

Multipurpose Adhesive for Extrusion Processes

Description

LOTADER[®] 4603 is a random terpolymer of ethylene, acrylic ester and maleic anhydride, polymerized by high-pressure autoclave process.

Applications

LOTADER[®] 4603 is a multipurpose extrusion adhesive used to bond PET homopolymer or copolymers to EVOH and PE in flexible and rigid applications. LOTADER[®] 4603 can also be used as extrusion coating/lamination adhesive for a wide variety of difficult substrates like oriented plastic films (OPET, OPA, OPP), reverse printed films, PVDC coated films, etc, in combination with easier substrates like aluminium foil, metallized films, PE films, paper and board.

For more detailed information and recommendations regarding your specific application, please contact your local ARKEMA technical representative.

Typical properties

Characteristics	Value	Unit	Test Method
Methyl acrylate content	26	% Wt	FTIR (internal)
Maleic Anhydride content	0.3	% Wt	FTIR (internal)
Melt index (190°C / 2.16 kg)	8	g/10min	ISO 1133 / ASTM D1238
Melting point	65	°C	ISO 11357-3
Density	0.94	g/cm ³	ISO 1183 / ASTM D1505
Vicat softening temperature (10N) ⁽¹⁾	<40	°C	ISO 306 / ASTM D1525
Elongation at break ⁽¹⁾	850	%	ISO 527-2 / ASTM D638
Tensile strength at break ⁽¹⁾	6	MPa	ISO 527-2 / ASTM D638
Flexural modulus	9	MPa	ISO 178 / ASTM D790
Hardness shore A ⁽¹⁾	76	-	ISO 868 / ASTM D2240

⁽¹⁾ On compression molded samples.

Processing

LOTADER[®] 4603 molecular structure and rheology are remarkably suitable for all kinds of extrusion, including extrusion coating/lamination: low neck-in, excellent melt stability and drawability. Proposed as a ready-to-use lamination adhesive, LOTADER[®] 4603 does not stick to nip or chill rolls when it overcoats the films being laminated. However, it is not designed to be used as top layer, due to stickiness and possible blocking issues.

Standard polyolefin extrusion equipment can be used for LOTADER[®] 4603, which has the same processability and heat stability as LDPE. Recommended temperature range is from 270°C up to 310°C.

LOTADER[®] 4503 is not moisture sensitive. It is recommended to purge the equipment with LDPE after a run is completed before shutting down.

Storage, handling and safety

LOTADER[®] 4603 should be stored in dry conditions protected from UV-light. Improper storage conditions may cause degradation and 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 LOTADER[®] 4603 is available upon request to your ARKEMA representative or at www.lotader.com.

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