

Technical specifications

Malen E FABS 23-D006

Low-density polyethylene



Product description

Malen E FABS 23-D006 is a low-density polyethylene containing an anti-blocking additive and slip agent for the production of 25µm films, which exhibit good mechanical properties and have high transparency and gloss. The anti-blocking additive and slip agent enable the film to be processed on high-speed packaging machines. The presence of an antioxidant increases the polymer's resistance to degradation during processing and reduces the tendency to form gels.

The material is offered in granular form.

This product may not be used for medical or pharmaceutical applications.

Legal status

Information confirming the product's compliance with legal requirements can be found in the Compliance Charter and Safety Data Sheet.

Product status	Commercially available
Product availability	Europe
Processing methods	Sleeve film, extrusion blow moulding
Product features	Anti-blocking agent, good optical and processing properties, slip agent, low coefficient of friction
Typical applications	Flexible packaging/Stand-up pouches and bags, shrink films, food packaging films, lamination films, hygiene films Recommended film thickness: 25-80 µm

Typical properties	Value		Method
	Nominal	Unit	
Physical			
Density	0.925	g/cm³	PN EN ISO 1183-1
Melt Flow Rate (MFR); (190°C/2.16 kg)	0.75	g/10 min	PN EN ISO 1133
Mechanical			
Tensile modulus of rigidity	250	MPa	PN EN ISO 527-1, 2
Tensile yield strength	11.0	MPa	PN EN ISO 527-1, 2
Foil			
Tensile strength			
- In the longitudinal direction	21.0	MPa	PN EN ISO 527-1, 3
- In the transverse direction	20.0	MPa	PN EN ISO 527-1, 3
Elongation at break			
- In the longitudinal direction	460	%	PN EN ISO 527-1, 3
- In the transverse direction	550	%	PN EN ISO 527-1, 3
Puncture resistance	230	g	PN EN ISO 7765-1
Coefficient of friction	0.18	-	PN EN ISO 8295
Gloss	65	-	ASTM D 2457
Turbidity	8	%	ASTM D 1003
Hardness			
Shore hardness (D scale)	50		PN EN ISO 868
Thermal			
Vicat softening point (A50; 50°C/h 10N)	92	°C	PN EN ISO 306
Melting point	114	°C	PN EN ISO 11357-3
Additives			
Anti-blocking agent – synthetic silica	900	ppm	
Slip agent – Erukamide	500	ppm	

Processing parameters

Extrusion temperature

170-220 °C

The film properties were determined on a 50 µm thick sleeve film, extruded at a 180°C mass temperature and a blowing ratio of 1:2.5.

Note: Typical properties, do not constitute an acceptance specification of the product

Further information

Processing tips

Processing temperatures should be selected within the suggested ranges to ensure optimum product performance and suitability for the intended application.

Health and safety

The plastic is manufactured to the highest standards, but special requirements apply to certain applications such as use in contact with food and in direct medical use. Contact your local representative for details on compliance.

Workers should be protected against skin or eye contact with molten polymer. Wearing safety goggles is recommended as the simplest protection against mechanical or thermal damage to the eyes.

The melted polymer may undergo chemical decomposition if exposed to air throughout the processing and off-line. Decomposition products can have an unpleasant odour. In higher concentrations, they can cause irritation of the mucous membranes. Production premises should be ventilated to remove the vapours and fumes generated. Emission control and pollution prevention rules should be followed. If the principles of safe production are applied and the workplace is well ventilated, the processing does not pose a health risk.

The plastic will burn if exposed to excessive heat and oxygen. The product should be handled and stored away from a direct flame and/or ignition source. Large amounts of heat are given off when burning and thick black smoke may be produced.

The recycled plastics may have previously been used as packaging or may have otherwise come into contact with hazardous goods. Processors are liable for taking all necessary precautions to ensure that recycled plastics are safe for further use.

For additional information on handling and processing, see the Safety Data Sheet.

Transport

Transport equipment should be designed in such a manner as to prevent the generation and accumulation of fine particles and dust that may be contained in the product. Such particles can cause an explosion hazard under specific conditions. We recommend that the transport system used be fitted with appropriate filters and be operated and maintained in such a manner that there are no leaks and that the system is properly earthed at all times.

Storage

The product is packaged in 25 kg bags or transported in bulk in suitable containers (containers, tanks) to protect it from contamination. During storage under unfavourable conditions, i.e. significant fluctuations in ambient temperature and high humidity, moisture may condense in the packaging. In such cases, it is advisable to dry the product before use. Adverse storage conditions can also intensify the characteristic odour, which is normally only slightly noticeable.

During storage, the product should be protected from direct sunlight, temperatures above 40°C and high humidity. Higher storage temperatures reduce the allowable storage time.

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