

8300 Carbon/NBR Rubber Binder

COMPRESSED SHEET GASKET MATERIAL § ASTM F104: F712120-A9B3E22K5L311M5

application:

DURLON® 8300 is a premium grade compressed non-asbestos sheet gasket material for service conditions to 900°F (482°C) and continuous operating temperatures of -100°F to 650°F (-73°C to 343°C) or 2000 psi (139 bar). It is suitable for saturated steam, oil, dilute acids and mild alkalis, hydrocarbons 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)
	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:	-100 to 900°F (-73 to 482°C)
Continuous, max:	650°F (343°C)
Pressure, max (ambient temperature):	2000 psig (139 bar)
Fluid Resistance - ASTM F146	
IRM 903 oil, 5 h/300°F (149°C)	
Thickness Increase:	0 to 10%
Weight Increase:	10%
ASTM Fuel B 5 h/70°F (21°C)	
Thickness Increase:	0 to 10%
Weight Increase:	12%
Sealability	
ASTM F37 (Fuel A):	0.03 mL/hr
ASTM F37 (Nitrogen):	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)
ASTM F2378 Gas Permeability:	0.05 cc/min
Creep Relaxation ASTM F38:	18%
Flexibility, ASTM F147:	10x
ASTM F104 Line Call-Out:	F712120-A9B3E22K5L311M5

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.

m&y and proposed astm gasket constants:

THICKNESS	1/16"	1/8"
M	3.7	3
Y psi (MPa)	3515 (24.2)	4014 (27.7)
Gasket Constants		
Gb psi (MPa)	512 (3.5)	460 (3.2)
a	0.355	0.313
Gs psi (MPa)	13 (0.09)	0.427 (0)
*Gasket Constants based on proposed ASTM Draft 10.1		

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	1524 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	1524 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	1524 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	1524 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	1524 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	1524 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	1524 x 3200	DC30-120-126	4	54 (24.50)
	120 x 126	3048 x 3200	DC30-120-126	1	108 (49.00)

Standard Testing:

Tests are standard ASTM procedures. Specific information on any test results and the procedure used is available upon request.

Testing vs Operating Conditions:

All test methods provide a standardized procedure to measure specific effects under controlled conditions. The results of any test are not intended to have any direct correlation with service conditions.

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