

## SK Chemicals SKYGREEN® PETG 2008 Specially Formulated PET Copolymer Resin

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , PETG Copolyester

### Material Notes:

SKYGREEN PETG is an amorphous copolyester in which a certain amount of ethylene glycol is replaced with 1,4-cyclohexane dimethanol (CHDM), which prevent crystallization, leading to improved processability and clarity. Skygreen® PETG provides a material having outstanding toughness, clarity, color, chemical resistance, and resistance to stress whitening. It can readily be thermoformed for extrusion blow molded. It is superior to acrylic for toughness, and superior to polycarbonate for processability. Applications: Extrusion Sheet: architecture protective cover, display signs, industrial products. Extrusion Film: blister packaging, food packaging containers, electrical & electronic packaging, pharmaceutical & medical packaging. Injection Molding: toys, refrigerator parts, electric & electronic parts, smart cards, pen caps, medical devices and tools. Extrusion Blow Molding: bottles for cosmetics, soaps, shampoos, detergents, etc. Information provided by SK Chemicals.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SK-Chemicals-SKYGREEN-PETG-2008-Specially-Formulated-PET-Copolymer-Resin.php](http://www.lookpolymers.com/polymer_SK-Chemicals-SKYGREEN-PETG-2008-Specially-Formulated-PET-Copolymer-Resin.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.27 g/cc	1.27 g/cc	ASTM D792
Water Absorption	0.13 %	0.13 %	24 hr immersion; ASTM D570
Linear Mold Shrinkage	0.0030 - 0.0060 cm/cm	0.0030 - 0.0060 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	110	110	ASTM D785
Tensile Strength at Break	28.0 MPa	4060 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	50.0 MPa	7250 psi	50 mm/min; ASTM D638
Elongation at Break	140 %	140 %	50mm/min; ASTM D638
Flexural Strength	73.0 MPa	10600 psi	1.27 mm/min; ASTM D790
Flexural Modulus	2.10 GPa	305 ksi	1.27 mm/min; ASTM D790
Izod Impact, Notched	1.00 J/cm	1.87 ft-lb/in	ASTM D256
Impact Test	33.0 J @Thickness 3.20 mm	24.3 ft-lb @Thickness 0.126 in	impact resistance energy, max. load in plaque, 220 m/min; ASTM D3763

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	70.0 Â°C	158 Â°F	ASTM D648

Thermal Properties	Metric	English	Comments
Vicat Softening Point	85.0 Â°C	185 Â°F	at 1 kg load; ASTM D1525
Glass Transition Temp, Tg	80.0 Â°C	176 Â°F	DSC
Flammability, UL94	HB	HB	min. 1.6 thickness
	V-2	V-2	min. 3.2 thickness

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	ASTM D257
Dielectric Constant	2.4	2.4	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	2.6	2.6	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	short-time, 500v/sec; ASTM D149
Dissipation Factor	0.0050	0.0050	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.023	0.023	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Processing Properties	Metric	English	Comments
Processing Temperature	45.0 Â°C	113 Â°F	Roll 1 Temperature
	54.0 Â°C	129 Â°F	Roll 2 Temperature
	63.0 Â°C	145 Â°F	Roll 3 Temperature
	210 Â°C	410 Â°F	Cylinder 4 Temperature
	245 Â°C	473 Â°F	Cylinder 2 and Cylinder 3 Temperature
	245 Â°C	473 Â°F	Screen, Me1t Pump, and Connection Temperature
Feed Temperature	240 Â°C	464 Â°F	
Nozzle Temperature	245 Â°C	473 Â°F	
Zone 1	180 Â°C	356 Â°F	Barrel Temp of Main Extruder

Processing Properties	195 Â°C Metric	383 Â°F English	Extrusion Blow Molding Comments
Zone 2	210 Â°C	410 Â°F	Extrusion Blow Molding
	245 Â°C	473 Â°F	Barrel Temp of Main Extruder
Zone 3	210 Â°C	410 Â°F	Extrusion Blow Molding
	265 Â°C	509 Â°F	Barrel Temp of Main Extruder
Zone 4	210 Â°C	410 Â°F	Extrusion Blow Molding
	260 Â°C	500 Â°F	Barrel Temp of Main Extruder
Zone 5	240 Â°C	464 Â°F	Barrel Temp of Main Extruder
Adapter Temperature	200 Â°C	392 Â°F	Extrusion Blow Molding
	245 Â°C	473 Â°F	
Die Temperature	195 Â°C	383 Â°F	Extrusion Blow Molding (Die Tip)
	247 Â°C	477 Â°F	Die Zone 1
	249 Â°C	480 Â°F	Die Zone 2
Head Temperature	185 Â°C	365 Â°F	Extrusion Blow Molding
Mold Temperature	12.0 - 20.0 Â°C	53.6 - 68.0 Â°F	Extrusion Blow Molding
	40.0 Â°C	104 Â°F	
	40.0 - 70.0 Â°C	104 - 158 Â°F	For Thermoforming (Forming time = 3-10 sec)
Drying Temperature	65.0 Â°C	149 Â°F	
Dry Time	6 - 12 hour	6 - 12 hour	
Injection Pressure	5.50 MPa	798 psi	1st Pressure
Hold Pressure	4.00 MPa	580 psi	
	8.30 MPa	1200 psi	Extrusion Melt Pressure
Back Pressure	0.500 MPa	72.5 psi	
Cycle Time - Injection	2.0 sec	2.0 sec	
	15 sec	15 sec	2nd Pressure Time
Cycle Time - Cooling	15 sec	15 sec	

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