

LOTADER[®] 4210

TERPOLYMER Ethylene – Acrylic Ester– Maleic Anhydride

Description

LOTADER 4210 is a random terpolymer of Ethylene, Acrylic Ester and Maleic Anhydride, polymerized by high-pressure autoclave process.

Main applications

LOTADER 4210 is a versatile adhesive for extrusion coating or lamination, designed as :

- Concentrate to be used in dry blend with LDPE. **LOTADER 4210** improves adhesion of LDPE on alu foils, metallized or primerized films.
- Ready for use resin to be used pure. **LOTADER 4210** gives excellent adhesion on substrates like alu foil, metallized plastics, paper, board, PE and some plastic films.

Typical characteristics

Characteristics	Value	Unit	Test Method
Melt index (190°C / 2,16 kg)	9	g/10mn	ASTM D 1238
Butyl Acrylate content	6.5	% wt	IRTF (internal)
Maleic Anhydride content	3.6	% wt	IRTF (internal)

Main properties

- As ethylene copolymer, **LOTADER 4210** is compatible with LDPE in all proportions, and with almost all other ethylene copolymers.
- Acrylic Ester brings softness and polarity, while keeping high thermal stability during processing.
- Maleic Anhydride gives reactivity, leading to very versatile adhesive properties to polar and non polar substrates in coating / lamination, and to molten polymers in coextrusion.
- As a result of high pressure polymerization in autoclave reactor, **LOTADER 4210** molecular structure and rheology are remarkably suitable for extrusion coating / lamination: low neck-in, excellent melt stability and drawability.

Processing

- Standard polyolefin extrusion equipment can be used for **LOTADER 4210**, which has the same processability as LDPE and is not corrosive.
- Heat stability of acrylate comonomers allows processing temperatures as high as for LDPE. Recommended temperature ranges from 270°C up to 320 – 330°C.
- Purging **LOTADER 4210** is readily achieved using LDPE, and it is recommended to do it before shutdown.

Physical properties

Characteristics	Value	Unit	Test Method
Density (23°C)	0.94	g/cm ³	ISO 1183
Melting point	105	°C	DSC
Vicat softening point (1 kg)	69	°C	ASTM D 1525 / ISO 306
Elongation at break (1)	650	%	ASTM D 638 / ISO R 527
Tensile strength at break (1)	10	MPa	ASTM D 638 / ISO R 527
Flexural modulus (1)	120	MPa	ASTM D 790 / ISO 178
Hardness Shore D (1)	44	-	ASTM D 2240
Brittle point	< -50	°C	ASTM D 726

(1) On compression molded samples.

Packaging

LOTADER 4210 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 partial use to protect **LOTADER 4210** against moisture. During storage, the material must be kept out of moisture in an aerated building at a temperature lower than 50°C (122°F).

Security / Precautions of use

A safety data sheet as well as information on handling and storage of the **LOTADER 4210** are available close to your correspondent ARKEMA or on the site www.arkemagroup.com under heading FDS.

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