

LOTADER[®] 4700

TERPOLYMER Ethylene – Acrylic Ester– Maleic Anhydride

Description

LOTADER 4700 is a random terpolymer of Ethylene, Acrylic Ester and Maleic Anhydride, polymerized under high pressure in an autoclave process. Comonomer content is high.

Main applications

Due to its properties (reactivity, softness), **LOTADER 4700** is an additive (toughener) of choice in order to improve the impact strength of polyamides (PA6, PA66, PA12 etc.). It can also be used as a compatibilizer for PA/PO blends.

Typical characteristics

Characteristics	Value	Unit	Test Method
Melt index (190°C / 2,16 kg)	7	g/10mn	ASTM D 1238
Ethyl Acrylate content	29	% wt	IRTF (internal)
Maleic Anhydride content	1.3	% wt	IRTF (internal)

Main properties

- Acrylic Ester brings softness and polarity, while keeping high thermal stability during processing.
- The high content of acrylic ester leads to high flexibility (low crystallinity) and high impact absorption behaviour.
- Maleic Anhydride gives reactivity (versus OH and NH₂ groups), leading to optimal dispersion during melt mixing with engineering thermoplastics (mainly polyamides).
- As an ethylene copolymer, **LOTADER 4700** is compatible with LDPE in all proportions, and with almost all other ethylene copolymers.

Processing

- Heat stability of acrylate comonomers allows processing temperatures as high as for polyamides, which is the main material using **LOTADER 4700** as impact modifier.
- **LOTADER 4700** is not corrosive. However, to minimize the generation of gels, it is recommended to purge the equipment after a run is completed.

Physical properties

Characteristics	Value	Unit	Test Method
Density (23°C)	0.94	g/cm ³	ISO 1183
Acid Index	11	mg KOH/g	Titration
Melting point	65	°C	DSC
Vicat softening point (1 kg)	< 40	°C	ASTM D 1525 / ISO 306
Ring & Ball temperature	145	°C	ASTM E28
Elongation at break (1)	800	%	ASTM D 638 / ISO R 527
Tensile strength at break (1)	5.5	MPa	ASTM D 638 / ISO R 527
Flexural modulus (1)	< 30	MPa	ASTM D 790 / ISO 178
Hardness Shore D (1)	14	-	ASTM D 2240

(1) On compression molded samples.

Packaging

LOTADER 4700 is commonly packed in 25 kg waterproof bags or 500 kg rigid containers with waterproof liner. It is recommended to reseal the bag or the liner after use to protect **LOTADER 4700** against moisture.

Security / Precautions of use

A safety data sheet as well as information on handling and storage of the **LOTADER 4700** are available close to your correspondent ARKEMA or on the site www.arkemagroup.com under heading FDS.

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