Vydyne® R633

Polyamide 66/6 Copolymer

Ascend Performance Materials Operations LLC

Message:

Vydyne R633 is 33% glass-fiber reinforced, PA66/6 copolymer resin for superior surface appearance. Available in natural, this injection-molding grade resin is lubricated for machine feed and mold release.
Vydyne R633 has tensile strength and modulus properties just below aluminum and zinc and can replace these metals in numerous applications due to an excellent balance of properties. Reduction in production costs, energy consumption, and part weight are key advantages of Vydyne glass-reinforced PA66/6 resins over aluminum and/or zinc die-cast parts.
Typical Applications/End Uses:
Vydyne R633 has been used for many under-the-hood automotive applications, motor housings for power tools, and garden appliances. These resins have also been used in miscellaneous brackets, gears and clips that require high rigidity and strength.

General Information	
Filler / Reinforcement	Glass Fiber,33% Filler by Weight
Additive	Lubricant
Features	Copolymer Good Mold Release Good Surface Finish High Rigidity High Strength High Tensile Strength Lubricated
Uses	Gears Housings Lawn and Garden Equipment Metal Replacement Power/Other Tools
Agency Ratings	ASTM D 4066 PA111G35 ASTM D 6779 PA081G35
UL File Number	E70062
Appearance	Natural Color
Forms	Pellets
Processing Method	Injection Molding
Multi-Point Data	Tensile Stress vs. Strain (ASTM D638)

Physical	Dry	Conditioned	Unit	Test Method
Density	1.39	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.90	--	%	

Flow : 23°C, 2.00 mm	0.40	--	%	
Water Absorption				ISO 62
23°C, 24 hr	1.3	--	%	
Equilibrium, 23°C, 50% RH	2.3	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (23°C)	10800	8000	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	184	130	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	4.0	6.0	%	ISO 527-2
Flexural Modulus (23°C)	8800	6800	MPa	ISO 178
Flexural Stress (23°C)	255	195	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179
-30°C	11	15	kJ/m²	
23°C	12	25	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	44	91	kJ/m²	
23°C	51	92	kJ/m²	
Notched Izod Impact Strength				ISO 180
-30°C	12	19	kJ/m²	
23°C	13	22	kJ/m²	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, Unannealed	230	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	220	--	°C	ISO 75-2/A
Melting Temperature	233	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	1.5E-5	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	1.0E-4	--	cm/cm/°C	
Injection	**Dry**	**Unit**		
Drying Temperature	80.0		°C	
Drying Time	4.0		hr	
Suggested Max Regrind	25		%	
Rear Temperature	280 to 310		°C	
Middle Temperature	280 to 310		°C	
Front Temperature	280 to 310		°C	
Nozzle Temperature	280 to 310		°C	

Processing (Melt) Temp	285 to 305	°C
Mold Temperature	65.0 to 95.0	°C

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China