Vydyne® R533H BK0667

Ascend Performance Materials Operations LLC - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Vydyne R533H BK0667 is a black, 33% glass-filled polyamide resin for injection molding designed specifically to withstand exposure to calcium chloride for extended periods of time.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Glass Fiber, 33% Filler by Weight		
Additive	• Heat Stabilizer	• Lubricant	
Features	• Chemical Resistant • Chlorine Resistant	• Crack Resistant • Heat Stabilized	• Hydrolysis Resistant • Lubricated
Uses	• Automotive Under the Hood • Gears	• Housings • Transmission Applications	
Automotive Specifications	• RENAULT AS27		
UL File Number	• E70062		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.38	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.90	--	%	
Flow : 73°F, 0.0787 in	0.40	--	%	
Water Absorption (24 hr, 73°F)	0.80	--	%	ISO 62
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	1.3	--	%	
Outdoor Suitability (Black)	f1	--		UL 746C
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (73°F)	1.55E+6	899000	psi	ISO 527-2
Tensile Stress (Break, 73°F)	27600	18100	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.8	4.0	%	ISO 527-2
Flexural Modulus (73°F)	1.36E+6	769000	psi	ISO 178
Flexural Stress (73°F)	39200	17400	psi	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	4.3	3.8	ft·lb/in²	
73°F	5.2	6.2	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	30	30	ft·lb/in²	
73°F	35	38	ft·lb/in²	

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Impact	Dry	Conditioned	Unit	Test Method
Notched Izod Impact Strength				ISO 180
-22°F	4.8	4.8	ft·lb/in²	
73°F	5.7	6.7	ft·lb/in²	

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	428	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	428	--	°F	
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.0E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	4.6E-5	--	in/in/°F	ISO 11359-2

Processing Information

Injection	Dry	Unit
Drying Temperature	176	°F
Drying Time	4.0	hr
Suggested Max Regrind	25	%
Rear Temperature	536 to 590	°F
Middle Temperature	536 to 590	°F
Front Temperature	536 to 590	°F
Nozzle Temperature	536 to 590	°F
Processing (Melt) Temp	545 to 581	°F
Mold Temperature	149 to 203	°F

Notes

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