Polymer Add (Thailand) Co.,Ltd.

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MATERIAL SAFETY DATA SHEET
ZINC STEARATE
DRY MICRONISED POWDER

1. Identification

Item	Information
Product name	Zinc Stearate, Micronised
Chemical name	Zinc salt of stearic acid
Synonyms	Zinc distearate; zinc octadecanoate
CAS number	557-05-1
EC number	209-151-9
Recommended use	Industrial processing lubricant, mould release agent, powdering agent, dispersing aid and hydrophobic additive

2. Hazard identification

Principal physical hazard: Combustible dust. Finely dispersed powder can form explosive mixtures with air.

Health hazards: Dust may irritate the eyes, skin and respiratory passages and cause coughing.

Other hazards: Spilled powder may make floors slippery.

Safety precautions: Avoid airborne dust clouds, ignition sources and electrostatic discharge. Prevent uncontrolled environmental release.

Formal classification and label requirements depend on the applicable regulatory system.

3. Composition / information on ingredients

Substance	CAS number	EC number
Zinc stearate — principal constituent	557-05-1	209-151-9

4. First-aid measures

- **Inhalation:** Move to fresh air and allow the person to rest. Obtain medical attention if coughing or breathing discomfort occurs. If breathing stops, trained personnel should provide resuscitation and obtain emergency assistance.
- **Eye contact:** Rinse gently with clean water for at least 15 minutes. Remove contact lenses if easy. Seek medical attention if irritation persists.
- **Skin contact:** Wash with soap and water. Remove contaminated clothing.
- **Ingestion:** Rinse mouth and obtain medical advice. Do not induce vomiting without medical direction. Give nothing by mouth to an unconscious person.
- **Medical treatment:** Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media: Water spray, foam, dry chemical or carbon dioxide.

Specific hazards: Suspended dust can ignite explosively. Burning may produce zinc oxide fumes, carbon monoxide, carbon dioxide and irritating gases.

Firefighter protection: Wear full protective equipment and self-contained breathing apparatus. Avoid dispersing deposited powder and contain contaminated firefighting water.

6. Accidental release measures

Remove ignition sources and ventilate the area. Avoid raising dust and use suitable protective equipment.

Collect using industrial vacuum equipment suitable for combustible dust, or carefully gather small spills into closed containers. Do not use compressed air for cleaning.

Prevent entry into drains, waterways and soil. Clean remaining deposits to remove slipping hazards.

7. Handling and storage

Use enclosed transfer or local exhaust ventilation during powder charging and mixing. Prevent dust accumulation and electrostatic charging. Earth and bond relevant equipment.

Store tightly closed in a cool, dry, ventilated area away from heat, sparks, flames, strong oxidisers and acids.

Avoid breathing dust. Wash hands before eating, drinking or smoking.

8. Exposure controls / personal protection

Exposure fraction	**Occupational reference eight-hour TWA**
Inhalable particulate	10 mg/m^3
Respirable particulate	3 mg/m^3

Apply the occupational exposure limits governing the workplace.

Protection	**Recommendation**
Engineering controls	Enclosed handling and local dust extraction
Eyes	Safety glasses; dust goggles where exposure is significant
Hands	Suitable protective gloves
Body	Protective work clothing
Respiratory	Properly selected and fitted particulate respirator where ventilation does not adequately control dust

9. Physical and chemical properties

Property	Typical information
Physical state	Solid powder
Appearance	Fine white to off-white powder
Odour	Slight characteristic fatty odour
Molecular formula	$Zn(C_{18}H_{35}O_2)_2$
Molecular weight	Approximately 632.34 g/mol
Melting range	Approximately 118–125°C
Bulk density	Approximately 260–360 kg/m^3
Specific gravity	Approximately 1.1
Water solubility	Practically insoluble
Vapour pressure	Negligible at ambient temperature
Flammability	Combustible
Dust explosion potential	Possible when fine powder is dispersed in air
Flash point and autoignition temperature	Not established in this generic sheet
Dust ignition and explosion parameters	Not established
pH and decomposition temperature	Not established

10. Stability and reactivity

Stability: Stable under normal storage and handling conditions.

Conditions to avoid: Excessive heat, ignition sources, electrostatic discharge and airborne dust clouds.

Incompatible materials: Strong oxidising agents and acids.

Hazardous decomposition products: Zinc oxide fumes, carbon monoxide and carbon dioxide.

11. Toxicological information

Exposure may occur through inhalation, ingestion and skin or eye contact.

Dust may cause mechanical irritation and coughing. Repeated inhalation of airborne powder should be avoided.

Reported oral LD_{50}, rat: >5,000 mg/kg.

Information on sensitisation, reproductive toxicity and chronic effects is incomplete.

12. Ecological information

Avoid release into drains, surface water and soil. Uncontrolled release of zinc-containing material may cause adverse environmental effects. Low water solubility does not establish environmental harmlessness. Product-specific biodegradation and bioaccumulation data are not established here.

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13. Disposal considerations

Recover uncontaminated material where practical. Dispose of waste and contaminated packaging through an authorised waste-management route according to local requirements. Waste classification depends on use and contamination. Do not discharge to drains or burn openly.

14. Transport information

Item	General reference status
UN number	Not assigned
UN proper shipping name	Not applicable
Transport hazard class	Not applicable
Packing group	Not applicable
Road and rail	Not regulated as dangerous goods
Sea transport	Not regulated as dangerous goods
Air transport	Not regulated as dangerous goods

Keep packaging closed and protected from moisture and damage. Transport status must reflect the actual material being shipped.

15. Regulatory information

CAS number: 557-05-1
EC number: 209-151-9

Classification, labelling, occupational exposure and disposal requirements depend on the applicable jurisdiction. Industrial use does not automatically establish suitability for food-contact, pharmaceutical or cosmetic applications.

16. Other information

Prepared: Oct 2026

Review : Oct 2028

This generic sheet provides guidance for handling dry, micronised Zinc Stearate. It is not a quality specification or guarantee of performance. A formally issued SDS must include the responsible supplier and emergency contact details.