



Material status:

- Commercial active

Availability:

- North America

Test Standards Available:

- ISO
- ASTM

Features:

- Impact resistance, high
- Food contact acceptable processing information

Uses:

- Sheet

Agency ratings:

- FDA Unspecified

Forms:

- Pellets

Processing method:

- Extrusion, sheet
- Blow molding

Typical Properties

Property	Test Method	Units	Values
PHYSICAL			
Specific gravity	ASTM D 792	Sp gr 23/23o	1.3
Mold shrink, linear flow (0.125 in.)	ASTM D 955	in/in	0.0060 – 0.0080
MECHANICAL			
Tensile modulus	ASTM D 638	psi	30,200
Tensile strength @ yield	ASTM D 638	psi	5,800
Tensile strength @ break	ASTM D 638	psi	4,400
Tensile elongation @ yield	ASTM D 638	%	3.1
Tensile elongation @ break	ASTM D 638	%	32
Flexural modulus (2.00 in Span)	ASTM D 790	psi	314,000
Flexural strength @ yield (2.00 in Span)	ASTM D 790	psi	9,700
Notched Izod impact	ASTM D 256	-	-
-22°F	ASTM D 256	-	5.80 ft-lb/in
73°F	ASTM D 256	-	8.10 ft-lb/in
Instrumented dart impact (73°F)	ASTM D 3763	in-lb	Total Energy: 450
THERMAL			
Coefficient of thermal expansion	ASTM D 696	in/in/°F	3.75 x 10 ⁻⁵
Coefficient of thermal conductivity	ASTM C 177	BTU-in/hr-ft ² ·°F	1.35
Heat deflection temperature @ 264 psi	ASTM D 648	°F	270
Heat deflection temperature @ 66 psi	ASTM D 648	°F	280
Brittleness temperature	ASTM D 746	°F	-200
ELECTRICAL			
DTUL @ 264 psi – unannealed (0.125 in)	ASTM D 648	°F	177
DTUL @ 66 psi – unannealed (0.125 in)	ASTM D 648	°F	200
Vicat softening point (Rate B)	ASTM D 1525	°F	224
CLTE, Flow (-40 to 100°F)	ASTM D 696	in/in/°F	5.6E-005
CLTE, Transverse (-40 to 100°F)	ASTM D 696	in/in/°F	5.8E-005
Mold filling analysis parameters			
Melt viscosity (464°F, 100 sec ⁻¹)	ASTM D 3835	Pa-s	1,400



Extrusion Molding Parameters

Drying temperature	180 to 200°F
Drying time	6 to 12 hr
Suggested max moisture	0.0020 to 0.020
Cylinder Zone 1 temperature	340 to 390°F
Cylinder Zone 2 temperature	360 to 430°F
Cylinder Zone 3 temperature	370 to 440°F
Cylinder Zone 4 temperature	390 to 460°F
Adapter temperature	400 to 480°F
Melt temperature	420 to 500°F
Die temperature	400 to 480°F
Take-off roll	200 to 220°F

Extrusion Notes

Sheet parameters:

- Roll stack temperature – Top: 190-200°F
- Roll stack temperature – Middle: 200-220°F
- Roll stack temperature – Bottom: 210-220°F

Purge material from extruder before shut down to a void degradation/set-up.

Blow molding parameters:

NOTE: Maintain melt temperature within processing range.

- Drying temperature: 180-190°F
- Drying time: 4-5 hr
- Drying time maximum: 24 hr
- Moisture content (range): 0.02-0.04%
- Moisture content maximum: 0.04%
- Melt temperature (parison): 420-450°F
- Barrel – Zone 1: 400-440°F
- Barrel – Zone 2: 400-440°F
- Barrel – Zone 3: 400-440°F
- Barrel – Zone 4: 400-440°F
- Adapter – Zone 5: 410-450°F
- Head – Zone 6 – Top: 420-450°F
- Head – Zone 7 – Top: 420-450°F
- Head – Zone 8 – Top: 420-455°F
- Mold temperature: 100-180°F

Head and die temperature to be same as the melt temperature. For extended downtimes lower barrel, head and die temperatures to 200°F.

Notes:

1. When used unmodified for the manufacture of food contact articles, the product will comply with Food Additives Regulations FDA Unspecified Rating 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; not to be construed as specifications

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.