

Product Texts

Durastar™ DS2000 polymer has excellent appearance and is nearly water-clear. Its most outstanding features are toughness, chemical resistance, and excellent processing characteristics. DS2000 has very good toughness as shown by Izod impact resistance. Exposure to aromatic oils often causes crazing or actual fracture of many polymer resins, but DS2000 maintains its physical properties when exposed to these oils, and its appearance is virtually unchanged. Easy to process, it flows readily and fills intricate molds. Under existing United States Food and Drug Administration (FDA) regulations, Durastar™ DS2000 may be used in food contact articles which comply with the specifications and conditions of use in 21 CFR 177.1240.

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Mold Shrinkage, MD	0.004	mm/mm	ASTM D 955
Mechanical properties			
ISO Data			
Yield stress	47	MPa	ISO 527
Yield strain	4	%	ISO 527
Stress at break	49	MPa	ISO 527
Strain at break	210	%	ISO 527
Flexural modulus, 23°C	1750	MPa	ISO 178
Flexural strength	64	MPa	ISO 178
Izod notched impact strength, +23°C	29.6	kJ/m ²	ISO 180/1A
Izod notched impact strength Temperature	6.3 -40	kJ/m ² °C	ISO 180/1A -
Puncture energy, +23°C	71	J	ISO 6603-2
ASTM Data			
Tensile Strength at Yield	46	MPa	ASTM D 638
Tensile Strength at Break	53.1	MPa	ASTM D 638
Elongation at Yield	5	%	ASTM D 638
Elongation at Break	310	%	ASTM D 638
Flexural Modulus	1900	MPa	ASTM D 790
Rockwell Hardness	105	-	ASTM D 785
Izod Impact notched, 1/8 in	370	J/m	ASTM D 256
Izod Impact notched, Low-Temperature Temperature	60 -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	73	°C	ISO 75-1/-2
ASTM Data			
UL 94 Flame rating	HB	-	UL 94
Thickness tested	1.5	mm	-
DTUL @ 66 psi	73	°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			
ASTM Data			
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	70	°C	-
Pre-drying - Time	3	h	-
Melt temperature	250 - 290	°C	-
Mold temperature	15 - 30	°C	-

Characteristics**Processing**

Injection Molding

Delivery form

Natural Color

Special Characteristics

High impact or impact modified, Transparent

Chemical Resistance

General Chemical Resistance, Oil Resistance

Certifications

Food contact, Food approval FDA 21 CFR

Applications

Building Construction, Sports Equipment

Regional Availability

Europe, Near East/Africa