Manufacturer website: https://www.ineos.com/businesses/ineos-olefins-polymers/

M21E730

Product Technical Information

LDPE ionomer for film products

Benefits & Features

M21E730 is an ionomer, produced by the neutralization of an ethylene methacrylic acid (MAA) copolymer. It offers the following properties:

- Very high impact strength
- Exceptional drawdown
- Very low resistance to tear propagation in both machine and transverse directions
- Good optical properties

Applications

M21E730 has been developed for easy tear film applications such as collation shrink film, envelopes, overwrap and bags. It can be blended or co-extruded with other types of polyethylene to tailor performance.

We recommend that you consult your INEOS technical representative for further advice on the use of **M21E730**.

Properties	Conditions	Test Methods	Values	Units
Physical				
Melt Flow Rate	190°C/2.16Kg	ISO 1133-1	0.5	g/10min
Density		ISO 1183-1 & ISO 1872-1	933	kg/m³
Methacrylic Acid Content		Ineos method	1.7	wt%
Vicat Softening Temperature		ISO 306 – Method A	92	°C
Film Mechanical Properties*				
Dart Drop Impact	Method A	ASTM D 1709	750	g
Tensile Strength at Yield	MD/TD**	ISO 1184	11 / 10	MPa
Tensile Strength at Break	MD/TD**	ISO 1184	28 / 29	MPa
Elongation at Break	MD/TD**	ISO 1184	200 / 400	%
1% Secant Modulus	MD/TD**	ISO 1184	165 / 175	MPa
Elmendorf Tear Strength	MD/TD**	ASTM D 1922	24 / 27	g/25 µm
Film Optical Properties*				
Haze		ASTM D 1003	9	%
Gloss	45°	ASTM D 2457	60	‰

Data should not be used for specification work

* Values determined on a 50 µm film, 2.5:1 blow-up ratio, 180°C melt temperature - **: MD= machine direction, TD= transverse direction

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Processing guidelines

M21E730 can be processed on all commercial blown film extruders over the temperature range 160 - 200°C. Film can be drawn down to approximately 15 µm under ideal extrusion conditions.

When extruding **M21E730**, normal good housekeeping precautions should be taken to prevent equipment corrosion. We recommend use of an extruder fitted with chrome or nickel plated die and stellite tipped screw flights. The resin should not stay in the extruder for extended periods. After extrusion of **M21E730**, the extruder should be purged with LDPE.

Storage

M21E730 should be stored in a dry and dust free environment at temperature below 50°C. Exposure to direct sunlight should be avoided as this may lead to product deterioration. It is advised to process the product within maximum one year after delivery.

Regulatory Information

The product and uses described herein may be subject to specific requirements or limitations for use in certain applications like food contact, drinking water or medical devices. Further information may be obtained from the website www.ineos.com where a specific Regulatory Certificate is available for each grade under the heading "SDS & Regulatory Certificate".

Unless specifically indicated, the product mentioned herein is not suitable for applications in the medical or pharmaceutical sectors.

Health and Safety Information

The product described herein may require precautions in handling. The available product health and safety information for this material is contained in the Safety Data Sheet (SDS) that may be obtained from the website www.ineos.com. Before using any material, a customer is advised to consult the SDS for the product under consideration for use.

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