

Product Data Sheet

Lucofin® 1400PN

1. Product description

Lucofin®1400PN is a polar copolymer with low crystallinity consisting of ethylene and n-butyl acrylate.

Due to its chemical structure Lucofin®1400PN is softer and more flexible than ethylene homopolymers with comparable density. Lucofin®1400PN is supplied as non-colored granules.

2. Product properties

Lucofin®1400PN is used as component in multilayer film applications or as a polymer modifier to improve low temperature crack resistance, stress crack resistance ESCR1, weldability, and processability.

3. Product advantages

- easy processing on standard processing equipment
- excellent wetting properties of fillers with high specific surface like carbon black
- flexibility
- high impact strength at low temperatures (- 40°C)
- thermal stability (no corrosive by-products)
- good mechanical properties
- high end use temperature
- good compatibility with other polymers and high filler acceptance
- environmentally friendly

4. Applications

Lucofin®1400PN is used primarily for injection molding applications but is also suited for extrusion purposes. It can be used as carrier resin for high loaded pigment and carbon black masterbatches in order to improve the melt index in combination with excellent dispersion and can be used in extrusion coating in order to improve hot tack properties of the final product.

Lucofin®1400PN can be used in injection molding for thin wall packaging.

5. Food Approval

This product complies with the relevant requirements of regulation 1935/2004 / EC. This product complies with the relevant requirements of Regulation 2023/2006 / EC (GMP). This product complies with the relevant requirements of the

amended regulation 10/2011 / EC (PIM) (last regulation 2016/1416 / EC.

Information on FDA compliance on request.

6. Processing

Lucofin®1400PN is suited for conventional standard processing equipment. We recommend the following standard values for extrusion.

Compounding:	approx. 160° - 220°C
Extrusion Coatings:	approx. 160° - 270°C

With respect to its organoleptic suitability, the end user must and/or let conduct respective and appropriate tests due to the fact that Lucofin® 1400PN is to be regarded as not unproblematic.

7. Chemical resistance

Lucofin®1400PN is resistant to water and aqueous solutions, to salt as well as to dilute acids and bases. When exposed to aliphatic, aromatic and halogen-substituted hydrocarbons, Lucofin®1400PN may swell or dissolve to some degree.

8. Packaging

Granules in 25 kg bags, standard pallet 1.375 kg. Other packaging upon request.

9. Storage and handling

Lucofin®1400PN should be stored under dry conditions at a temperature below 40°C and protected from UV-light. Otherwise the packaging could be damaged or degradation may occur resulting in odor generation and color changes

¹ ESCR – Environmental Stress Crack Rate

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Technical data			
	Standard	Unit	Standard value
Density (23 °C)	ISO 1183-1	g/cm ³	0,924
MFR ⁴ (190 °C/2.16 kg)	ISO 1133-1	g/10 min	15
Comonomer n-BA ⁵	DIN 51451	%	17
Melting temperature	ISO 3146	°C	93
Vicat softening temperature A/50	ISO 306	°C	60
Module of Elasticity (23 °C)	ISO 178	MPa	25
Stress at break – Type 5 A	ISO 527-1, -2	MPa	8
Elongation at break – Type 5 A	ISO 527-1, -2	%	>600
Shore Hardness D	ISO 868	-	30

These standard values are typical values and should not be regarded as specifications.

² FFS – Form, Fill and Seal

³ FDA - Food and Drug Administration

⁴ MFR – Melt Flow Ratio

⁵ n-BA – n-Butyl-acrylate

⁶ NB – No Break

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