

Technical Data

Product Description

HIVAL® 5303 is a High Impact Polystyrene material. It is available in North America for extrusion or injection molding.

Important attributes of HIVAL® 5303 are:

- RoHS Compliant
- BPA Free
- Food Contact Acceptable

Typical application of HIVAL® 5303: Food Contact Applications

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
Search for UL Yellow Card	• Nexeo Plastics • HIVAL®
Availability	• North America
Features	• BPA Free • Food Contact Acceptable
Agency Ratings	• FDA 21 CFR 177.1640
RoHS Compliance	• RoHS Compliant
Forms	• Pellets
Processing Method	• Extrusion • Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.04 g/cm ³	1.04 g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.0 g/10 min	3.0 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	280000 psi	1930 MPa	ASTM D638
Tensile Strength (Yield)	4000 psi	27.6 MPa	ASTM D638
Flexural Modulus	280000 psi	1930 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	3.0 ft-lb/in	160 J/m	ASTM D256
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-Scale)	94	94	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed	195 °F	90.6 °C	ASTM D648
Vicat Softening Temperature	200 °F	93.3 °C	ASTM D1525

Injection	Nominal Value (English)	Nominal Value (SI)
Rear Temperature	390 to 450 °F	199 to 232 °C
Middle Temperature	400 to 450 °F	204 to 232 °C
Front Temperature	425 to 500 °F	218 to 260 °C
Nozzle Temperature	425 to 500 °F	218 to 260 °C
Processing (Melt) Temp	425 to 525 °F	218 to 274 °C
Injection Rate	Slow-Fast	Slow-Fast

Injection Notes

Screw Speed: Slow



Extrusion	Nominal Value (English)	Nominal Value (SI)
Cylinder Zone 1 Temp.	380 to 440 °F	193 to 227 °C
Cylinder Zone 3 Temp.	390 to 450 °F	199 to 232 °C
Cylinder Zone 5 Temp.	400 to 470 °F	204 to 243 °C
Die Temperature	410 to 450 °F	210 to 232 °C
Screw L/D Ratio	20.0:1.0	20.0:1.0

Extrusion Notes

Compression Ratio: 2:1-3:1

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² Typical properties: these are not to be construed as specifications.

