

SABIC® LLDPE 318B

LINEAR LOW DENSITY POLYETHYLENE

DESCRIPTION

SABIC[®] LLDPE318B is a standard C4-LLDPE grade with a relatively low melt flow rate. SABIC[®] LLDPE318B is a general grade, typically used for low filled or additive masterbatches in film and blow moulding applications(e.g. slip agents, anti fog agents, anti static agents, thermal stabilizers). This product is not intended for and must not be used in any pharmaceutical/medical applications.

TYPICAL PROPERTY VALUES

POLYMER PROPERTIES Meit Fow Mate Sea (a) 0 (2 nd 2.16 kg) ASIM D1238 (a) M10238	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
at 190°C and 2.16 kg 2.8 definity ASTM D1238 Descrity 198 kg/m² ASTM D1505 DSC weeking point 2 ASEC MERCHANCE MECHANICAL PROPERTIES Tessile test Tessile test STATE MERCHANICAL PROPERTIES STATE MERCHANICAL PROPERTIES Tessile test STATE MERCHANICAL PROPERTIES Tessile test Testile test Testile test Testile test Testile test Testile test <td>POLYMER PROPERTIES</td> <td></td> <td></td> <td></td>	POLYMER PROPERTIES			
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Sec melting point 121 cell cell MECHANICA PROPERTIES Tensile test Stress at yield 16 6 ASTAIN D638 stress at break 16 ASTAIN D638 stress at break ASTAIN D638 ASTAIN D638 ASTAIN D638 ASTAIN D638 Stress breath of the stress pretention ASTAIN D638 </td <td>at 190 °C and 2.16 kg</td> <td>2.8</td> <td>dg/min</td> <td>ASTM D1238</td>	at 190 °C and 2.16 kg	2.8	dg/min	ASTM D1238
relating point 121 °C ASIC method MECHANICAL PROPERTIES Tensite st Strain at yield 16 ASTM DG38 stress at yield 12 MPa ASTM DG38 stress at break 12 ASTM DG38 ASTM DG38 stress at break 12 ASTM DG38 ASTM DG38 ASTM DG38 ASTM DG90 A	Density	918	kg/m³	ASTM D1505
MECHANICAL PROPERTIES Tensile test strain at yield 16 % ASTM D638 stress at yield 12 MPa ASTM D638 stress at yield 13 MPa ASTM D638 stress at yield 19 % ASTM D638 Flexual test ** ** ASTM D638 Protestine Deposition ** ** ** Protestine Stream tensil test ** ** ** ** Protestine Protestine Cevery & Stress retention ** ** ** ** ** ** ** ** ** ** ** ** ** **	DSC			
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strain at yield 16 % ASTM D638 stress at yield 12 MPa ASTM D638 stress at break 13 MPa ASTM D638 strain at break 70 8 ASTM D638 strain at break 70 8 ASTM D638 Flexural treatments Security of MPa ASTM D790 ASTM D790 Hardness Shore D 45 ASTM D790 Hardness Shore D 48 ASTM D790 ASTM D790 Brade Astmosphere D Brade Astmosphere D 49 ASTM D2457 ASTM D459 Hardness Shore D 40 ASTM D2457 ASTM D459 ASTM D4549-95 ASTM D454	MECHANICAL PROPERTIES			
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stress at break 13 MPa ASTM D638 strain at break 710 % ASTM D638 Flexural test Flexural test <td>strain at yield</td> <td>16</td> <td>%</td> <td>ASTM D638</td>	strain at yield	16	%	ASTM D638
Strain at break 710 % ASTM D638 Flexural test	stress at yield	12	MPa	ASTM D638
