Technical Data Sheet

Alathon 9305TC

W&C Polyolefin Compound

Product Description

Alathon 9305TC is a high molecular weight high density polyethylene copolymer with a broad bimodal molecular weight distribution. This resin exhibits high density, stiffness and good processability. Typical applications for wire and cable include cable in conduit.

Alathon 9305TC meets the requirements of the following:

- ASTM D1248, Type III, Category 5, Class A, Grade E10
- Federal LP390C, Type II, Class H, Category 5, Grade 5
- ASTM D3350 Cell Classification: PE445480A

Regulatory Status

For regulatory compliance information, see *Alathon* 9305TC Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
Application	Wire & Cable
Market	Wire & Cable
Processing Method	Wire & Cable

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	0.075	g/10 min	0.075	g/10 min	ASTM D1238
Density, (23 °C)	0.949	g/cm³	0.949	g/cm³	ASTM D1505
Mechanical					
Flexural Modulus, (1% Secant)	145000	psi	1000	MPa	ASTM D790
Tensile Stress at Break	5300	psi	36.6	MPa	ASTM D638
Tensile Stress at Yield	3400	psi	23.4	MPa	ASTM D638
Tensile Elongation at Break	800	%	800	%	ASTM D638
Thermal Stress Crack Resistance, F_{50}	>2500	hr	>2500	hr	ASTM D2951
Environmental Stress Crack Resistance, F_{50} (10% Igepal®, Cond B)	>2000	hr	>2000	hr	ASTM D1693
Hardness					
Shore Hardness, (Shore D)	65		65		ASTM D2240
Thermal					
Vicat Softening Temperature	257	°F	125	°C	ASTM D1525
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746
Electrical					
Volume Resistivity	2.6 x 10^{17}	ohm*cm	2.6 x 10^{17}	ohm*cm	ASTM D257
Dielectric Constant, 1 MHz	2.33		2.33		ASTM D150
Dissipation Factor, 1 MHz	0.00007		0.00007		ASTM D150

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

Notes

Igepal® is a registered trademark of Rhodia.

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.

General Extrusion Conditions

Alathon 9305TC, like other thermoplastic polyolefin resins, can be extruded using a conventional extruder. Below are suggested extrusion conditions for *Alathon* 9305TC. These conditions are intended as general guidelines only, and are not optimum values, since manufacturing variables such as extruder type and size have an effect on processing of thermoplastic resins.

Extruder Zone	Temperature Range	Extruder Zone	Temperature Range
Feed	300 - 325 °F (149 - 163°C)	Adapter	475 - 500 °F (246 - 260 °C)
Zone 2	350 - 400 °F (177 - 204 °C)	Die	475 - 500 °F (246 - 260 °C)
Zone 3	400 - 450 °F (204 - 232 °C)	Melt Temperature	475 - 500 °F (246 - 260 °C)
Zone 4-X	475 - 500 °F (246 - 260 °C)		

Company Information

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

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