

LOTADER[®] 4720

TERPOLYMER Ethylene – Acrylic Ester– Maleic Anhydride

Description

LOTADER 4720 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 4720** is an additive (toughener) of choice in order to improve the impact strength of polyamide 6. It can also be use 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	0.3	% 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 cristallinity) and high impact absorption behaviour.
- Maleic Anhydride gives reactivity (versus OH and NH₂ groups), leading to optimale dispersion during melt mixing with engineering thermoplastics (mainly polyamide 6).
- As an ethylene copolymer, **LOTADER 4720** 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 polyamide 6, which is the main material using **LOTADER 4720** as impact modifier.
- **LOTADER 4720** 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	2.5	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)	6	MPa	ASTM D 638 / ISO R 527
Flexural modulus (1)	< 30	MPa	ASTM D 790 / ISO 178
Hardness Shore A (1)	70	-	ASTM D 2240
Hardness Shore D (1)	19	-	ASTM D 2240

(1) On compression molded samples.

Packaging

LOTADER 4720 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 4720** against moisture.

Security / Precautions of use

A safety data sheet as well as information on handling and storage of the **LOTADER 4720** are available close to your correspondent ARKEMA or on the site www.arkemagroup.com under heading FDS.

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Technical Polymers Division
4/8, cours Michelet – La Défense 10
92800 Puteaux - France
www.arkemagroup.com

www.lotader.com