



# MATERIAL SAFETY DATA SHEET

Ferro Corporation, Polymer Additives Division  
 Cleveland Operation  
 1636 Wayside Road  
 Cleveland, Ohio 44112 USA

Emergency telephone number:  
 CHEMTREC: 1-800-424-9300

Plant Number: 1-216-750-7020

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

**Product Name:** Therm-Chek® 196 Date of Preparation: 02/17/2004  
**Chemical Family:** Polymer Additive  
**Chemical Name:** PVC Powder Stabilizer  
**CAS-No.:** Mixture

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

### Exposure limits

Components	CAS-No	Weight %	OSHA	ACGIH
Hydrocalcite	11097-59-9	20 - 30%	15 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA
Dehydroacetic Acid	4418-26-2	5 - 10%	Not established	Not established
Zinc compound, as Zn		5 - 10%	Not established	Not established
Benzoic acid	65-85-0	5 - 10%	Not established	Not established
Barium compounds, as Ba Stearate		1 - 5% 10-20	0.5 mg/m <sup>3</sup> TWA 15 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> TWA	0.5 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> TWA

OSHA particulate (not otherwise regulated) limit: 5 mg/m<sup>3</sup> (respirable); 15 mg/m<sup>3</sup> (total). The specific chemical identities are being withheld as a trade secret (29CFR1910.1200).

## 3. HAZARDS IDENTIFICATION

### Emergency Overview

Caution

<b>Color:</b>	White	<b>Health:</b>	2
<b>Physical state:</b>	Powder	<b>Fire:</b>	1
<b>Odor:</b>	Mild	<b>Instability:</b>	0

### NFPA 704

May cause eye/skin irritation. May cause irritation of respiratory tract.

### Potential Health Effects

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

#### Eye contact:

May cause slight irritation. Resin particles, like other inert materials, are mechanically irritating to eyes.

#### Skin contact:

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

#### 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.

**HMIS**

Health: 2

Fire: 1

Physical hazard: 0

PPE: E

**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. Do not induce vomiting without medical advice. Consult a physician.

**Notes to physician:**

Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Flash point:** > 260 °C ( 500°F) Method: PMCC

**Suitable extinguishing media:**

Use dry chemical, CO<sub>2</sub>, water spray or "alcohol" foam.

**Hazardous decomposition products:**

Thermal decomposition can lead to release of irritating gases and vapors. heavy metal compounds. Carbon oxides. BaO. 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:**

Dust may form explosive mixture in air.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions:**

Avoid dust formation. Evacuate area of all unnecessary personnel. Avoid contact with skin, eyes and clothing. Fine dust dispersed in air may ignite. 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. Remove all sources of ignition. Take precautionary measures against static discharges.

**Storage:**

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

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Engineering measures:**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Respiratory protection:**

Use NIOSH approved respirator when ventilation is inadequate.

**Hand protection:**

Impervious gloves.

**Skin and body protection:**

Lightweight protective clothing.

**Eye protection:**

Safety glasses with side-shields.

**Exposure limits:**

See Section 2.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state:</b>	Powder
<b>Color:</b>	White
<b>Odor:</b>	Mild
<b>pH:</b>	No data available
<b>Molecular weight:</b>	No data available
<b>Boiling point/range (°C):</b>	No data available
<b>Specific gravity (Water =1):</b>	> 1.000
<b>Vapor pressure (mmHg):</b>	No data available
<b>Evaporation rate (Water =1):</b>	No data available
<b>Water solubility (mg/l):</b>	Negligible
<b>VOC content (%)</b>	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:**

Fine dust dispersed in air may ignite.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Target Organ Effects:**

Barium compound: Heart, gastrointestinal tract.

**Component Information**

Component information, if any, is listed below

**Polyol**

*NIOSH - LD50s and LC50s:* = 19500 mg/kg Oral LD50 Rat  
= 25500 mg/kg Oral LD50 Mouse

**Calcium hydroxide**

*NIOSH - LD50s and LC50s:* = 7300 mg/kg Oral LD50 Mouse  
= 7340 mg/kg Oral LD50 Rat

**Dehydroacetic Acid**

*NIOSH - LD50s and LC50s:* = 1050 mg/kg Oral LD50 Mouse  
= 500 mg/kg Oral LD50 Rat

**Benzoic acid**

*NIOSH - LD50s and LC50s:* = 1700 mg/kg Oral LD50 Rat  
= 1940 mg/kg Oral LD50 Mouse  
> 10 g/kg Dermal LD50 Rabbit  
> 26 mg/m<sup>3</sup> Inhalation LC50 Rat 1 h

**Zn Sulfate Monohydrate**

*NIOSH - LD50s and LC50s:* = 1710 mg/kg Oral LD50 Rat  
= 245 mg/kg Oral LD50 Mouse

**12. ECOLOGICAL INFORMATION****Aquatic toxicity:**

No information available

**Persistence and degradability:**

No information available

**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:**

Proper shipping name: Not regulated.

<u>Components</u>	<u>CERCLA/DOT RQ:</u>
Benzoic acid (5 - 10%)	5000 lb 2270 kg

TDG (Canada):  
Proper shipping name: Not regulated.

## 15. REGULATORY INFORMATION

### U.S. Regulations:

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

Zinc compounds, as Zn (5 - 10%)

**SARA 313:** form R reporting required for 1.0% de minimis concentration (only fume or dust); Chemical Category N982

Zinc Compound (30 - 40%)

**SARA 313:** 1.0 percent de minimis concentration (Chemical Category N982)

Barium compounds, as Ba (1 - 5%)

**SARA 313:** form R reporting required for 1.0% de minimis concentration; Chemical Category N040

Barium Compound (10 - 20%)

**SARA 313:** form R reporting required for 1.0% de minimis concentration; Chemical Category N040

<u>Components</u>	<u>CERCLA/DOT RQ:</u>
Benzoic acid (5 - 10%)	5000 lb 2270 kg

### 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.

Polyol

**PARTK:** Listed

Calcium hydroxide

**NJRTK:** sn 0322

**PARTK:** Listed

Quartz silica

**NJRTK:** sn 1660

**PARTK:** Listed

**Cal Prop65:** carcinogen (airborne particles of respirable size); initial date 10/1/88

Benzoic acid

**NJRTK:** sn 0209

**PARTK:** Listed

Barium Compound

**NJRTK:** 2146

**PARTK:** Listed

Zinc Compound

**NJRTK:** 3012

**PARTK:** Listed

Zn Sulfate Monohydrate

**NJRTK:** sn 2044

**PARTK:** Listed

Magnesium Perchlorate

NJRTK: Listed  
PARTK: Listed

**Canadian WHMIS**

WHMIS hazard class: D2B Toxic materials.

**Components**                      **WHMIS Ingredient Disclosure List:**

Calcium hydroxide (0.5 - 1%  
1%)  
Quartz silica ( < 0.003)    1%  
Dehydroacetic Acid (5 - 1%  
10%)  
Benzoic acid (5 - 10%)    1%  
Zn Sulfate Monohydrate 1%  
(5 - 10%)  
Magnesium Perchlorate 1%  
(10 - 20%)

**International Inventories**

TSCA 8(b): All the ingredients are on the TSCA list.  
Canadian DSL: One or more ingredient(s) are not on the DSL list.  
EINECS: All the ingredients are on the EINECS list.  
Phillipines (PICCS): Listed.  
Japan (ENCS): Not listed.  
Korea (KECL): Not listed.  
China (IECS): Listed.  
Australia (AICS): Listed.

Adipate, dipentaerythrityl  
Canadian NDSL: 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**