Flexural test Flexural test Flexural test (elongation) 251 MPa ASTM D790 Hardness Shore D 48 2 150 868 CPTICAL PROPERTIES Gloss (45°) 91 % ASTM D2457 Haze 2.1 % ASTM D0457 Haze b ASTM D103 ASTM D103 FILL MROPERTIES Dart impact 26 MI/m ISO 7765-2 ASTM D545-95 Potrusion Puncture resistance 20 MI/m ISO 7765-2 ASTM D545-95 Elastic recovery & Stress retention 21 % ASTM D545-95 ASTM D545-95 Stress retention 78.1 % ASTM D545-95 ASTM D545-95 THERMAL PROPERTIES FILL MARCH PROPERTIES Victa Softcering Temperature 2 C S0 306 British p Change 14 M Q S0 306 ASTM D545-95 British p Change 12 C S0 306 ASTM D545-95 ASTM D545-95 <t< td=""><td>stress at break</td><td>13</td><td>MPa</td><td>ASTM D638</td></t<>	stress at break	13	MPa	ASTM D638
Secant modulus at % elongation 251 MPa ASTM D790 Hardness Shore D 48	strain at break	710	%	ASTM D638
Hardness Shore D 48 command isos (88) OPTICAL PROPERTIES % ASTM D2457 Haze 2.1 % ASTM D103 FILM PROPERTIES I/Immoder iso 7765-2 Tear strength TD 140 ki/Immoder iso 6383-2 Protrusion Puncture resistance 2.0 I/Immoder ASTM D548-95 Elastic recovery & Stress retention 5.9 % ASTM D5459-95 Stress retention 78.1 % ASTM D5459-95 THERMAL PROPERTIES * ASTM D5459-95 THERMAL PROPERTIES C ASTM D5459-95 SCC test * ASTM D5459-95 Both (VST/A) 102 C ASTM D5459-95 Both (VST/A) 102 C ASTM D5459-95 Both (VST/A) 103 ASTM D5459-95 ASTM D5459-95 Both (VST/A) 103 ASTM D5459-95 ASTM D5459-95 ASTM D5459-95 Both (VST/A) 103 ASTM D5459-95 ASTM D5459-95 ASTM D5459-95 ASTM D5459-95 ASTM D5459-95	Flexural test			
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Gloss (45°) 91 ∞ ASTM D2457 Haze 2.1 ∞ ASTM D1003 FILM PROPERTIES Dart impact 2.6 M/m ISO 7765-2 Tear strength TD 140 kN/m ISO 6383-2 Protrusion Puncture resistance 2.0 kN/m ISO 6383-2 Protrusion Puncture resistance 2.0 X ASTM D548-95 Elastic recovery & Stress retention 78.1 % ASTM D5459-95 Stress retention 78.1 % ASTM D5459-95 THERMAL PROPERTIES Vicat Softening Temperature at 10 N (VST/A) 102 °C ISO 306 DSC test enthalpy change 114 J/g SABIC method melting point 21 °C SABIC method ELECTRICAL PROPERTIES SE15 Ohm.cm ASTM D257	Hardness Shore D	48	-	ISO 868
Haze\$21\$	OPTICAL PROPERTIES			
FILM PROPERTIESDart impact2.6kl/mISO 7765-2Tear strength TD140kN/mISO 6383-2Protrusion Puncture resistance2.0JASTM D5748-95Elastic recovery & Stress retention***ASTM D5459-95Stress retention51.9%ASTM D5459-95THERMAL PROPERTIESVicat Softening Temperatureat 10 N (VST/A)102°CISO 306DSC testenthalpy change114J/gABIC methodmethalpy change12°CABIC methodmethol point12°CABIC methodELECTRICAL PROPERTIESUsual point8.5E15Ohn.cmASTM D257	Gloss (45°)	91	%0	ASTM D2457
Dart impact 2.6 kJ/m ISO 7765-2 Tear strength TD 140 kN/m ISO 6383-2 Protrusion Puncture resistance 2.0 J ASTM D5748-95 Elastic recovery & Stress retention ** ASTM D5459-95 Stress retention 78.1 ** ASTM D5459-95 THERMAL PROPERTIES Vicat Softening Temperature at 10 N (VST/A) 102 °C ISO 306 DSC test enthalpy change 114 J/g SABIC method melting point 121 °C SABIC method ELECTRICAL PROPERTIES SES 55 Ohm.cm ASTM D257	Haze	2.1	%	ASTM D1003
