

TECHNYL STAR® S 216 V30 BLACK 2215

Polyamide 6
Solvay Engineering Plastics

Message:

TECHNYL STAR® S 216 V30 Black 2215 is based on a patented high flow polyamide 6 resin (TechnylStar), reinforced with 30% of glass fibre, for injection moulding. Due to its outstanding flow characteristics, this grade provides a significant productivity improvement and allows more freedom in mould and part design versus a standard polyamide solutions.

General Information				
UL YellowCard		E44716-300166		
Filler / Reinforcement		Glass fiber reinforced material, 30% filler by weight		
Features		Excellent appearance		
		High liquidity		
		Good demoulding performance		
Uses		Power/other tools		
		Industrial application		
		Furniture		
		Outdoor application		
		General		
		Consumer goods application field		
Agency Ratings		UL QMFZ2		
RoHS Compliance		RoHS compliance		
Appearance		Black		
		Natural color		
Forms		Particle		
Processing Method		Injection molding		
Resin ID (ISO 1043)		PA6-GF30		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.34	--	g/cm ³	ISO 1183/A
Water Absorption (23°C, 24 hr)	0.95	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9600	6200	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	180	110	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	3.3	--	%	ISO 527-2
Flexural Modulus (23°C)	9300	5200	MPa	ISO 178
Flexural Stress (23°C)	255	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method

Charpy Notched Impact Strength (23°C)	10	14	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	50	--	kJ/m ²	ISO 179/1eU
23°C	81	90	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	12	19	kJ/m ²	ISO 180
Unnotched Izod Impact Strength (23°C)	82	65	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	204	--	°C	ISO 75-2/Af
Melting Temperature	222	--	°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+13	ohms·cm	IEC 60093
Dielectric Strength (2.00 mm)	--	22	kV/mm	IEC 60243-1
Relative Permittivity	3.80	4.50		IEC 60250
Comparative Tracking Index (Solution A)	550	475	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.6 mm	HB	--		UL 94
3.2 mm	HB	--		UL 94
Glow Wire Flammability Index (1.6 mm)	650	--	°C	IEC 60695-2-12
Oxygen Index	22	--	%	ISO 4589-2
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	230 - 235		°C	
Middle Temperature	235 - 240		°C	
Front Temperature	240 - 245		°C	
Mold Temperature	60 - 90		°C	
Injection instructions				

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point mini -20°C. Recommended time 2-4h

Injection Advice:

For reinforced polyamide, Solvay recommends the use of steel with a high content of Carbon and purified for polishing to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (DIN Norm). For Mould Temperature, in the case of parts where the surface roughness is required we can recommend a temperature of 90°C to 120°C with an optimum at 105°C.

The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design

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