SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier
   Product Name: Zinc Stearate
   Product Code(s): Zinc Stearate
   Synonym(s): Dibasic zinc stearate; Stearic acid, zinc salt; Octadecanoic acid, zinc salt; Zinc distearate
   REACH Registration Number: No data available

1.2 Relevant identified uses of the substance or mixture and uses advised against
   General use: For use in industrial and laboratory applications
   Uses advised against: None known

1.3 Details of the supplier and of the safety data sheet
   Manufacturer/Distributor
   Allan Chemical Corporation
   235 Margaret King Avenue
   Ringwood, NJ  07456  USA
   +1-973-962-4014

1.4 Emergency telephone number
   Chem Tel
   +1-813-248-0585
   +1-800-255-3924

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture
   Product definition: Substance
   Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008
   Not a dangerous substance according to OSHA or to European Union Legislation

2.2 Label Elements
   Not classified as dangerous according to GHS

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
   None known

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
<table>
<thead>
<tr>
<th>% by Weight</th>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EC Number</th>
<th>Index Number</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;99</td>
<td>Zinc Stearate</td>
<td>557-05-1</td>
<td>209-151-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence, require reporting in this section.

3.2 Mixtures
   May form combustible dust concentrations in air

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures
   Inhalation: If exposure to product mist causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Loosen tight fitting clothing such as a collar, tie, belt or waistband. If symptoms persist, seek medical attention.
   Eyes: Immediately flush eyes with large amounts of water for 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after the first 2 minutes and continue rinsing. If irritation persists seek medical attention, preferably from an ophthalmologist.
   Skin: Flush skin with water while removing contaminated clothing. Wash affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes thoroughly before reuse. If irritation persists, seek medical attention.
   Ingestion: Rinse mouth thoroughly with water if the victim is conscious. Remove dentures, if present. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Obtain medical attention, especially if a large amount is swallowed.

4.2 Most important symptoms and effects, both acute and delayed
   Potential health symptoms and effects
   Eyes: May cause mild, transient eye irritation. Particulates may cause mechanical irritation of the cornea and surrounding tissue.
   Skin: May cause skin irritation.
   Inhalation: Inhalation of dust may cause irritation of the nose, throat and respiratory tract. Inhalation of fumes from heated material may cause metal fume fever, characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased
SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishable media
Suitable methods of extinction: Use extinguishing media suitable for surrounding material.
Unsuitable methods of extinction: None known

5.2 Special hazards arising from the substance or mixture
Closed containers may explode due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.
Explosion hazards: Not considered to be explosion hazard.

5.3 Advice for firefighters
Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, water contaminated by this material should be contained from being discharged to any waterway, sewer or drain to prevent environmental contamination.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.2 Environmental precautions
Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways.

6.3 Methods and materials for containment and cleaning up
Cover drains and contain spill. Avoid dust generation during cleanup. Collect material and place into an approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5). Dispose of in accordance with federal, state and local regulations.

6.4 Reference to other sections
See Section 13 for additional waste treatment information.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling
Wear all appropriate personal protective equipment specified in Section 8. Do not get in eyes or on skin or clothing. Do not breathe dust. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing and shoes before reuse.
Advice on protection against fire and explosion
Not considered to be a fire or explosion hazard

7.2 Conditions for safe storage, including any incompatibilities
Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10.5), food and drink. Transfer only to approved containers having correct labeling. Keep container tightly closed. Protect containers against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent spillage. Containers may be hazardous when when empty as they contain product residues Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Do not take internally. Keep out of reach of children.

7.3 Specific end uses
Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
Occupational exposure limits

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>557-05-1</td>
<td>Zinc Stearate</td>
<td>15 mg/m³ , total dust; 10 mg/m³ (stearates)</td>
<td>15 mg/m³ , total dust; 5 mg/m³, respirable fraction</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls
Engineering Measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

Eye/face protection: Wear protective goggles or safety glasses with non-perforated side shields and a face shield. Refer to 29 CFR 1910.133, ANSI Z87.4 or Standard EN 166.

Hand Protection: Wear gloves recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of gloves must be greater than the intended use period.
**Other protective equipment:** Wear protective clothing. Wear protective boots, if the situation requires.

**Respiratory Protection:** None required with normal use. Always use an approved respirator when vapor/aerosols are generated. Where risk assessment shows air-purifying respirators are appropriate use a full-faced respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Environmental exposure controls:** Do not empty into drains.

*PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.*

---

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White powder, flakes or granular solid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild, fatty</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>632.34 g/mol</td>
</tr>
<tr>
<td>Chemical Formula</td>
<td>Zn(C18H35O2)2</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing/Melting Point, Range</td>
<td>120 - 130 °C (248 - 266 °F)</td>
</tr>
<tr>
<td>Initial Boiling Point</td>
<td>Decomposes</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>278.9 °C (534 °F) open cup</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>790 °C (1,454 °F)</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower Explosive Limit (LEL)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper Explosive Limit (UEL)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.095</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Partition Coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Volatiles by Volume @ 21 °C</td>
<td>0%</td>
</tr>
</tbody>
</table>

**9.2 Other data**

No data available

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**SECTION 10 - STABILITY AND REACTIVITY**

### 10.1 Reactivity

No special reactivity has been reported.