Tear strength TD I40 kN/m ISO 6383-2 Protrusion Puncture resistance 2.0 J ASTM D5748-95 Elastic recovery & Stress retention * ASTM D5459-95 Stress retention 78.1 * ASTM D5459-95 THERMAL PROPERTIES Vicat Softening Temperature * * SO 306 DSC test * * SABIC method enthalpy change 114 J/g SABIC method melting point * C SABIC method ELECTRICAL PROPERTIES * C SABIC method LECTRICAL PROPERTIES * C SASIM D257	FILM PROPERTIES			
Protrusion Puncture resistance2.0JASTM D5748-95Elastic recovery & Stress retention51.9%ASTM D5459-95Stress retention78.1%ASTM D5459-95THERMAL PROPERTIESVicat Softening TemperatureVCISO 306Bot 10 N (VST/A)102CISO 306DSC testenthalpy change114J/gSABIC methodmelting point121℃SABIC methodELECTRICAL PROPERTIESCSABIC methodVolume resistivity8.5E15Ohm.cmASTM D257	Dart impact	2.6	kJ/m	ISO 7765-2
Elastic recovery & Stress retention Elastic recovery 51.9 78.1 78.1 FUERMAL PROPERTIES Vicat Softening Temperature at 10 N (VST/A) 102 Control 104 105 Control 104 Control 104 Control 105 Control 104 Control 105	Tear strength TD	140	kN/m	ISO 6383-2
Elastic recovery Stress retention 78.1 78.1 THERMAL PROPERTIES Vicat Softening Temperature at 10 N (VST/A) 102 Constituting Temperature enthalpy change melting point 114 121 121 121 121 121 121 121 121 121	Protrusion Puncture resistance	2.0	J	ASTM D5748-95
Stress retention 78.1 % ASTM D5459-95 THERMAL PROPERTIES Vicat Softening Temperature ** ** LSO 306 BSC test enthalpy change 114 J/g SABIC method melting point 121 ** C SABIC method ELECTRICAL PROPERTIES Volume resistivity 8.5E15 Ohm.cm ASTM D257	Elastic recovery & Stress retention			
THERMAL PROPERTIES Vicat Softening Temperature at 10 N (VST/A) 102 °C 150 306 DSC test enthalpy change 114 J/g SABIC method melting point 121 °C SABIC method ELECTRICAL PROPERTIES Volume resistivity 8.5E15 Ohm.cm ASTM D257	Elastic recovery	51.9	%	ASTM D5459-95
Vicat Softening Temperature at 10 N (VST/A) 102 °C 150 306 DSC test enthalpy change 114 J/g SABIC method melting point 121 °C SABIC method ELECTRICAL PROPERTIES Volume resistivity 8.5E15 Ohm.cm ASTM D257	Stress retention	78.1	%	ASTM D5459-95
at 10 N (VST/A) 102 °C ISO 306 DSC test V <t< td=""><td>THERMAL PROPERTIES</td><td></td><td></td><td></td></t<>	THERMAL PROPERTIES			
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enthalpy change 114 1/g SABIC method melting point 121 °C SABIC method °C SABIC method 121 °C SABIC method	at 10 N (VST/A)	102	°C	ISO 306
melting point 121 °C SABIC method ELECTRICAL PROPERTIES Volume resistivity 8.5E15 Ohm.cm ASTM D257	DSC test			
ELECTRICAL PROPERTIES Volume resistivity 8.5E15 Ohm.cm ASTM D257	enthalpy change	114	J/g	SABIC method
Volume resistivity 8.5E15 Ohm.cm ASTM D257	melting point	121	°C	SABIC method
	ELECTRICAL PROPERTIES			
Dissipation factor at 60 Hz 5.0E-4 - ASTM D150	Volume resistivity	8.5E15	Ohm.cm	ASTM D257
	Dissipation factor at 60 Hz	5.0E-4	-	ASTM D150



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dielectric constant at 60 Hz	2.2	-	ASTM D150
Dielectric strength at 2000 V/sec	>30	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.