



Technical Data Sheet (TDS)

LDPE Wax (Low Density Polyethylene Wax)

Product Identification

Item	Description
Product Name	LDPE Wax
Chemical Name	Low Density Polyethylene Wax
Chemical Family	Polyethylene Wax
Appearance	White Powder / Flakes / Granules
Product Type	Synthetic Polyolefin Wax
Application	Lubricant, Processing Aid, Dispersing Agent
Packaging	25 kg Bags, Jumbo Bags, Customized Packaging

Product Description

LDPE Wax (Low Density Polyethylene Wax) is a low molecular weight polyethylene wax produced through controlled polymerization or thermal degradation processes. Due to its branched molecular structure and lower density compared to HDPE wax, it provides excellent lubrication, dispersion, flow enhancement, and processing efficiency in a wide range of industrial applications.

Furthermore, LDPE Wax offers good compatibility with polymers, pigments, fillers, and additives. As a result, manufacturers use it extensively in PVC processing, masterbatch production, coatings, printing inks, rubber compounds, and hot melt adhesive formulations.



Typical Technical Specifications

Property	Unit	Typical Value
Appearance	—	White Powder / Flakes
Density @ 25°C	g/cm ³	0.91 – 0.94
Melting Point	°C	95 – 115
Viscosity @ 140°C	cps	100 – 1,500
Penetration (25°C)	dmm	2 – 15
Acid Value	mg KOH/g	≤ 5
Volatile Matter	%	≤ 1.0
Ash Content	%	≤ 0.10
Molecular Weight	g/mol	1,000 – 5,000
Color	—	White
Solubility in Water	—	Insoluble

Note: Values shown are typical industry ranges and should not be considered product specifications. Actual values may vary depending on grade and manufacturing process.

Key Features and Benefits

Excellent Lubrication

LDPE Wax acts as an effective internal and external lubricant. Consequently, it reduces friction during processing and improves material flow.

Superior Dispersion Performance

The wax promotes uniform distribution of pigments and fillers. As a result, manufacturers achieve better color consistency and formulation stability.

Low Melt Viscosity

Its low viscosity improves mixing efficiency and processing performance. Therefore, production lines can operate more efficiently.



Good Thermal Stability

LDPE Wax maintains stable performance at elevated processing temperatures. Furthermore, it helps ensure consistent manufacturing conditions.

Improved Surface Properties

The wax enhances surface smoothness, gloss, slip, and scratch resistance in various applications.

Broad Compatibility

LDPE Wax demonstrates good compatibility with:

- PVC compounds
- Polyolefins
- Pigments
- Fillers
- Adhesive systems
- Coating formulations

Typical Applications

PVC Processing

LDPE Wax is widely used as a processing lubricant in rigid and flexible PVC formulations.

Benefits

- Improved melt flow
- Reduced processing friction
- Enhanced surface finish
- Better mold release
- Increased production efficiency

Color Masterbatch

LDPE Wax serves as an effective dispersing aid for pigment concentrates.



Benefits

- Improved pigment wetting
- Better color dispersion
- Reduced agglomeration
- Enhanced color strength

Filler Masterbatch

The wax improves the incorporation of mineral fillers into polymer systems.

Benefits

- Improved filler dispersion
- Higher filler loading capability
- Reduced processing energy
- Better compound consistency

Hot Melt Adhesives

LDPE Wax helps regulate viscosity and application performance in adhesive systems.

Benefits

- Improved flow characteristics
- Enhanced processing stability
- Better application consistency
- Controlled viscosity

Coatings

LDPE Wax contributes to improved coating durability and appearance.

Benefits

- Scratch resistance
- Slip enhancement
- Surface smoothness



- Improved wear resistance

Printing Inks

The wax functions as a surface modifier in ink formulations.

Benefits

- Rub resistance
- Scuff resistance
- Slip improvement
- Enhanced print durability

Rubber Processing

LDPE Wax assists processing and mixing operations in rubber compounds.

Benefits

- Improved flow properties
- Reduced friction
- Better process stability
- Enhanced production efficiency

Recommended Dosage

Application	Typical Dosage (%)
PVC Processing	0.3 – 2.0
Color Masterbatch	1.0 – 5.0
Filler Masterbatch	1.0 – 4.0
Hot Melt Adhesives	1.0 – 10.0
Coatings	0.5 – 3.0
Printing Inks	0.5 – 3.0



Application	Typical Dosage (%)
Rubber Compounds	0.5 – 2.0

Actual dosage should be optimized through laboratory and production trials.

Storage and Handling

Store LDPE Wax in:

- Cool and dry conditions
- Well-ventilated warehouses
- Original sealed packaging

Avoid:

- Direct sunlight
- Excessive heat
- Open flames
- Strong oxidizing agents

Shelf Life

Under recommended storage conditions, LDPE Wax typically maintains its properties for **24 months** from the date of manufacture.

Packaging

Standard packaging options include:

- 25 kg paper bags
- 25 kg woven polypropylene bags
- 500 kg jumbo bags
- 1,000 kg jumbo bags

Customized packaging options may be available upon request.



Regulatory and Compliance

LDPE Wax is generally supplied for industrial use and may be available with supporting documentation such as:

- Technical Data Sheet (TDS)
- Safety Data Sheet (SDS/MSDS)
- Certificate of Analysis (COA)
- REACH-related documentation (where applicable)

Customers should verify local regulatory requirements before use.

Product Advantages Summary

- ✓ Excellent lubrication performance
- ✓ Improved pigment and filler dispersion
- ✓ Low melt viscosity
- ✓ Good thermal stability
- ✓ Enhanced processing efficiency
- ✓ Improved surface appearance
- ✓ Broad formulation compatibility
- ✓ Suitable for PVC, masterbatch, coatings, inks, adhesives, and rubber applications

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Intended Use: Industrial Applications Only