DOWLEX™ 2355 POLYETHYLENE RESIN

The Dow Chemical Company - Enhanced Polyethylene

Friday, April 1, 2016

General Information

Product Description

DOWLEX 2355 Polyethylene Resin is an ethylene-octene copolymer, produced in the proprietary solution process of The Dow Chemical Company. It has a unique molecular structure with a controlled side chain distribution, which provides excellent stress crack resistance properties combined with very good Long Term Hydrostatic Strength.

Processability: Typical extrusion temperatures for processing of DOWLEX 2355 Polyethylene Resin range from 190 to 230° C. The use of a reverse temperature profile may be beneficial on certain types of processing equipment. For further information, see our Extrusion Guideline.

Applications:
Pipes for hot and cold water systems, e.g.:

- floor heating
- wall heating/cooling
- ceiling cooling
- radiator connections
- warm / cold drinking water distribution
- heat recovery systems
- solar panels

Complies with:

- EU, No 10/2011
- U.S. FDA 21 CFR 175.105(c)(5)
- U.S. FDA 21 CFR 177.1520(c)3.2a (with Restrictions)

Consult the regulations for complete details.

General			
Generic Name	• Polyethylene, Enhanced (EPE)		
Material Status	• Commercial: Active		
Availability	• Europe		
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Rating	• EU, 10/2011	• FDA, 21 CFR 175.105(c) (5)	• FDA, 21 CFR 177.1520(c) 3.2a (With Restrictions)
Forms	• Pellets		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.933		ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.70	g/10 min	
190°C/5.0 kg	2.3	g/10 min	
Environmental Stress-Cracking Resistance			ASTM D1693
122°F, 10% Antarox	> 8760	hr	

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Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (0.0787 in, Compression Molded)	57900	psi	ISO 527-2
Tensile Stress (Yield, 0.0787 in, Compression Molded)	2030	psi	ISO 527-2
Tensile Stress (Break, 0.0787 in, Compression Molded)	5220	psi	ISO 527-2
Tensile Strain (Yield, 0.0787 in, Compression Molded)	6.0	%	ISO 527-2
Tensile Strain (Break, 0.0787 in, Compression Molded)	> 800	%	ISO 527-2
Flexural Modulus (0.0787 in, Compression Molded)	62200	psi	ISO 178
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	246	°F	ASTM D1525
CLTE - Flow (68 to 158°F)	1.5E-4	in/in/°F	DIN 53752
Thermal Conductivity (140°F)	2.7	Btu·in/hr/ft²/°F	DIN 52612
Cured Properties	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness [2] (Shore D, 0.0787 in)	59		ISO 868

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Compression Molded