

BASF Ultrason S 2010 PSU

Category : Polymer , Thermoplastic , Polysulfone (PSU)

Material Notes:

Ultrason S 2010 is an unreinforced, medium viscosity standard injection molding PSU grade. It flows readily and offers outstanding heat resistance and dimensional stability. It conforms to FDA requirements of 21 CFR 177.1655.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultrason-S-2010-PSU.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	ISO 1183
Water Absorption	0.80 %	0.80 %	ISO 62
Moisture Absorption at Equilibrium	0.30 %	0.30 %	23°C/50% R.H.; ISO 62
Viscosity Test	63 cm ³ /g	63 cm ³ /g	Viscosity number
Linear Mold Shrinkage, Flow	0.0068 cm/cm	0.0068 in/in	ISO 294
Linear Mold Shrinkage, Transverse	0.0072 cm/cm	0.0072 in/in	ISO 294
Melt Flow	90 g/10 min @Load 10.0 kg, Temperature 360 °C	90 g/10 min @Load 22.0 lb, Temperature 680 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	135 MPa	19600 psi	ISO 11359-1/-2
Tensile Strength at Break	75.0 MPa	10900 psi	5mm/min; ISO 527-2
Tensile Strength, Yield	75.0 MPa	10900 psi	50mm/min; ISO 527-2
Elongation at Break	5.7 %	5.7 %	5mm/min; ISO 527-2
Elongation at Yield	5.7 %	5.7 %	50mm/min; ISO 527-2
Tensile Modulus	2.60 GPa	377 ksi	ISO 527-2
Shear Modulus	0.0250 GPa @Temperature 200 °C	3.63 ksi @Temperature 392 °F	ISO 6721
	0.800 GPa @Temperature 175 °C	116 ksi @Temperature 347 °F	ISO 6721
	0.900 GPa @Temperature 100 °C	131 ksi @Temperature 212 °F	ISO 6721

Mechanical Properties	Metric	English	Comments
	@Temperature 50.0 °C	@Temperature 122 °F	
Izod Impact, Notched (ISO)	5.00 kJ/m²	2.38 ft-lb/in²	ISO 180/A
	6.00 kJ/m²	2.86 ft-lb/in²	ISO 180/A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	NB	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.550 J/cm²	2.62 ft-lb/in²	ISO 179/1eA
	0.0600 J/cm²	0.286 ft-lb/in²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Creep Modulus, 1000 hours	2500 MPa	363000 psi	elongation <0.5%, 23°C; ISO 899

Thermal Properties	Metric	English	Comments
CTE, linear	53.0 µm/m-°C	29.4 µin/in-°F	DIN 53752
	@Temperature 26.0 °C	@Temperature 78.8 °F	
	60.0 µm/m-°C	33.3 µin/in-°F	DIN 53752
	@Temperature 125 °C	@Temperature 257 °F	
	65.0 µm/m-°C	36.1 µin/in-°F	DIN 53752
	@Temperature 175 °C	@Temperature 347 °F	
CTE, linear, Parallel to Flow	53.0 µm/m-°C	29.4 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	60.0 µm/m-°C	33.3 µin/in-°F	ISO 11359-1/-2
	@Temperature 140 - 180 °C	@Temperature 284 - 356 °F	
Maximum Service Temperature, Air	180 °C	356 °F	short cycle operations
Deflection Temperature at 1.8 MPa (264 psi)	167 °C	333 °F	ISO 75
Glass Transition Temp, Tg	187 °C	369 °F	ISO 11357-1/-3
UL RTI, Electrical	155 °C	311 °F	50% decrease of tensile strength after 20000h; 746B
	HB	HB	

Thermal Properties	Metric	English	Comments
	V-2	V-2	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	@Thickness 3.20 mm	@Thickness 0.126 in	

Optical Properties	Metric	English	Comments
Refractive Index	1.63	1.63	
	1.63	1.63	
	@Wavelength 700 nm	@Wavelength 700 nm	
	1.63	1.63	
	@Wavelength 550 nm	@Wavelength 550 nm	
	1.64	1.64	
	@Wavelength 590 nm	@Wavelength 590 nm	
	1.65	1.65	
	@Wavelength 540 nm	@Wavelength 540 nm	
	1.66	1.66	
	@Wavelength 450 nm	@Wavelength 450 nm	
Transmission, Visible	89 %	89 %	ASTM D 1003
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	75 %	75 %	
	@Wavelength 400 nm	@Wavelength 400 nm	
	85 %	85 %	
	@Wavelength 500 nm	@Wavelength 500 nm	
	85 %	85 %	
	@Wavelength 600 nm	@Wavelength 600 nm	
UV Transmittance	3.0 %	3.0 %	
	@Wavelength 300 nm	@Wavelength 300 nm	
	15 %	15 %	
	@Wavelength 200 nm	@Wavelength 200 nm	
	40 %	40 %	
	@Wavelength 350 nm	@Wavelength 350 nm	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{13}$ ohm-cm	$\geq 1.00 \times 10^{13}$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00 \times 10^{14}$ ohm	$\geq 1.00 \times 10^{14}$ ohm	IEC 60093
Dielectric Constant	3.1	3.1	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	3.1	3.1	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	40.0 kV/mm	1020 kV/in	IEC 60243-1 3
Dissipation Factor	0.00080	0.00080	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0064	0.0064	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	125 V	125 V	Test Liquid A & B; IEC 60112

Processing Properties	Metric	English	Comments
Adapter Temperature	300 °C	572 °F	
Die Temperature	310 °C	590 °F	
Melt Temperature	330 - 390 °C	626 - 734 °F	Injection molding
Mold Temperature	120 - 160 °C	248 - 320 °F	Injection molding
Die Opening	110 cm	43.3 in	

Descriptive Properties	Value	Comments
Color	Natural	
Commercial Status	North America and Europe	
FDA	21 CFR 177.1655	
Impact Modified	No	
NSF Std. 61	Yes	
Primary Processing Technique	Injection Molding, Extrusion and Blow Molding	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China