### 10.2 Chemical stability

This product is stable under recommended storage conditions, handling and use.

### 10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

### 10.4 Conditions to avoid

High temperatures and contact with incompatible materials.

### 10.5 Incompatible materials

Strong oxidizing agents, strong alkalis, peroxides, acids

### 10.6 Hazardous decomposition products

Thermal decomposition products include oxides of carbon, zinc oxide and zinc oxide fumes.

---

**SECTION 11 - TOXICOLOGICAL INFORMATION**

### 11.1 Information on toxicological effects

**Acute Oral Toxicity**

LD50, rat: >10,000 mg/kg

**Acute inhalation toxicity**

No data available

**Acute dermal toxicity**

No data available

**Skin irritation/corrosion**

May cause skin irritation
Sensitization
No data available
Genotoxicity in vitro
No data available
Mutagenicity
No data available
Specific organ toxicity - single exposure
No data available
Specific organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available

11.2 Further information
No component of this product present at levels greater than or equal to the 0.1% threshold (de minimis) is identified as a probable, possible, potential or confirmed carcinogen by ACGIH, IARC, NTP or OSHA. No data is available regarding the mutagenicity or teratogenicity of this product, nor is there any available data that indicates that it causes adverse developmental or fertility effects.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity
Expected to be very toxic to aquatic organisms, and may cause with long term adverse effects in the environment.

12.2 Persistence and degradability
Not readily biodegradable. Zinc ions are inorganic; therefore, biodegradation is not applicable to them.

12.3 Bioaccumulation potential
In some fish it has been observed that the level of zinc found in their bodies did not directly relate to the exposure concentrations. The bioaccumulation of zinc in fish is inversely related to their aqueous exposure. This evidence suggests that fish placed in environments with lower zinc concentrations can sequester zinc in their bodies.

12.4 Mobility in soil
Zinc is adsorbed by the soil; higher concentrations may travel into deeper soil layers.

12.5 Results of PBT and vPvB assessment
No data available

12.6 Other adverse effects
Additional ecological information
Do not allow material to run into surface waters, wastewater or soil.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Methods of disposal: The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Disposal of surplus and non-recyclable product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Avoid dispersal of spill material or runoff and contact with soil, waterways, drains and sewers.
RCRA P-Series: No listing
RCRA U-Series: No listing

SECTION 14 - TRANSPORT INFORMATION

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

NOT REGULATED FOR TRANSPORT

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture
U. S. Federal Regulations
OSHA Hazard Communication Standard: This material is not classified as highly hazardous in accordance with OSHA 29 CRF 1910.1200.
EPA Federal Insecticide, Fungicide and Rodenticide Act: This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.
Toxic Substance Control Act (TSCA) Inventory: This substance is listed on the TSCA Inventory. It is not subject to TSCA 12(b) Export Notification.
Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.4(f)(2) and Chemical Code Number Not listed
Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number
Not listed
Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals
Not listed

Superfund Amendments and Reauthorization Act (SARA)
SARA 313 Information: Zinc Stearate (CAS #557-05-1), listed as Zinc Compounds (N982), is subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.

SARA Section 311/312 Hazard Categories: Acute

SARA 302/304 Extremely Hazardous Substance: None of the chemicals in this product are subject to reporting requirements of these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification: None of the chemicals in this product are subject to reporting requirements of these sections of Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following: CERCLA reportable substance(s):

European Economic Community

Zinc and its compounds (e.g. Zinc Stearate) are listed on the NPRI.

Canadian National Pollutant Release Inventory (NPRI):

WGK, Germany (Water danger/protection):

Canada

WHMIS Hazard Symbol and Classification: Uncontrolled product according to WHMIS classification criteria.

Canadian National Pollutant Release Inventory (NPRI): Zinc and its compounds (e.g. Zinc Stearate) are listed on the NPRI.

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986
This product contains no chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm.

Other U.S. State Inventories

Zinc Stearate (CAS #557-05-1) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: MA, MN, NJ, PA, WA.

Canada

WHMIS Hazard Symbol and Classification: Uncontrolled product according to WHMIS classification criteria.

Canadian National Pollutant Release Inventory (NPRI): Zinc and its compounds (e.g. Zinc Stearate) are listed on the NPRI.

European Economic Community

WGK, Germany (Water danger/protection): 1 (Low hazard to waters)

Global Chemical Inventory Lists

<table>
<thead>
<tr>
<th>Country</th>
<th>Inventory Name</th>
<th>Inventory Listing*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substance List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substance List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>Inventory of New and Existing Chemicals (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States</td>
<td>Toxic Substance Control Act (TSCA)</td>
<td>Yes</td>
</tr>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory of Chemicals (NZIoC)</td>
<td>Yes</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Yes - All components of this product are in compliance with the inventory requirements administered by the governing country.
No - One or more components of this product are not on the inventory or are exempt from listing.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out.

SECTION 16 - OTHER INFORMATION

Hazardous Material Information System (HMIS)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

HMIS Hazard Rating Legend
0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe " * Chronic Health Hazard

Flammability

Health
0 0 0

NFPA Hazard Rating Legend
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

Instability

Special

Abbreviation Key

ACGIH American Conference of Governmental Industrial Hygienists
ADR Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)
CAS Chemical Abstract Services
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