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LOTADER® 3410

TERPOLYMER Ethylene – Acrylic Ester– Maleic Anhydride

Description

LOTADER 3410 is a random terpolymer of Ethylene, Acrylic Ester and Maleic Anhydride, polymerized by high-pressure autoclave process.

Main applications

LOTADER 3410 is a versatile adhesive for extrusion coating or lamination, designed as :

- Concentrate to be used in dry blend with LDPE. **LOTADER 3410** improves adhesion of LDPE on alu foils, metallized or primerized films and some plastic films.
- Ready for use resin to be used pure. **LOTADER 3410** gives excellent adhesion on substrates like alu foil, metallized plastics, paper, board, PE and many plastic films.
- Coextrusion tie layer for PE/PA and PE/EVOH in extrusion coating process.

Typical characteristics

Characteristics	Value	Unit	Test Method
Melt index (190°C / 2,16 kg)	5	g/10mn	ASTM D 1238
Butyl Acrylate content	17	% wt	IRTF (internal)
Maleic Anhydride content	3.1	% wt	IRTF (internal)

Main properties

- As ethylene copolymer, **LOTADER 3410** 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.
- Maleïc 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 3410** 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 3410**, 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 3410** 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	89	°C	DSC
Vicat softening point (1 kg)	47	°C	ASTM D 1525 / ISO 306
Elongation at break (1)	700	%	ASTM D 638 / ISO R 527
Tensile strength at break (1)	8	MPa	ASTM D 638 / ISO R 527
Flexural modulus (1)	60	MPa	ASTM D 790 / ISO 178
Hardness Shore D (1)	37	-	ASTM D 2240
Brittle point	< -50	°C	ASTM D 726

(1) On compression molded samples.

Packaging

LOTADER 3410 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 3410** 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).