

TOTAL Polyethylene LDPE FE 8004

Low Density Polyethylene

TOTAL Refining & Chemicals

Message:

LDPE FE 8004 is a low density polyethylene produced by a high pressure autoclave process.

LDPE FE 8004 is a slip and anti-block formulated grade, which is particularly suitable for transparent thin film.

LDPE FE 8004 is suited to many applications in the field of consumer, industrial, food or hygiene packaging such as collation shrink, lamination and coextrusion film.

General Information

Additive Anti-caking agent (500 ppm)

Sliding agent (650 ppm)

Features smoothness

Anti-caking property

Uses Packaging

Films

Laminate

Bags

Industrial application

Food packaging

Shrinkable film

Consumer goods application field

Agency Ratings EC 1907/2006 (REACH)

Forms Particle

Processing Method Blow film

Co-extrusion molding

Physical	Nominal Value	Unit	Test Method
Density			
--	0.924	g/cm ³	ISO 1183
--	924	kg/m ³	ISO 1183 ¹
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.80	g/10 min	ISO 1133
Melt volume-flow rate (190°C/2.16 kg)	1.00	cm ³ /10min	ISO 1133 ²
Water Absorption (Saturation)	0.010	%	ISO 62 ³
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	240	MPa	ISO 527-2 ⁴
Tensile Stress (Yield)	12.0	MPa	ISO 527-2 ⁵

Tensile Strain (Yield)	15	%	ISO 527-2 ⁶
Tensile Elongation at Break	> 50	%	ISO 527-2 ⁷
Films	Nominal Value	Unit	Test Method
Tensile Stress			ISO 527-3
MD: Yield, 40 µm, blown film	12.5	MPa	ISO 527-3
TD: Yield, 40 µm, blown film	12.5	MPa	ISO 527-3
MD: Broken, 40 µm, blown film	28.0	MPa	ISO 527-3
TD: Broken, 40 µm, blown film	24.0	MPa	ISO 527-3
Tensile Elongation			ISO 527-3
MD: Broken, 40 µm, blown film	370	%	ISO 527-3
TD: Broken, 40 µm, blown film	570	%	ISO 527-3
Dart Drop Impact (40 µm, Blown Film)	120	g	ISO 7765-1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa)	41.0	°C	ISO 75-2 ⁸
Vicat Softening Temperature			
--	99.0	°C	ISO 306
50°C/h, B (50N)	98.0	°C	ISO 306 ⁹
Melting Temperature (DSC)			
--	111	°C	ISO 3146
-- ¹⁰	114	°C	ISO 11357-3 ¹¹
CLTE - Flow	1.8E-4	cm/cm/°C	ISO 11359-2 ¹²
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	IEC 60093 ¹³
Volume Resistivity	> 1.0E+13	ohms·m	IEC 60093 ¹⁴
Relative Permittivity (100 Hz)	2.00		IEC 60250 ¹⁵
Dissipation Factor			IEC 60250 ¹⁶
100 Hz	2.0E-4		IEC 60250
1 MHz	2.0E-4		IEC 60250
Comparative Tracking Index	600		IEC 60112 ¹⁷
Flammability	Nominal Value	Unit	Test Method
Burning Behav. at 1.6mm nom. thickn. (1.60 mm)	HB		ISO 1210 ¹⁸
Oxygen Index	18	%	ISO 4589-2 ¹⁹
Additional Information			
The value listed as Melting Temperature, ISO 3146, was tested in accordance with ISO 11357. Elmendorf, ISO 6383-2, MD, Blown Film, 40 µm: 53 N/mm Elmendorf, ISO 6383-2, TD, Blown Film, 40 µm: 47 N/mm Haze, ISO 14782, Blown Film, 40 µm: 12%			
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	160 - 200	°C	
Cylinder Zone 2 Temp.	160 - 200	°C	
Cylinder Zone 3 Temp.	160 - 200	°C	
Cylinder Zone 4 Temp.	160 - 200	°C	
Cylinder Zone 5 Temp.	160 - 200	°C	
NOTE			

1.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
2.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
3.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
4.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
5.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
6.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
7.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
8.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
9.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
10.	10 °C/min
11.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
12.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
13.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
14.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
15.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
16.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
17.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
18.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???
19.	??????,?? ISO 10350 ??? 23°C/50%r.h. ???

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