

# Product Data Sheet

## Lucofin® 1400MN

### 1. Product description

Lucofin®1400MN 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 is supplied as non-colored granules.

### 2. Product properties

Lucofin®1400MN is used as component in multilayer film applications or as a polymer modifier to improve low temperature crack resistance, stress crack resistance ESCR<sup>1</sup>, weldability, and processability.

### 3. Product advantages

- easy processing with standard processing equipment
- flexibility
- high impact strength at low temperatures (- 40°C)
- thermal stability (no corrosive by products)
- good mechanical properties
- high temperature resistance
- good compatibility to other polymers and high filler acceptance
- environmentally friendly

### 4. Applications

Lucofin®1400MN is used primarily for injection molding applications but is also suited for extrusion purposes. It is suitable for film extrusion; respective products are films for the construction and agriculture industries FFS<sup>2</sup> bags, and for food regulations packaging applications. Moreover, Lucofin®1400MN is ideally suited as base resin for compounding or as impact modifier for stiff polymers. Compounds based on Lucofin®1400MN can be used for profile and cable extrusion purposes and for the production of sealing membranes. Furthermore, it can be used for cross-linked closed cell foams.

### 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 is suited for conventional standard processing equipment. We recommend the following standard values for extrusion.

Profiles and hoses:	approx. 160° - 200°C
Blow molding:	approx. 160° - 200°C
Blown films	approx. 160° - 190°C
Flat-sheet composites:	approx. 160° - 220°C
Coatings:	approx. 160° - 270°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 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. The product is also available as powder.

### 9. Storage and handling

Lucofin®1400MN 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.

<sup>1</sup> ESCR – Environmental Stress Crack Rate

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. To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication. However, we do not assume any liability whatsoever for the accuracy and completeness of these information. LUCOBIT AG gives no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose. It is the customer's responsibility to inspect and test our products in order to satisfy himself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use as well as the appropriate processing and handling of our products. No liability can be accepted with respect to the use of LUCOBIT AG products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any other third party materials.

# Product Data Sheet

## Lucofin<sup>®</sup> 1400MN

Technical data			
	Standard	Unit	Standard value
Density (23 °C)	ISO 1183-1	g/cm <sup>3</sup>	0,924
MFR <sup>4</sup> (190 °C/2.16 kg)	ISO 1133-1	g/10 min	7
Comonomer n-BA <sup>5</sup>	DIN 51451	%	17
Melting temperature	ISO 3146	°C	95
Vicat softening temperature A/50	ISO 306	°C	60
ESCR	ASTM D1693	hrs	>1600
Module of Elasticity (23 °C)	ISO 178	MPa	42
Stress at break – Type 5 A	ISO 527-1, -2	MPa	11
Elongation at break – Type 5 A	ISO 527-1, -2	%	>800
Shore Hardness D	ISO 868	-	30
Notched Izod Impact Strength (-10°C)	ISO 180	kJ/m <sup>2</sup>	NB <sup>6</sup>
HAZE	ASTM D1003	%	8
Tensile strength MD (50µm blow ratio 1:2,5)	ISO 527-1, -2, -3	MPa	17
Tensile strength TD (50µm blow ratio 1:2,5)	ISO 527-1, -2, -3	MPa	16
Elongation at brake MD (50µm blow ratio 1:2,5)	ISO 527-1, -2, -3	%	450
Elongation at brake TD (50µm blow ratio 1:2,5)	ISO 527-1, -2, -3	%	600

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

<sup>2</sup> FFS – Form, Fill and Seal

<sup>3</sup> FDA - Food and Drug Administration

<sup>4</sup> MFR – Melt Flow Ratio

<sup>5</sup> n-BA – n-Butyl-acrylate

<sup>6</sup> NB – No Break

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. To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication. However, we do not assume any liability whatsoever for the accuracy and completeness of these information. LUCOBIT AG gives no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose. It is the customer's responsibility to inspect and test our products in order to satisfy himself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use as well as the appropriate processing and handling of our products. No liability can be accepted with respect to the use of LUCOBIT AG products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any other third party materials.