LOTADER® AX 8900

TERPOLYMER Ethylene – Acrylic Ester– Glycidyl Methacrylate (GMA)

Description

LOTADER® AX 8900 is a random terpolymer of ethylene, acrylic ester and glycidyl methacrylate, polymerized under high pressure in an autoclave process. Comonomer content is high.

Main applications

Due to its properties (reactivity, softness), **LOTADER® AX 8900** is an additive (toughener) of choice in order to improve the impact strength of engineering thermoplastics like PA, Polyesters (PBT, PET.), PC/PBT and PC/ABS alloys, PPS. It can also be use as a compatibilizer for Polyesters/Polyolefins blends and as an adhesive for some laminate structures.

Typical characteristics

Characteristics	Value	Unit	Test Method
Melt index (190°C / 2,16 kg)	6	g/10mn	ASTM D 1238
Methyl Acrylate content	24	% wt	FTIR (internal)
Glycidyl Methacrylate content	8	% wt	FTIR (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.
- Glycidyl methacrylate gives reactivity (versus OH, COOH and NH_2 groups), leading to optimale dispersion during melt mixing with engineering thermoplastics.
- As an ethylene copolymer, **LOTADER® AX 8900** is compatible with LDPE in all proportions, and with almost all other ethylene copolymers.
- Good adhesion on PET, PBT, PPS, metal, paper, glass..

Processing

- Heat stability of acrylate comonomers allows processing temperatures as high as for polyesters (PBT, PET) and PPS, which are the main material using **LOTADER® AX 8900** as impact modifier. Nevertheless, to minimize the generation of gels, it is recommended to purge the equipment after a run is completed as **LOTADER® AX 8900** is able to crosslink with time and temperature.
- **LOTADER® AX 8900** is not corrosive.

Warning

LOTADER AX 8900 reacts with maleic anhydride and acid containing polymers. This reaction can be the cause of gels or can block an extruder if not controlled. Extruders must be purged thoroughly before and after extruding Lotader AX 8900.

Physical properties

Characteristics	Value	Unit	Test Method
Density (23°C)	0.94	g/cm^3	ISO 1183
Melting point	65 (140)	°C (°F)	DSC
Vicat softening point (1 kg)	< 40 (< 104)	°C (°F)	ASTM D 1525 / ISO 306
Young's Modulus	8	MPa	ASTM D 638 Type IV
Elongation at break (1)	1100	%	ASTM D 638 Type IV
Tensile strength at break (1)	4	MPa	ASTM D 638 Type IV
Flexural modulus (1)	< 30	MPa	ASTM D 790 / ISO 178
Hardness Shore A (1) (1 second)	64	-	ASTM D 2240
Hardness Shore D (1) (1 second)	18	-	ASTM D 2240

(1) On compression molded samples.

Packaging

LOTADER® AX 8900 is commonly packed in 25 kg waterproof bags or 500 kg rigid containers with waterproof liner. During storage, the material must be kept out of moisture in an aerated building at a temperature lower than 45°C (112°F).

Security / Precautions of use

A safety data sheet as well as information on handling and storage of the **LOTADER® AX 8900** are available close to your correspondent ARKEMA or on the site www.arkema.com under heading FDS.

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