



1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
900 First Avenue
King of Prussia, Pennsylvania 19406

Thio and Fine Chemicals

Customer Service Telephone Number: (800) 628-4453
(Monday through Friday, 8:30 AM to 5:30 PM EST)

Emergency Information

Transportation: CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: VULTAC® TB 710
Synonyms: VULTAC® TB 710 powder
Molecular formula: Not available
Chemical family: Polymer
Product use: Vulcanization agent

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: amber
Physical state: solid
Form: powder
Odor: Slightly acrid

WARNING!
MAY CAUSE ALLERGIC SKIN REACTION.

Potential Health Effects

Primary routes of exposure:
Inhalation and skin contact.

Signs and symptoms of acute exposure:
Prolonged or repeated exposure may cause: Allergic skin reaction: redness, rash.

Skin:
Practically non-irritating. (based on animal studies) May cause allergic skin reaction. (based on components)

Eyes:
Slightly irritating. (based on animal studies)

Ingestion:



No more than slightly toxic. (based on animal studies)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	OSHA Hazardous
Phenol, 4-(1,1-dimethylethyl)-, polymer with sulfur chloride (S2Cl2)	60303-68-6	90 %	Y
Octadecanoic acid	57-11-4	10 %	Y
Sulfur	7704-34-9	< 3 %	Y

This material is classified as hazardous under Federal OSHA regulation.

The substance(s) marked with a "Y" in the Hazard column above, are those identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This material is classified as hazardous under Federal OSHA regulation.

4. FIRST AID MEASURES

Inhalation:

If inhaled, remove victim to fresh air.

Skin:

In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:

Immediately flush eye(s) with plenty of water.

Ingestion:

If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flash point > 392 °F (> 200 °C) (Tag closed cup)

Auto-ignition temperature: Not determined

Lower flammable limit (LFL): Not determined

Upper flammable limit (UFL): Not determined

Extinguishing media (suitable):

Carbon dioxide (CO₂), Foam, Dry chemical, water spray

Protective equipment:



Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:

Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:

When burned, the following hazardous products of combustion can occur:

- Carbon monoxide
- carbon dioxide
- sulfur oxides

6. ACCIDENTAL RELEASE MEASURES

In case of spill or leak:

Spills should be contained and placed in suitable containers for disposal. Sweep up and shovel into suitable containers for disposal. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7. HANDLING AND STORAGE

Handling

General information on handling:

- Avoid prolonged or repeated contact with skin.
- Wash thoroughly after handling.
- Emptied container retains vapor and product residue.
- Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Storage

General information on storage conditions:

Stable under normal conditions.

Storage incompatibility – General:

Store separate from: Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Particles Not Otherwise Specified / Nuisance Dust

US. ACGIH Threshold Limit Values

Form:	Inhalable particles.
Time Weighted Average (TWA):	10 mg/m3
Form:	Respirable particles.
Time Weighted Average (TWA):	3 mg/m3



US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Form:	Respirable fraction.
PEL:	5 mg/m ³
Remarks:	All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3.
Form:	Total dust.
PEL:	15 mg/m ³
Remarks:	All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3.

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). Provide ventilation if necessary to control exposure levels below airborne exposure limits (see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Respiratory protection:

Avoid breathing dust. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Rinse immediately if skin is contaminated. Wash contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

Eye protection:

Use good industrial practice to avoid eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	amber
Physical state:	solid
Form:	powder
Odor:	Slightly acrid
pH:	not applicable
Density:	not applicable
Specific Gravity (Relative density):	not applicable
Vapor pressure:	not applicable
Vapor density:	not applicable
Boiling point/boiling range:	not applicable
Freezing point:	not determined
Melting point/range:	not determined
Solubility in water:	insoluble

10. STABILITY AND REACTIVITY**Stability:**

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Materials to avoid:

Strong oxidizing agents

Conditions / hazards to avoid:

Avoid dust formation.

Hazardous decomposition products:

No decomposition if stored normally.

11. TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Data for VULTAC® TB 710**Acute toxicity****Oral:**

No more than slightly toxic. (rat) LD0 = 2,000 mg/kg.

