Torlon® 4203

TYPICAL PROPERTIES OF Torlon® 4203

Property	Test Method[2]	Typical Values[1] U.S. Customary Units Value	U.S. Customary Units Units	SI Units Value	SI Units Units
Mechanical					
Tensile strength					
-321°F (-196°C)	D 1708	31.5	kpsi	218	MPa
73°F (23°C)	D 1708	27.8	kpsi	192	MPa
275°F (135°C)	D 1708	16.9	kpsi	117	MPa
450°F (232°C)	D 1708	9.5	kpsi	66	MPa
Tensile elongation					
-321°F (-196°;C)	D 1708	6	%	6	%
73°F (23°C)	D 1708	15	%	15	%
275°F (135°C)	D 1708	21	%	21	%
450°F (232°C	D 1708	22	%	22	%
Tensile modulus	D 1708	700	kpsi	4.9	GPa
Flexural strength					
-321°F (-196°C)	D 790	41.0	kpsi	287	MPa
73°F (23°C)	D 790	34.9	kpsi	244	MPa
275°F (135°C)	D 790	24.8	kpsi	174	MPa
450°F (232°C)	D 790	17.1	kpsi	120	MPa
Flexural modulus					
-321°F (-196°C)	D 790	1,140	kpsi	7.9	GPa
73°F (23°C)	D 790	730	kpsi	5.0	GPa
275°F (135°C)	D 790	560	kpsi	3.9	GPa
450°F (232°C)	D 790	520	kpsi	3.6	GPa
Izod impact strength					
Notched[3]	D 256	2.7	ft-lb/in	142	J/m
Unnotched[3]	D 256	20.0	ft-lb/in	1067	J/m
Shear strength	D 732	18.5	kpsi	128	MPa
Compressive strength	D 695	32.1	kpsi	220	MPa
Compressive modulus	D 695		10^5 psi	4.0	GPa
Poisson's ratio		0.45		0.45	
Thermal					
Heat deflection temperature					
at 264 psi (1.82 MPa)	D 648	532	°F	278	°C
Flammability Rating[4]	UL-94	94 V-0		94 V-0	
Coefficient of thermal expansion	D 696	17	10^{-6} in/in/°F	30.6	10^{-6} m/m/°C
Thermal conductivity	C 177	1.8	Btu-in/hrft^2°F	0.26	W/mK
Oxygen index	D 2863	45	%	45	%
Electrical					
Dielectric strength					
0.040" (1 mm)	D 149	580	V/mil	23.6	kV/mm
Dielectric constant					
at 1 kHz	D 150	4.2		4.2	
at 1 MHz	D 150	3.9		3.9	
Dissipation factor					
at 1 kHz	D 150	0.026		0.026	
at 1 MHz	D 150	0.031		0.031	
Surface resistivity	D 257	$5x10^{18}$	ohm	$5x10^{18}$	ohm
Volume resistivity	D 257	$8x10^{16}$	ohm-in	$2x10^{15}$	ohm-m
General					
Moisture absorption	D 570	0.33	%	0.33	%
Rockwell hardness	D 785	86		86	
Density	D 1505	0.051	lb/in^3	1.42	g/cm^3

[1]Actual properties of individual batches will vary within specification limits.

[2]Test methods are ASTM unless otherwise noted.

[3]1/8" (3.2 mm) bar

[4]These flammability ratings are not intended to reflect hazards for this or any other material under actual fire conditions.

Data courtesy of Solvay Advanced Polymers.