



Thursday, January 04, 2007

SKYGREEN® PETG S2008

SK Chemicals - Polyethylene Terephthalate Glycol Comonomer

Unit System: English

Actions



[Legend \(Open\)](#)

[Compare Materials \(Open\)](#)

General Information

General

Material Status	<ul style="list-style-type: none"> Commercial: Active
Availability	<ul style="list-style-type: none"> Asia Europe North America
Test Standards Available	<ul style="list-style-type: none"> ASTM
Features	<ul style="list-style-type: none"> Chemical Resistance, Good Cycle (Production), Fast Food Contact Acceptable Gloss, High Processability, Good Toughness, Good Toxicity, None
Uses	<ul style="list-style-type: none"> Bottles Caps, Closure Electrical/Electronic Applications Medical Applications Packaging Packaging, Food Packaging, Medical Packaging, Pharmaceutical Tools, Power/Others Toys
Agency Ratings	<ul style="list-style-type: none"> EU 1999/91/EC EU 90/128/EEC FDA 21 CFR 177.1315(b) 1 1
Appearance	<ul style="list-style-type: none"> Clear Colors Available
Forms	<ul style="list-style-type: none"> Pellets
Processing Method	<ul style="list-style-type: none"> Extrusion Blow Molding Extrusion, Film Extrusion, Profile Injection Molding Thermoforming

ASTM and ISO Properties 2

Physical	Nominal Value	Unit	Test Method
Density -Specific Gravity	1.27	sp gr 23/23°C	ASTM D792
Mold Shrink, Linear-Flow	0.0030 to 0.0060	in/in	ASTM D955
Water Absorption @ 24 hrs	0.13	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength @ Yield 3	7300	psi	ASTM D638
Tensile Strength @ Break 3	4100	psi	ASTM D638
Tensile Elongation @ Brk 3	140	%	ASTM D638
Flexural Modulus 4	305000	psi	ASTM D790
Flexural Strength 4	10600	psi	ASTM D790
Films	Nominal Value	Unit	Test Method
Film Puncture Energy 5	26.4	in-lb	
Secant Modulus MD 6	276000	psi	ASTM D882
Secant Modulus TD 6	276000	psi	ASTM D882
Tensile Strength @ Yld MD 6	7500	psi	ASTM D882
Tensile Strength @ Yld TD 6	7500	psi	ASTM D882
Tensile Strength @ Brk MD 6	8600	psi	ASTM D882
Tensile Strength @ Brk TD 6	8000	psi	ASTM D882
Elongation @ Yield MD 3	4.5	%	ASTM D882
Elongation @ Yield TD 3	4.5	%	ASTM D882
Elongation @ Break MD 6	380	%	ASTM D882
Elongation @ Break TD 6	380	%	ASTM D882
Impact	Nominal Value	Unit	Test Method

Notched Izod Impact (73 °F)	1.88 ft-lb/in	ASTM D256
Instrumented Dart Impact (73 °F, 0.125 in) ⁷	Max. Load: 288 in-lb	ASTM D3763
Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (R-Scale)	110	ASTM D785
Thermal	Nominal Value Unit	Test Method
DTUL @66psi - Unannealed	158 °F	ASTM D648
DTUL @264psi - Unannealed	147 °F	ASTM D648
Glass Transition Temp	176 °F	DSC
Vicat Softening Point	185 °F	ASTM D1525
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+16 ohms	ASTM D257
Volume Resistivity	1.0E+15 ohm-cm	ASTM D257
Dielectric Strength	410 V/mil	ASTM D149
Dielectric Constant		ASTM D150
(1000 Hz)	2.600	
(1E+6 Hz)	2.400	
Dissipation Factor		ASTM D150
(1000 Hz)	0.0050	
(1E+6 Hz)	0.023	
Flammability	Nominal Value Unit	Test Method
Flame Rating - UL		UL 94
(0.0630 in)	HB	
(0.126 in)	V-2	
UL File Number	E215991	
Optical	Nominal Value Unit	Test Method
Transmittance (10.00 mil)	89.0 %	ASTM D1003
Haze (10.00 mil)	0.50 %	ASTM D1003

Additional Properties

Vicat Softening Temperature, ASTM D1525, 1 kg load: 185 °F

Additional Film Properties:

Intrinsic Viscosity of Film, SK Method: 0.75 dl/g

Total Transmittance, ASTM D1003: 91%

Tear Propagation Resistance M.D., ASTM D1938, Split Tear Method, 10 in/min: 205 lb/in

Tear Propagation Resistance T.D., ASTM D1938, Split Tear Method, 10 in/min: 205 lb/in

The value shown for Film Puncture Energy was tested in accordance with ASTM D3763 test methods on a 10 mil thick film at 73°F and a speed of 220 m/min.

Processing Information

Injection	Nominal Value Unit
Drying Temperature	149 °F
Drying Time	4.0 to 6.0 hr
Suggested Max Moisture	0.050 %
Middle Temperature	473 °F
Mold Temperature	59.0 to 104 °F
Screw Speed	50 to 100 rpm

Extrusion Notes

Extrusion Blow Molding:
 Barrel Temperature: 410°F
 Die Temperature: 383°F
 Mold Temperature: 54 - 68 °F

Film Extrusion for 1mm Thickness:

Barrel Temperature: 490°F
 Die Temperature: 500 °F
 Roll Temperature 1: 90°F
 Roll Temperature 2: 108°F
 Roll Temperature 3: 149°F

Notes

¹ When used unmodified for the manufacture of food contact articles, SKYGREEN® PETG S2008 will comply with Food Additive Regulations FDA 21 CFR 177.1315(b) 1 under the U.S. Food, Drug and Cosmetic Act. Such uses are subject to good manufacturing practices and any other limitations which are part of the statute or regulations. These should be consulted for complete details.

² Typical properties: these are not to be construed as specifications.

- 3 2.0 in/min
 - 4 0.050 in/min
 - 5 10.0 mil
 - 6 2.0 in/min, 10.0 mil
 - 7 8661 in/min
-



Copyright © 2007 [IDES - The Plastics Web®](http://www.ides.com)

The information presented on this data sheet was acquired by IDES from various sources, including the producer of the material and recognized testing agencies. In some cases, material updates have been integrated directly into the IDES Plastics Database by the material producer utilizing the Data Maintenance Tool. IDES makes substantial efforts to assure the accuracy of this data. However, IDES assumes no responsibility for the data values and urges that upon final material selection, data points are validated with the manufacturer.

IDES - The Plastics Web®

Free, instant access to 65,000 datasheets online!

800-788-4668 or 307-742-9227 | www.ides.com/pse