

# Product Data Sheet Lucofin® 1400HN

## Product description

Lucofin 1400HN is a polar copolymer consisting of ethylene and butyl acrylate with low crystallinity. Due to its chemical structure Lucofin 1400HN is softer and more flexible than ethylene homopolymers with comparable density. Lucofin 1400HN is supplied as uncoloured granules.

## Product properties

Lucofin 1400HN is used as component in multi-layer film constructions or as a polymer modifier to improve splitting resistance, environmental stress crack resistance ESCR, resistance to low temperatures, weldability, and processability.

## Product advantages

- easy processing on standard processing equipment
- flexibility
- impact strength at low temperatures (- 40 °C)
- thermal stability of polymer (no corrosive by products)
- good mechanical properties high end use temperature
- good compatibility and filler acceptance
- good organoleptics
- environmentally sound

## Applications

Lucofin 1400HN is used primarily for extrusion applications. In the field of film extrusion it is used for films for the construction and agricultural industry, FFS bags, but also for food packaging films. In addition, Lucofin 1400HN is ideally suited as a base resin for compounds or as an impact modifier for stiff polymers. Compounds based on Lucofin 1400HN can be used for profile and cable extrusion purposes and for the production of sealing membranes. Furthermore Lucofin 1400HN is used for X-linked closed cell foam applications.

## Processing

Lucofin 1400HN can be processed on conventional standard processing equipment. We recommend the following standard values for extrusion:

Profiles and hoses:	approx. 160° - 200 °C
Blow moulding:	approx. 160° - 200 °C
Blown films:	approx. 160° - 190 °C
Flat-sheet composites:	approx. 160° - 230 °C
Coatings:	approx. 160° - 270 °C

For injection moulding Lucofin 1400HN is processed at melt temperatures ranging from 180° - 250 °C and mould temperatures from 10° - 40 °C.

## Packaging

Granules in 25 kg bags, other packaging upon request. The product is also available as powder.

## Chemical resistance

Lucofin 1400HN is resistant to water and aqueous solutions, salt as well as to dilute acids and bases. When exposed to aliphatic, aromatic and halogen-substituted hydrocarbons Lucofin 1400HN may swell or dissolve to a certain extent.

## Food Legislation

Lucofin 1400HN meets the food contact regulations in most countries.

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Typical Properties			
	Standard	Unit	Standard value
Density (23 °C)	ISO 1183	g/cm <sup>3</sup>	0.924
MFR (190 °C/2.16 kg)	ISO 1133	g/10 min	1.4
Comonomer BA	DIN 51451	%	16
Melting temperature	ISO 3146	°C	96
Vicat softening temperature A/50	ISO 306	°C	70
Module of Elasticity (23 °)	ISO 527	MPa	62
Yield strain	ISO 527	%	14.5
Yield stress	ISO 527	MPa	4
Ball indentation hardness H 49/30	ISO 2039-1	MPa	8
ESCR (ASTM-Fo)	ASTM D	h	> 1,000
Shore Hardness D	ISO 868	-	34
Shore Hardness A	ISO 868	-	90
These standard values are typical values and should not be regarded as specifications.			

## Note

The information provided in this document is based on our product tests and present technical knowledge. It does not release purchasers from the responsibility of carrying out their receiving inspections. Neither does it imply any binding assurance of suitability of our products for a particular purpose. As LUCOBIT cannot anticipate or control the many different conditions under which this product may be processed and used this information does not relieve processors from their own tests and investigations. Any proprietary rights as well as existing legislation shall be observed.