Lupolen 4552D black

High Density Polyethylene

LyondellBasell Industries

Message:

Lupolen 4552D black is a UV and thermal stabilised high-density polyethylene with a multi-modal molecular weight distribution designed for extrusion.
Lupolen 4552D black is produced with the advanced Hostalen technology which provides the material with excellent mechanical and physical properties.
The excellent dispersion of the fine particle sized carbon black ensures the material has excellent weathering resistance.
Lupolen 4552D black fulfils the requirements of DIN 30670, NFA 49710, CAN, CSA-Z245.21-M98 and prEN 10285 when used in combination with the maleic-anhydrided grafted adhesives Lucalen G3710E P and a compatible fusion-bonded epoxy powder.
Lupolen 4552D black is recommended as the topcoat layer in 3LPE pipe coating applications and is suitable for severe laying conditions even at elevated temperatures. Lupolen 4552D black can be used up to 85°C service temperature of the pipeline when used in combination with the maleic-anhydride grafted adhesives Lucalen G3710E or Lucalen G3710E P and a compatible fusion-bonded epoxy powder.
This grade is available in black, in pellet form.

General Information	
Additive	Carbon Black (2%) Heat Stabilizer UV Stabilizer
Features	Bacteria Resistant Bimodal Molecular Weight Distribution Fungus Resistant Good Chemical Resistance Good Creep Resistance Good Impact Resistance Good UV Resistance Good Weather Resistance Heat Stabilized High ESCR (Stress Crack Resist.) Low to No Water Absorption Ozone Resistant
Uses	Coating Applications Pipe Coatings
Agency Ratings	CSA Z245.21-M98 DIN 30670 NF A 49-710 prEN 10285
Appearance	Black
Forms	Pellets
Processing Method	Extrusion

Physical	Nominal Value	Unit	Test Method
Density			ISO 1183
-- [1]	> 0.930	g/cm³	
-- [2]	0.956	g/cm³	
Apparent Density	> 0.50	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	0.42	g/10 min	
190°C/5.0 kg	1.7	g/10 min	
Environmental Stress-Cracking Resistance (F0)	> 2000	hr	ASTM D1693
Carbon Black Content	2.2	%	ISO 6964
Moisture Content	0.035	%	ISO 15512
Oxidation Induction Time			ISO 11357-6
200°C	> 30	min	
210°C	> 30	min	
220°C	> 20	min	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	60		ASTM D2240, ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	900	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	23.0	MPa	ISO 527-2/50
Tensile Elongation (Break)	700	%	ASTM D638
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact Strength (-20°C)	> 3.0	kJ/m²	ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	< -70.0	°C	ASTM D746
Vicat Softening Temperature	124	°C	ISO 306/A50
Melting Temperature (DSC)	130	°C	ISO 3146
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+17	ohms·cm	ASTM D257, IEC 60093
Extrusion	**Nominal Value**	**Unit**	
Melt Temperature	190 to 260	°C	
NOTE			
1.	Base Polymer		
2.	Compound		

Recommended distributors for this material

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