Technical Data Sheet

Alathon L5008

High Density Polyethylene

Product Description

Alathon L5008 is a bimodal, high molecular weight, high density polyethylene resin with excellent processing characteristics. L5008 is selected by customers for demanding pressure pipe applications. When combined with an approved color or black masterbatch at the correct use level, L5008 may meet the following standards or requirements (see Technical Data Sheet for limitations and more information):

- ASTM D3350 Cell Classifications: **PE445564C CC0, PE445564E CC0, PE445565C CC0,** and **PE445565E CC0**
- NSF Standard 14 and Standard 61 for Potable Water Pipe and Fittings
- NSF Standard 358-1 for PE Pipe and Fittings for "Geothermal" Heat Pump Systems
- PE80 per ISO 9080 & ISO 12162
- Plastics Pipe Institute (PPI) PE 3408 and PE4608 per PPI TR-3

Regulatory Status

For regulatory compliance information, see *Alathon* L5008 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Not Promoted
Availability	North America; South & Central America
Application	Drinking Water Pipe
Market	Industrial, Building & Construction; Pipe
Processing Method	Pipe

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate					
(190 °C/2.16 kg)	0.07	g/10 min	0.07	g/10 min	ASTM D1238
(190 °C/21.6 kg)	16	g/10 min	16	g/10 min	ASTM D1238
Density, (23 °C)	0.949	g/cm³	0.949	g/cm³	ASTM D1505
Mechanical					
Flexural Modulus, (2% Secant)	141000	psi	972	MPa	ASTM D790
Tensile Stress at Break	4970	psi	34.3	MPa	ASTM D638
Tensile Stress at Yield	3560	psi	24.5	MPa	ASTM D638
Tensile Elongation at Break	635	%	635	%	ASTM D638
PENT, (2.4 MPa, 80 °C, Air)	>100	hr	>100	hr	ASTM F1473
Value was determined on L5008 compounded with an approved masterbatch.					
Thermal					
Deflection Temperature Under Load, (66 psi, Unannealed)	154	°F	68	°C	ASTM D648
DSC Induction Temperature	500	°F	260	°C	ASTM D3350
Oxidative-Induction Time, (200 °C)	100	min	100	min	ASTM D3895
Value was determined on L5008 compounded with an approved masterbatch.					
Conformance Testing					

Manufacturer website: https://www.lyondellbasell.com/en/

Hydrostatic Design Basis				
(73 °F)	1600	psi		ASTM D2837
(140 °F)	1000	psi		ASTM D2837
Minimum Required Strength, (20 °C)			8 MPa	ISO 12162

Notes

Typical Property values were determined on natural L5008 resin, unless otherwise noted. Conformance Test values were determined from L5008 compounded with an approved masterbatch.

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Approved Black Masterbatches

The following black masterbatches are approved for use with *Alathon* L5008 when added to produce a carbon black level in the final article of 2.00 - 2.56 wt%. When using a nominal 35 wt% carbon black masterbatch, this will result in a use level of the masterbatch between 6.0 and 7.3 wt%. Addition levels may need to be adjusted due to variation in the certified carbon black level in the particular masterbatch lot.

Manufacturer	Masterbatch Code
Ampacet Corporation	190872, 190109A
Ingenia Polymers Corporation	IPBK033A
Modern Dispersions Incorporated	PE 535-42
PolyOne Corporation	2116 Black PEC, PEC 2139, B60054
PolyOne Corporation	PE-335-4710L BLACK PEC
RTP Company	PE 42000 BK MB

Approved Color Masterbatches

Manufacturer	Masterbatch Code	Use Level	Restrictions
Ampacet Corporation	LR-180685 Blue UV HDPE MB	4%	none
PolyOne Corporation	2612 Blue PEC	4%	none
PolyOne Corporation	2614 Lavender (Purple) PEC	4%	non-potable water only

Chlorine Classification

Alathon L5008 has not been tested for chlorine resistance and is designated a CC0 per ASTM D3350-14.

Caution

If an approved masterbatch is not used in the manufacture of pipe or fittings, the customer assumes all responsibility for determining that the final article meets the applicable material and pipe or fittings standards.

Certifications

Certified as meeting requirements of Plastics Pipe Institute and NSF International, as stated above.

Company Information

For further information regarding the LyondellBasell company, please visit http://www.lyb.com/.

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