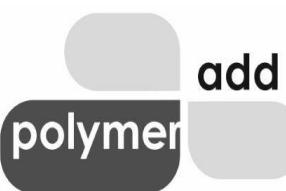


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## ZINC STEARATE (MICRONISED)

### SUPERIOR MOLD RELEASE WITHOUT STAINING OR FOULING

CAS Number	557-05-1
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#### Chemical Name and Synonyms

##### IUPAC Chemical Name:

Zinc bis(octadecanoate)

##### Common Industry / Trade Synonyms:

Zinc stearate

Zinc octadecanoate

Stearic acid, zinc salt

#### Physical and Chemical Properties

Property	Description
Appearance	White to off-white fine powder
Density	~1.09–1.15 g/cm <sup>3</sup>
Melting Range	120–130 °C
Solubility	Insoluble in water; dispersible in non-polar polymers
Particle Size Distribution (Micronised Grade)	D50: 3–7 µm D90: <15 µm D99: <25 µm

#### 5) Application-Specific Technical Discussion

##### 5.1 Specific Benefits for the Highlighted Application

Zinc stearate is selected for mold release applications where clean demolding is required without surface staining, mold fouling, or residue build-up on tooling.

- Clean and consistent release from metal mold surfaces
- Reduced risk of surface staining on finished parts
- Minimal residue build-up on molds and tooling
- Stable release performance over extended production cycles

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## 5.2 End Uses Directly Related to the Article Heading

- Injection moulding of thermoplastics
- Compression and transfer moulding of rubber compounds
- Elastomer moulding processes
- High-cavity and multi-cavity moulding operations
- Precision moulded parts requiring clean surface appearance

## 5.3 Key Physical, Chemical & Performance Parameters Relevant to This Application

- Metal soap molecular structure
- Controlled interfacial migration behaviour
- Moderate melting range suitable for moulding temperatures
- High hydrophobic character
- Low affinity for permanent adhesion to metal surfaces

## 5.4 Known Limitations

- Dosage optimisation required to avoid over-lubrication effects
- Not intended as a substitute for dedicated external spray release agents in all systems
- Performance dependent on mold surface finish and processing conditions

## 6) Regulatory Note

Regulatory status depends on grade, purity, and intended use. Food-contact and regional compliance listings, where applicable, are addressed in separate regulatory documentation.

## 7) Disclaimer

Information provided is for technical reference only.

No warranty of fitness for a particular purpose is expressed or implied.

Users are responsible for validation, processing trials, and regulatory compliance.

**Creation:** January 2026

**Next Technical Review:** January 2028

**END OF ARTICLE**