

LOTADER[®] 4403

TERPOLYMER Ethylene – Acrylic Ester– Maleic Anhydride

DESCRIPTION

LOTADER 4403 is a random terpolymer of Ethylene, Acrylic Ester and Maleic Anhydride, polymerized by high pressure autoclave process.

Main applications

LOTADER 4403 is a versatile adhesive for extrusion lamination, designed as a ready for use resin to be used pure. **LOTADER 4403** gives excellent adhesion to aluminium foil in the extrusion lamination process. It also bonds to PE films, paper, board, metallized plastics and corona treated plastics like OPP, CPP and OPA. Typical uses are :

- Adhesive for extrusion lamination of polar and non polar films and foils, particularly for laminates involving aluminium.
- Adhesive for coextrusion coating of LDPE / Tie / PA / tie onto paper or films.

Typical characteristics

Characteristics	Value	Unit	Test Method
Melt index (190°C / 2,16 kg)	9	g/10mn	ASTM D 1238
Methyl Acrylate content	20	% wt	IRTF (internal)
Maleic Anhydride content	0.3	% wt	IRTF (internal)

Main properties

- As ethylene copolymer, **LOTADER 4403** 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 4403** 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 4403**, which has the same processability as LDPE and is not corrosive.
- Heat stability of acrylate comonomer allows processing temperatures as high as for LDPE. Recommended temperature ranges from 270°C up to 320 – 330°C. Adhesion on aluminum foil increases with increasing processing temperature.
- Purging **LOTADER 4403** 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	-	ISO 1183
Melting point	77	°C	DSC
Vicat softening point (1 kg)	45	°C	ASTM D 1525 / ISO 306
Elongation at break ⁽¹⁾	750	%	ASTM D 638 / ISO R 527
Tensile strength at break ⁽¹⁾	9.6	MPa	ASTM D 638 / ISO R 527
Flexural modulus ⁽¹⁾	20	MPa	ASTM D 790 / ISO 178
Hardness Shore D ⁽¹⁾	25	-	ASTM D 2240

(1) On compression molded samples.

Packaging

LOTADER 4403 is commonly packed in 25 kg bags or 500 kg rigid containers. **LOTADER 4403** pellets are not moisture sensitive.

Security / Precautions of use

Safety data sheet as well as information on handling and storage of **LOTADER 4403** are available close to your correspondent ARKEMA or at www.arkemagroup.com under heading FDS.

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