Skin Irritation:

Practically non-irritating. (rabbit) Irritation Index: 0.5/8.0. (4 h)

Eye Irritation:

Slightly irritating. (rabbit) Irritation Index: 2.4/110.0.

Data for Octadecanoic acid (57-11-4)**Acute toxicity****Dermal:**

Practically nontoxic. (rabbit) LD50 > 5,000 mg/kg.

Carcinogenicity

Repeated dietary administration / No increase in tumor incidence was reported.

Genotoxicity**Assessment in Vitro:**

No genetic changes were observed in laboratory tests using: bacteria, yeast

Human experience**Skin contact:**

Skin: No skin allergy was observed (studied using human volunteers)

Data for Sulfur (7704-34-9)**Acute toxicity****Dermal:**

No more than slightly toxic. (rabbit) LD50 > 2,000 mg/kg.

Inhalation:

Practically nontoxic. (rat) 4 h LC50 > 9.23 mg/l.

Skin Sensitization:

Repeated skin exposure. (guinea pig) No skin allergy was observed

Repeated dose toxicity

Subchronic Inhalation administration to rat / signs: reduced body weight

Genotoxicity**Assessment in Vitro:**

No genetic changes were observed in laboratory tests using: bacteria

Human experience**Inhalation:**

Respiratory disorders, chronic bronchitis. (dust)

Human experience**Skin contact:**

Erythema. (repeated or prolonged exposure)

Human experience**Eye contact:**

Dust and/or vapor are reported to cause irritation when proper industrial hygiene controls/procedures are not used.

12. ECOLOGICAL INFORMATION**Chemical Fate and Pathway**

Data on this material and/or its components are summarized below.

Data for Octadecanoic acid (57-11-4)**Octanol Water Partition Coefficient:**

log Pow > 7 (Potential to bioaccumulate)

Ecotoxicology

Data on this material and/or its components are summarized below.

Data for Octadecanoic acid (57-11-4)**Aquatic toxicity data:**

No more than slightly toxic. Coho salmon 96 h LC50 > 12 mg/l

Data for Sulfur (7704-34-9)**Aquatic toxicity data:**

Practically nontoxic. *Gambusia affinis* (Mosquito fish) LD50 = 10,000 mg/l

Practically nontoxic. Fish LOEC between 1,600 - 10,000 mg/l (Colloidal suspension)

Practically nontoxic. *Oncorhynchus mykiss* (rainbow trout), Bluegill sunfish 96 h LD50 > 180 mg/l

Aquatic invertebrates:

Practically nontoxic. *Daphnia magna* (Water flea) 48 h LD50 > 5,000 mg/l

Practically nontoxic. Mysid shrimp 48 h LD50 > 736 mg/l

**13. DISPOSAL CONSIDERATIONS****Waste disposal:**

Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT): not regulated

International Maritime Dangerous Goods Code (IMDG): not regulated

15. REGULATORY INFORMATION**Chemical Inventory Status**

EU. EINECS	EINECS	Conforms to
US. Toxic Substances Control Act	TSCA	The components of this product are all on the TSCA Inventory.
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	Does not conform
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 144)	DSL	All components of this product are on the Canadian DSL list.
Japan. Kashin-Hou Law List	ENCS (JP)	Conforms to
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	Does not conform
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	Conforms to
China. Inventory of Existing Chemical Substances	IECSC (CN)	Conforms to
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	NZIOC	Does not conform

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

SARA Title III - Section 311/312 Hazard Categories:

Acute Health Hazard



SARA Title III – Section 313 Toxic Chemicals:

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

OSHA Regulated Carcinogens (NTP, IARC, OSHA Listed):

NTP:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC:

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

United States – State Regulations

New Jersey Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
Sulfur	7704-34-9

Pennsylvania Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
Octadecanoic acid	57-11-4
Sulfur	7704-34-9
Phenol, 4-(1,1-dimethylethyl)-, polymer with sulfur chloride (S2Cl2)	60303-68-6

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

16. OTHER INFORMATION

Latest Revision(s):

Revised Section(s):	Updated Corporate Address Change and Rocky Mountain Poison Center Phone Number
Reference number:	000000031084
Date of Revision:	07/11/2011
Date Printed:	07/11/2011

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Material Safety Data Sheet

VULTAC[®] TB 710

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