

Product Texts

Durastar™ DS1010 polymer contains a mold release. It has excellent appearance and clarity. Its most outstanding features are chemical resistance and excellent processing characteristics. Exposure to aromatic oils often causes

crazing or actual fracture of many polymer resins, but DS1010 maintains its physical properties when exposed to these oils, and its appearance is virtually unchanged. Easy to process, it flows readily, fills intricate molds, and is

well suited for thick-wall applications. Under existing United States Food and Drug Administration (FDA) regulations, Durastar™ DS1010 may be used in food contact articles which comply with the specifications and conditions of use in 21 CFR 177.1240. This product is certified to ANSI/NSF Standard 51.

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Mold Shrinkage, MD	0.004	mm/mm	ASTM D 955
Mechanical properties			
ISO Data			
Tensile Modulus	1800	MPa	ISO 527
Yield stress	47	MPa	ISO 527
Yield strain	4	%	ISO 527
Stress at break	46	MPa	ISO 527
Strain at break	200	%	ISO 527
Flexural modulus, 23°C	1850	MPa	ISO 178
Flexural strength	65	MPa	ISO 178
Izod notched impact strength, +23°C	7.8	kJ/m ²	ISO 180/1A
Izod notched impact strength Temperature	4.8 -40	kJ/m ² °C	ISO 180/1A -
Puncture energy, +23°C	58.7	J	ISO 6603-2
ASTM Data			
Tensile Strength at Yield	47	MPa	ASTM D 638
Tensile Strength at Break	51	MPa	ASTM D 638
Elongation at Yield	5	%	ASTM D 638
Elongation at Break	300	%	ASTM D 638
Flexural Modulus	2000	MPa	ASTM D 790
Rockwell Hardness	103	-	ASTM D 785
Izod Impact notched, 1/8 in	80	J/m	ASTM D 256
Izod Impact notched, Low-Temperature Temperature	40 -40	J/m °C	ASTM D 256 -
Izod Impact unnotched, 1/8 in	N	J/m	ASTM D 256
Thermal properties			
ISO Data			
Temp. of deflection under load, 1.80 MPa	66	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	72	°C	ISO 75-1/-2
Burning behav. at thickness h Thickness tested	V-2 3.0	class mm	IEC 60695-11-10 -
ASTM Data			
DTUL @ 66 psi	75	°C	ASTM D 648
DTUL @ 264 psi	65	°C	ASTM D 648
Optical properties			
ASTM Data			
Haze	0.3	%	ASTM D 1003
Light Transmittance	91	%	ASTM D 1003

Other properties	Value	Unit	Test Standard
Density	1190	kg/m ³	ISO 1183
Density	1200	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	71	°C	-
Pre-drying - Time	3 - 4	h	-
Melt temperature	232 - 277	°C	-
Mold temperature	16 - 38	°C	-

Characteristics

Processing

Injection Molding

Delivery form

Natural Color

Additives

Release agent

Special Characteristics

High impact or impact modified, Transparent

Chemical Resistance

General Chemical Resistance, Oil Resistance

Certifications

Food contact, Food approval FDA 21 CFR, Food approval NSF 51

Applications

Packaging, Sports Equipment

Regional Availability

North America, Europe, Asia Pacific, South and Central America