

DURLON[®] 8300

Carbon Fiber with NBR Rubber Binder COMPRESSED SHEET GASKET MATERIAL ASTM F104: F712120-A9B3E22K5L311M5

APPLICATION:

DURLON[®] 8300 is premium grade compressed sheet gasket material that is excellent in steam and hydrocarbon services in the refining, petrochemical and power generation industries. Other applications include oil, water, mild alkalis, mild acids, and solvents.

COMPOSITION:

DURLON[®] 8300 contains high-strength carbon fibers bonded with nitrile (NBR) synthetic rubber. A release agent on both sides provides good anti-stick properties.

ANTI-STICK PROPERTIES:

Much effort has gone into improving the anti-stick release agents of all compressed DURLON[®] products. All DURLON[®] compressed gasket materials have passed the MIL-G-24696B Navy Adhesion Test (366°F/48 hrs).

TYPICAL PROPERTIES:

Color:	Black, branded
Fiber:	Carbon
Binder:	Nitrile (NBR)
Fluid Services:	Saturated Steam, Oils, Dilute Acids & Alkalis, Hydrocarbons, Solvents
Density:	1.6 g/cm ³ (100 lbs./ft ³)
Tensile Strength, ASTM F152:	1,800 psi (12.4 MPa)
Compressibility, ASTM F36:	8 to 16%
Recovery ASTM F36:	50%
Temperature Range: Continuous, max:	-100 to 800°F (-73 to 427°C) 600°F (315°C)
Pressure, max:	1500 psig (103 bar)
Fluid Resistance - ASTM F146 IRM 903 oil, 5 h/300°F (149°C) Thickness Increase: Weight Increase: ASTM Fuel B 5 h/70°F (21°C) Thickness Increase: Weight Increase:	0 to 10% 10% 0 to 10% 12%
Sealability ASTM F37 (Fuel A): ASTM F37 (Nitrogen):	0.03 mL/hr 0.4 mL/hr
Volume Resistivity, ASTM D257:	5 x 10 ⁹ ohm-cm
Dielectric Breakdown, ASTM D149:	0.04 kV/mm (1 V/mil)
DIN 3535 Gas Permeability:	0.05 cc/min
Creep Relaxation ASTM F38:	18%
Flexibility, ASTM F147:	10x

Note: ASTM properties based on 1/16" sheet thickness except ASTM F38, which is based on 1/32" sheet thickness. This is a general guide only and should not be the sole means of accepting or rejecting this material. The data listed here falls within the normal range of product properties but should not be used to establish specification limits nor used alone as the basis of design.

*For applications above Class 300, consult your representative.

M&Y AND PROPOSED ASTM GASKET CONSTANTS:

THICKNESS	1/16"	1/8"
M Y psi (MPa)	3.7 3515 (24.24)	3.0 4014 (27.68)
Gasket Constants		
G_b psi (MPa)	512 (3.5)	1716 (11.8)
a	0.355	0.209
G_s psi (MPa)	13 (0.09)	70 (0.48)
*Gasket Constants based on proposed ASTM Draft 10.01		

AVAILABLE SHEET SIZES:

Nominal Thickness	Sheet Sizes		Order Code	Sheets Per Roll	Approx. Weight/Sheet lbs (kg)
	inches	mm			
1/64" 0.4mm	60 x 63	1524 x 1600	DC05-060-063	20	4 (1.81)
	60 x 126	1254 x 3200	DC05-060-126	10	7 (3.18)
1/32" 0.8mm	60 x 63	1524 x 1600	DC08-060-063	20	7 (3.18)
	60 x 126	1254 x 3200	DC08-060-126	10	14 (6.35)
1.0mm	60 x 63	1524 x 1600	DC10-060-063	20	11 (5.00)
	60 x 126	1254 x 3200	DC10-060-126	10	22 (9.98)
	120 x 126	3048 x 3200	DC10-120-126	2	44 (19.96)
1/16" 1.5mm	60 x 63	1524 x 1600	DC15-060-063	10	14 (6.35)
	60 x 126	1254 x 3200	DC15-120-126	5	28 (12.70)
	120 x 126	3048 x 3200	DC15-120-126	2	55 (24.95)
2.0mm	60 x 63	1524 x 1600	DC20-060-063	10	22 (9.98)
	60 x 126	1254 x 3200	DC20-060-126	5	44 (19.96)
	120 x 126	3048 x 3200	DC20-120-126	2	88 (39.92)
3/32" 2.5mm	60 x 63	1524 x 1600	DC25-060-063	8	25 (11.34)
	60 x 126	1254 x 3200	DC25-060-126	4	49 (22.23)
1/8" 3.0mm	60 x 63	1524 x 1600	DC30-060-063	8	27 (12.25)
	60 x 126	1254 x 3200	DC30-120-126	4	54 (24.50)
	120 x 126	3048 x 3200	DC30-120-126	1	108 (49.00)

Note: Please inquire about availability of 4.0mm and 5.0mm thicknesses and other sizes not listed.

Warning: Durlon gasket materials should never be recommended when both the temperature and the pressure are at the maximums listed. Properties and applications shown are typical. No application should be undertaken by anyone without independent study and evaluation for suitability. Never use more than one gasket in one flange joint, and never reuse a gasket. Improper use or gasket selection could cause property damage and/or serious personal injury. The data reported is a compilation of field testing, field service reports and/or in-house testing. While the utmost care has gone into publishing the information contained herein, we assume no responsibility for errors. The information and specifications contained in this website are subject to change without notice. This revision cancels and obsoletes all previous editions.