

General Information

General

Material Status	<ul style="list-style-type: none"> Commercial: Active
Availability	<ul style="list-style-type: none"> North America
Test Standards Available	<ul style="list-style-type: none"> ASTM
Features	<ul style="list-style-type: none"> Clarity, High Strength, High Thermal Stability, Good UV Resistance, Good Weather Resistance, Good
Uses	<ul style="list-style-type: none"> Appliance Components Automotive Exterior Parts Automotive Interior Parts Household Goods Lighting Diffusers Medical Appliances Optical Applications
Agency Ratings	<ul style="list-style-type: none"> FDA 21 CFR 177.1010 ¹ USP XXI, Class VI
Appearance	<ul style="list-style-type: none"> Colors Available Opaque Translucent Transparent
Forms	<ul style="list-style-type: none"> Pellets
Processing Method	<ul style="list-style-type: none"> Extrusion Injection Molding

ASTM and ISO Properties ²

Physical	Nominal Value Unit	Test Method
Density -Specific Gravity	1.19 sp gr 23/23°C	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	3.4 g/10 min	ASTM D1238
Mold Shrink, Linear-Flow	0.0040 to 0.0070 in/in	ASTM D955
Water Absorption @ 24 hrs	0.30 %	ASTM D570
Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	470000 psi	ASTM D638
Tensile Strength @ Yield	11300 psi	ASTM D638
Flexural Strength @ Yield	16200 psi	ASTM D790
Compressive Strength	17000 psi	ASTM D695
Impact	Nominal Value Unit	Test Method
Notched Izod Impact (73 °F, 0.125 in)	0.250 ft-lb/in	ASTM D256
Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (M-Scale)	95	ASTM D785
Thermal	Nominal Value Unit	Test Method
DTUL @264psi - Unannealed	212 °F	ASTM D648
Vicat Softening Point	243 °F	ASTM D1525
CLTE, Flow	0.000040 in/in/°F	ASTM D696
Electrical	Nominal Value Unit	Test Method
Dielectric Strength	500 V/mil	ASTM D149
Dielectric Constant (100 Hz) (10000 Hz)	3.700 2.800	ASTM D150
Flammability	Nominal Value Unit	Test Method
Flame Rating - UL (0.0580 in)	HB	UL 94

UL 746	Nominal Value Unit	Test Method
RTI Str (0.0580 in)	122 °F	UL 746
RTI Imp (0.0580 in)	122 °F	UL 746
RTI Elec (0.0580 in)	122 °F	UL 746

Optical	Nominal Value Unit	Test Method
Refractive Index	1.490	ASTM D542
Transmittance	92.0 %	ASTM D1003

Processing Information

Injection	Nominal Value Unit
Drying Temperature	180 °F
Drying Time	3.0 hr
Suggested Max Moisture	0.10 %
Mold Temperature	140 °F
Injection Pressure	6000 to 18000 psi
Screw Speed	20 to 50 rpm
Clamp Tonnage	1.9 to 3.0 tons/in ²

Notes

¹ When used unmodified for the manufacture of food contact articles, ACRYLITE® S10 will comply with Food Additive Regulations FDA 21 CFR 177.1010 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.

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