



METALTEK
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SLIP ACTIVE AGENT (Erucamide, Oleamide)

INTRODUCTION

Slip or surface friction, expressed as Coefficient of Friction or CoF, measures the interaction between two polymer surfaces, or between the polymer surface and processing equipment. There are several factors affecting the development of friction including:

- ◆ Polymer type
- ◆ Process temperature and type
- ◆ Film gauge and structure
- ◆ Other present additives

High friction can result in difficulties with the processing of thin film, winding of film rolls, bag production and packaging operations.

SLIP AGENT TYPES

As slip agents, fatty acid amides (Oleamide, Erucamide and Stearamide) are normally used. The addition of slip agents can prevent film sticking and pulling helping to increase throughput.

Type	Melting Point (°C)
Oleamide	66 ~ 72
Erucamide	79 ~ 85
Stearamide	98 ~ 104

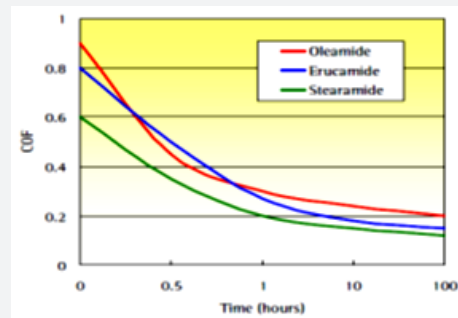


Figure: The effectiveness of slip agents in LDPE film

- ◆ Erucamide will provide films with a lower COF than Oleamide. Due to its lower vapor pressure and volatility, Erucamide is used in higher temperature processing applications, it also stays at the surface longer, not venting off as smoke.
- ◆ Oleamide migrates quicker than Erucamide. So, it is generally used where a low COF is needed in a short period of time.



- ◆ Stearamide is often used together with Erucamide or Oleamide to provide an anti-blocking effect when film transparency is very important.

SUPPLIED SLIP ACTIVE AGENTS GRADE

Vegetable base Erucamide and Oleamide.

APPLICATIONS/ BENEFITS/ PROPERTIES

Applications:

- ◆ Adhesive & Sealants
- ◆ Film production
- ◆ Inks

Benefits:

- ◆ High Slip
- ◆ Non-toxic
- ◆ Low volatility
- ◆ Mold release
- ◆ Scuff resistance
- ◆ Improve dispersion of fillers
- ◆ Excellent heat/ oxidative stability
- ◆ Prevent adhesive granules or films sticking together



Physical Properties	Units (SI)	Oleamide	Erucamide
Physical state		Off-white to light yellow, beads	Off-white to light yellow, beads
Boiling Point	°C	433	474
Melting Point	°C	70-78	77-85
Flash Point	°C	215	240
Specific gravity	g/cm ³ (90°C)	0.85	0.84
Amide purity	% min	98	98.5
Acid Value	% max	0.4	0.2
Iodine Value	%	85-90	72-78
Moisture	% max	0.1	0.1
Suitable for		Polyolefins/ Acrylics/ Vinyls	Polyolefins/ Acrylics/ Vinyls