



Ultramid® B3GM35 Q643

BASF Corporation - Polyamide 6

Monday, November 4, 2019

General Information

Product Description

Ultramid B3GM35 Q643 is a 40% combined glass-fiber and mineral reinforced injection molding PA6 grade.

Applications

Typical applications include industrial articles requiring medium rigidity and high dimensional stability.

General

Material Status	• Commercial: Active
Availability	• North America
Filler / Reinforcement	• Glass\Mineral, 40% Filler by Weight
Features	• High Dimensional Stability • Medium Rigidity • Oil Resistant
Uses	• Industrial Applications
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• GM GMW16279P-PA6-M25GF15 Color: Natural • GM GMW8752P-PA6-M25-GF15H Color: Natural
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density / Specific Gravity	1.48	--		ASTM D792
Density	1.48	--	g/cm ³	ISO 1183
Molding Shrinkage - Flow (0.125 in)	4.0E-3	--	in/in	
Water Absorption (Saturation)	5.7	--	%	ASTM D570
Water Absorption				ISO 62
Saturation, 73°F	5.7	--	%	
Water Absorption				ASTM D570
Equilibrium, 50% RH	1.7	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F, 50% RH	1.7	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.23E+6	--	psi	ISO 527-2
Tensile Strength (Break, 73°F)	17800	--	psi	ASTM D638
Tensile Stress (Break, 73°F)	17400	--	psi	ISO 527-2
Tensile Elongation (Break, 73°F)	2.6	--	%	ASTM D638
Tensile Strain (Break, 73°F)	2.6	--	%	ISO 527-2
Flexural Modulus (73°F)	1.09E+6	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
73°F	2.0	--	ft-lb/in ²	
Notched Izod Impact				ASTM D256
-40°F	0.75	--	ft-lb/in	
73°F	0.99	2.5	ft-lb/in	

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Impact	Dry	Conditioned	Unit	Test Method
Notched Izod Impact Strength 73°F	2.6	--	ft·lb/in ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	388	--	°F	ASTM D648
Heat Deflection Temperature 264 psi, Unannealed	388	--	°F	ISO 75-2/A
Peak Melting Temperature	430	--	°F	ASTM D3418
Melting Temperature (DSC)	430	--	°F	ISO 3146
CLTE - Flow	9.7E-6	--	in/in/°F	
CLTE - Transverse	5.9E-5	--	in/in/°F	

Processing Information

Injection	Dry	Unit
Drying Temperature	181	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Processing (Melt) Temp	518 to 563	°F
Mold Temperature	176 to 203	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Fast	

Notes

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