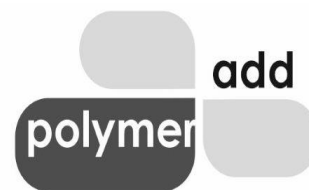


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ZINC STEARATE (MICRONISED)

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 ³
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.

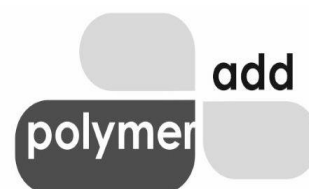
- Clean and consistent release from metal mold surfaces
- Reduced risk of surface staining on finished parts
- Minimal residue build-up on molds and tooling
- Stable release performance over extended production cycles

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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