

## Ethylene – Methyl Acrylate – Glycidyl Methacrylate terpolymer

### Description

LOTADER<sup>®</sup> AX8900 is a random terpolymer of ethylene, methyl acrylate and glycidyl methacrylate, polymerized under high-pressure in an autoclave process.

- 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.
- Glycidyl methacrylate gives reactivity (versus OH, COOH and NH<sub>2</sub> groups), leading to optimal dispersion during melt mixing with engineering thermoplastics.
- As an ethylene copolymer, LOTADER<sup>®</sup> AX8900 is compatible with LDPE in all proportions, and with almost all other ethylene copolymers.
- LOTADER<sup>®</sup> AX8900 exhibits good adhesion on PET, PBT, PPS, metal, paper, and glass.

### Main applications

Due to its properties, LOTADER<sup>®</sup> AX8900 is suitable as additive (toughener) to improve the impact strength of engineering thermoplastics like polyesters (PBT, PET), PC/PBT and PC/ABS alloys, PPS. It can also be used as a compatibilizer for polyesters/polyolefins blends and in some formulated adhesive tapes.

### Typical properties

Characteristics	Value	Unit	Test Method
Melt index (190°C / 2.16 kg)	6	g/10min	ISO 1133 / ASTM D1238
Methyl Acrylate content	24	% Wt	FTIR (internal)
Glycidyl Methacrylate content	8	% Wt	FTIR (internal)
Density (23°C)	0.94	g/cm <sup>3</sup>	ISO 1183 / ASTM D1238
Melting point	65	°C	ISO 11357-3
Vicat softening point <sup>(1)</sup>	<40	°C	ISO 306 / ASTM D1525
Flexural modulus <sup>(1)</sup>	<30	MPa	ISO 178 / ASTM D790
Elongation at break <sup>(1)</sup>	1100	%	ISO 527-2 / ASTM D638
Tensile strength at break <sup>(1)</sup>	4	MPa	ISO 527-2 / ASTM D638
Hardness Shore A/D (at 1s) <sup>(1)</sup>	64/18	-	ISO 868 / ASTM D2240

<sup>(1)</sup> On compression molded samples.

### 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<sup>®</sup> AX8900 as impact modifier.

**CAUTION: LOTADER<sup>®</sup> AX8900 reacts with polymers containing maleic anhydride and acid. This reaction may generate gels or can block an extruder if not controlled. Extruders must be thoroughly purged before and after extruding LOTADER<sup>®</sup> AX8900.**

### Storage, handling and safety

LOTADER<sup>®</sup> AX8900 should be stored in standard conditions and protected from UV-light. Improper storage conditions may cause degradation and could have consequences on physical properties of the product. Due to its physical properties (Vicat temperature <40°C), it may be possible that the product shows some caking. This is particularly true during summer time.

Safety data sheet as well as information on handling and storage of the LOTADER<sup>®</sup> AX8900 is available upon request to your ARKEMA representative or on the web site [www.lotader.com](http://www.lotader.com).

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