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Zinc Stearate MSDS Sheet, Material safety Data Sheet

1. Product Identification

Synonyms: Dibasic zinc stearate; stearic acid zinc salt; octadecanoic acid zinc salt, zinc distearate.

CAS No.: 557-05-1

Molecular Weight: 632.2

Chemical Formula: $\text{Zn}(\text{C}_{18}\text{H}_{35}\text{O}_2)_2$

2. Composition/Information on Ingredients

Ingredient: **Zinc Stearate**

CAS No. 557-05-1

Percent: 90 - 100%

Hazardous Yes

3. Hazards Identification

Emergency Overview

WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR. Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Health Effects:

Inhalation: Symptoms from excessive inhalation of dust may include coughing and difficult breathing.

Ingestion: Large dose may cause abdominal spasms and diarrhea.

Skin Contact: May cause skin irritation. Constant exposure to excessive amounts may cause eczema.

Eye Contact: May cause redness, pain.

Chronic Exposure: Grossly excessive and chronic inhalation of the dust may cause a progressive chemical pneumonitis, cyanosis, and pulmonary edema.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders, impaired respiratory function, or a history of pulmonary disease should not be exposed to dusts.

Repeated or prolonged exposure to Zinc stearate is not known to aggravate medical condition.

4. First Aid Measures

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

5. Fire Fighting Measures

Fire: Flash point: 279C (534F)

Auto ignition temperature: 790C (1454F)

Minimum dust cloud ignition temperature is 690C (1274F). Contact with strong oxidizers may cause fire.

Explosion: Fine dust of Zinc stearate dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum exposable concentration: 0.02 g/l (air). (Bureau of Mines, 1968). Maximum explosion pressure: 68 lb./sq. in. @ 0.3 ounces per cubic foot. Sensitive to static discharge.

Fire Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide. Water or foam may cause frothing.

6. Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to legal requirements.

Large Spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

7. Handling and Storage

Precautions: Keep Zinc stearate away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes.

Storage: Keep Zinc stearate container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):

15 mg/m³ total dust, 5 mg/m³ respirable fraction for zinc stearate

-ACGIH Threshold Limit Value (TLV):

10 mg/m³ total dust for stearate (does not include stearate of toxic metals) A4 - Not classifiable as a Human Carcinogen.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Gloves and lab coat, apron or coveralls.

Eye Protection:

Use chemical safety goggles.

9. Physical and Chemical Properties

Appearance: **Zinc stearate** is fine, soft white powder, granules, prills or flakes.

Odor: Slight odor of fatty acid.

Solubility: Insoluble in water, alcohol, ether; slightly soluble in benzene.

Density: 1.095

pH: No information found.

% Volatiles by volume @ 21C (70F): 0

Boiling Point: Decomposes.

Melting Point: 120 - 130C (248 - 266F)

10. Stability and Reactivity

Stability: Zinc stearate is stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Burning may produce carbon monoxide, carbon dioxide, and zinc oxides.

Hazardous Polymerization: Will not occur.

Incompatibilities: Strong oxidizers, strong alkalis, peroxides, oxygen, and acids.

Conditions to Avoid: Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

LD50 oral, rat = > 10 gm/Kg.

-----\Cancer Lists\-----

----- ---NTP Carcinogen--

Ingredient ----- Known - Anticipated - IARC Category

Zinc Stearate (557-05-1) -- No ----- No ----- None

12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose Zinc stearate container and unused contents in accordance with legal requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient ----- TSCA EC Japan Australia

Zinc Stearate (557-05-1) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----

----- --Canada--

Ingredient ----- Korea - DSL - NDSL - Phil.

Zinc Stearate (557-05-1) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\
 -----SARA 302- -----SARA 313-----
 Ingredient ----- RQ TPQ List Chemical Catg.

 Zinc Stearate (557-05-1) No No No Zinc compound

-----\Federal, State & International Regulations - Part 2\
 -----RCRA- -TSCA-
 Ingredient ----- CERCLA - 261.33 - 8(d)

 Zinc Stearate (557-05-1) No No No

Chemical Weapons Convention: No; TSCA 12(b): No; CDTA: No

SARA 311/312: Acute: No; Chronic: No; Fire: Yes; Pressure: No

Reactivity: No (Pure / Solid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

US Federal and State Regulations: Pennsylvania RTK: Zinc stearate Massachusetts RTK: Zinc stearate TSCA 8(b) inventory: Zinc stearate SARA 313 toxic chemical notification and release reporting: Zinc stearate CERCLA: Hazardous substances.: Zinc stearate

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard: 0

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

16. Other Information

Disclaimer:

Our company provides this Zinc Stearate MSDS information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This Zinc Stearate MSDS sheet is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.
