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SABIC® LLDPE 218BE

LINEAR LOW DENSITY POLYETHYLENE

DESCRIPTION

SABIC® LLDPE 218BE is a butene linear low density polyethylene resin with an additive package typically designed for a broader range of food applications (TNPP free). The good thermal stability allows to use the resin in critical extrusion processing conditions.

Application
SABIC® LLDPE 218BE is typically used for food applications (lamination film, barrier film) but can also be used in industrial packaging and as blending partner with other SABIC® PE resins in both blown and cast film applications.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

TYPICAL PROPERTY VALUES

Revision 20260319

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190 °C and 2.16 kg	2.1	dg/min	ISO 1133
Density	918	kg/m³	ASTM D1505
DSC			
melting point	122	°C	SABIC method
MECHANICAL PROPERTIES			
Tensile test			
strain at break	790	%	ASTM D638
stress at yield	12	MPa	ASTM D638
strain at yield	16	%	ASTM D638
stress at break	17	MPa	ASTM D638
Flexural test			
Secant modulus at 1% elongation	254	MPa	ASTM D790
Hardness Shore D	48	-	ISO 868
OPTICAL PROPERTIES			
Gloss (45°)	92	‰	ASTM D2457
Haze	1.2	%	ASTM D1003
FILM PROPERTIES			
Dart impact	2.8	kJ/m	ISO 7765-2
Tear strength TD	185	kN/m	ISO 6383-2
Protrusion Puncture resistance	2.2	J	ASTM D5748-95
Elastic recovery & Stress retention			
Stress retention	79.9	%	ASTM D5459-95
Elastic recovery	52.6	%	ASTM D5459-95
Peel cling			
200% pre-stretch	0.05	N/mm	ASTM D5458-95
0% pre-stretch	0.06	N/mm	ASTM D5458-95
THERMAL PROPERTIES			
Vicat Softening Temperature			
at 10 N (VST/A)	96	°C	ISO 306

CHEMISTRY THAT MATTERS™

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
DSC test			
melting point	122	°C	SABIC method
HIGHLIGHT PROPERTIES			
Ultimate pre-stretch level	310	%	-
Retention force at 60 sec	0.97	kg	-
ELECTRICAL PROPERTIES			
Volume resistivity	5.0E15	Ω.cm	ASTM D257
Dissipation Factor			
@ 60 Hz	1.0E3	-	ASTM D150
Dielectric Constant			
@ 60 Hz	2.17	-	ASTM D150
Dielectric Strength			
at 500 V/sec	55	V/µm	ASTM D149

STORAGE AND HANDLING

Polyethylenes resins (in pelletised or powder form) should be stored in such a way that it prevents exposure to direct sunlight and/or heat, as this may lead to quality deterioration. The storage location should also be dry, dust free and the ambient temperature should not exceed 50 °C. Not complying with these precautionary measures can lead to a degradation of the product which can result in colour changes, bad smell and inadequate product performance. It is also advisable to process polyethylene resins (in pelletised or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality.

ENVIRONMENT AND RECYCLING

The environmental aspects of any packaging material do not only imply waste issues but have to be considered in relation with the use of natural resources, the preservations of foodstuffs, etc. SABIC considers polyethylene to be an environmentally efficient packaging material. Its low specific energy consumption and insignificant emissions to air and water designate polyethylene as the ecological alternative in comparison with the traditional packaging materials. Recycling of packaging materials is supported by SABIC whenever ecological and social benefits are achieved and where a social infrastructure for selective collecting and sorting of packaging is fostered. Whenever 'thermal' recycling of packaging (i.e. incineration with energy recovery) is carried out, polyethylene -with its fairly simple molecular structure and low amount of additives- is considered to be a trouble-free fuel.

DISCLAIMER