



MATERIAL DATASHEET

TOTAL Polystyrene 8265

Environmental Stress Crack Resistant Polystyrene

UL File Number: E314268

Polystyrene Impact 8265 is a high ductility polystyrene for extrusion application.

It offers excellent environmental stress crack resistance (ESCR) at low temperatures, rendering it suitable for frozen packaging while retaining good mechanical properties.

Application:

- Fridge
- Extrusion Sheet requiring High ESCR Properties

Properties	Test Method		S.I.		Metric		English	
	ISO	ASTM	Value	Units	Value	Units	Value	Units
RHEOLOGICAL								
Melt Flow Index (200 °C - 5 kg)	1133	D-1238	0.0035	kg/ 10 min	3.50	g/ 10 min	7.72E-03	lb/ 10 min
Spiral Flow (220 °C)	-	D-3123	0.44	m	44	cm	17.32	in
THERMAL								
Vicat Softening Point 10N (T increase = 50 °C/h)	306	D-1525	372	K	99	°C	210	°F
Heat Distortion Temperature	75	D-648	354	K	81	°C	178	°F
Coefficient of Linear Thermal Expansion (10 ⁻⁵)	-	D-696	9.10E-03	m/K	9.10	mm/°C	1.99E-01	in/°F
MECHANICAL								
Notched Izod Impact Strength	180	D-256	12.00	kJ/m ²	11.00	kg-cm/cm	2.02	ft-lb/in
Tensile Strength at Yield	527	D-638	27	MPa	270.0	kg/cm ²	3917	psi
Elongation at Break	527	D-638	75	%	75	%	75	%
Flexural Modulus	178	D-790	1700	MPa	17000	kg/cm ²	246632	psi
Rockwell Hardness	2039	D-785	R78	-	R78	-	R78	-
ELECTRICAL								
Dielectric Strength	-	D-149	150000	kV/m	150	kV/mm	3810	kV/in
Surface resistivity	IEC 93	-	>10e+13	Ohms ⁻¹	>10e+13	Ohms ⁻¹	>10e+13	Ohms ⁻¹
MISCELLANEOUS								
Density	-	D-792	1040	kg/m ³	1.04	g/cm ³	64.91	lb/ft ³
Mold Shrinkage	-	D-955	0.4 - 0.7	%	0.4 - 0.7	%	0.4 - 0.7	%
Water absorption	62	D-570	0.06	%	0.06	%	0.06	%



RECOMMENDED EXTRUSION PARAMETERS

Barrel Temperature	Value	Units
Zone 1	170 - 180	°C
Zone 2	180 - 220	°C
Zone 3	210 - 240	°C
Zone 4	210 - 240	°C
Nozzle	210 - 240	°C

General Information :

Standard Properties: All tests are carried out at 23 °C unless otherwise stated. Mechanical properties are measured on injection moulded test specimens.

Bulk Density: Bulk Density of all Natural grades is approximately 0.6 g/cm³.

TOTAL Polystyrene 8265 should be kept in a cool and dry place. Avoid direct exposure to sunlight.