

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 suitable for many applications. Due to its high melt flow index, the coating properties of Lucofin®1400PN are excellent. It is particularly suitable for highly filled compounds, especially for conductive compounds for cable applications such as semi-con compounds. In addition to conductive carbon black compounds with a high specific surface area, filler and halogen-free flame-retardant compounds can also be produced well with Lucofin®1400PN. Lucofin®1400PN can also be used as a universal carrier for masterbatches.

In many cases, the use of Lucofin®1400PN in polymer compounds also shows an improvement in mechanical as well as adhesive and welding properties. It has good processing properties and can improve stress cracking resistance, low-temperature flexibility and weldability.

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

The material is mainly used in extrusion applications. Lucofin®1400PN is also ideal as a base polymer for compounds or for the impact modification of stiffer polymers. Lucofin®1400PN is characterized by high dispersibility with good flow properties. Lucofin®1400PN can be used as a carrier material for highly filled pigment or carbon black concentrates. Compounds based on Lucofin®1400PN are used in profile and cable extrusion.

Lucofin®1400PN is suitable for extrusion coating to improve hot-tack properties. Lucofin®1400PN can be used in injection molding for thin-walled packaging with long flow paths.

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

In the injection molding process, Lucofin®1400PN is processed at molding temperatures of 180° - 250 °C and mold temperatures of 10° - 40 °C.

7. Chemical resistance

Lucofin®1400PN is resistant to water and aqueous solutions, to salts and to diluted acids and bases. Lucofin®1400PN can be partially swollen or dissolved by aliphatic, aromatic and halogen-substituted hydrocarbons.

With regard to organoleptic/sensory suitability, we recommend application-related tests.

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

Disclaimer: The product mentioned herein is not intended to be used for medical, pharmaceutical or healthcare applications; and we do not support its use for such applications.

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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
E-Module	ISO 527	MPa	54
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 A	ISO 868	-	90
Shore Hardness D	ISO 868	-	30
These standard values are typical values and should not be regarded as specifications.			

¹ 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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