

Product Data Sheet

Lucofin® 1400MN Powder

1. Product description

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

Due to its chemical structure Lucofin®1400MN is softer and more flexible than ethylene homopolymers with comparable density. Lucofin®1400MN Powder is supplied as non-colored granules without any additives.

2. Product properties

Lucofin®1400MN Powder can be used for polymer modifications to improve:

- the compatibility and absorptive capacity of minerals, fillers, pigments and additives
- the flexibility in rotomolding applications
- the heat resistance of bitumen, without negative impact on flexibility at low temperatures

3. Product advantages

- easy processing with standard processing equipment
- improved flexibility
- enhanced impact strength at low temperature(- 40°C)
- thermal stability (no corrosive by-products)
- good mechanical properties
- high temperature resistant up to 300°C
- good compatibility and filler acceptance
- environmentally friendly

4. Applications

Lucofin®1400MN Powder is used primarily as additive in rotomoulding applications, for powder coatings and as bitumen modifier (PmB).

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

Compounding	approx. 160° - 290°C
Rotomolding	approx. 160° - 220°C
Coatings	approx. 160° - 270°C
Bitumen modification	approx. 160° - 240°C

7. Chemical resistance

Lucofin®1400MN 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®1400MN may swell or dissolve to some degree.

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

8. Packaging

In 20 kg bags, standard pallet 1.000 kg.

Other packaging upon request.

9. Storage and handling

Lucofin®1400MN Powder 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

We strongly recommend to use the material latest within 6 months after delivery. Storage time in excess of 6 months may have a negative impact on the processability and should be inspected according to quality assurance measures to ensure product's performance

Unfavorable storage conditions may also contribute to intensify the slight but characteristic odor of the polymer

.If the product is stored under different conditions, e.g. if the ambient temperature varies greatly and / or the humidity is high, moisture may condense inside the packaging. Under these circumstances, it is recommended to dry the product at max. 60°C.

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Technical data			
	Standard	Unit	Standard value
Density (23 °C)	ISO 1183	g/cm ³	0,924
MFR ¹ (190 °C/2.16 kg)	ISO 1133	g/10 min	7
Comonomer n-BA ²	DIN 51451	%	17
Melting temperature	ISO 3146	°C	95
Vicat softening temperature A/50	ISO 306	°C	60
Module of Elasticity (23 °C)	ISO 178	MPa	45
Stress at break	ISO 527	MPa	13
Elongation at break	ISO 527	%	>800
Particle size	ASTM D 1921	µm	500
Shore hardness D	ISO 868	-	32
Shore hardness A	ISO 868	-	88
Sieve analysis	ISO 4610	Sieve (> µm)	w-%
		0	0
		200	10
		400	34
		600	42
		850	14
These standard values are typical values and should not be regarded as specifications.			

¹ MFR – Melt Mass-Flow Rate

² n-BA – n-Butyl-acrylate

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