol A**

Ecotoxicity - Fish Species Data:
96 h LC50 (Pimephales promelas) = 3.6-5.4 mg/L flow-through
96 h LC50 (Pimephales promelas) = 4.0-5.5 mg/L static
96 h LC50 (Oncorhynchus mykiss) = 4 mg/L
96 h LC50 (Brachydanio rerio) = 9.9 mg/L static
Ecotoxicity - Water Flea Data:
48 h EC50 (Daphnia magna) = 9.2 - 11.4 mg/L Static
48 h EC50 (Daphnia magna) = 10.2 mg/L
48 h EC50 (Daphnia magna) = 3.9 mg/L
Ecotoxicity - Freshwater Algae Data:
96 h EC50 (Pseudokirchneriella subcapitata) = 2.5 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.)**

**Proper shipping name:** Not regulated.

**TDG (Canada)**

**Proper shipping name:** Not regulated.

## 15. REGULATORY INFORMATION

**U.S. Regulations:**

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

**SARA 313:**

| Components | SARA 313: |
|---|---|
| Zinc compounds (10 - 20%) | 1.0 % de minimis concentration (Chemical Category N982) |
| Bisphenol A (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 |
|---|---|
| Quartz silica | Listed (NJRTK)<br>Listed (PARTK) |

| Components | State Regulation - CA Prop65 |
|---|---|
| Quartz silica | Carcinogen |

**Canadian WHMIS**

**WHMIS hazard class:** D2B Toxic materials

**Canadian Ingredient Disclosure List (IDL):**

| Components | Canada - WHMIS Ingredient Disclosure: |
|---|---|
| Calcium compounds | 1 |
| Bisphenol A | 1 |

**International Inventories**

| | |
|---|---|
| **TSCA 8(b):** | Listed or exempt. |
| **Canadian DSL/NDSL list** | One or more ingredient(s) are not listed on the DSL or NDSL list. |
| **EC-No.** | Listed or exempt. |
| **Philippines (PICCS):** | Listed. |
| **Japan (ENCS):** | Listed or exempt. |
| **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**