

8500 Aramid-Inorganic/NBR Rubber Binder

COMPRESSED SHEET GASKET MATERIAL § ASTM F104: F712120-A9B3E12K5L151M6



application:

Our workhorse material, DURLON® 8500 is excellent in steam, natural gas, soybean processing and with new generation refrigerants. A high quality general service gasket material for use in a wide range of services in pulp and paper, food, beverage, pharmaceutical, chemical, refinery, gas pipeline and general industry. DURLON® 8500 exhibits good compressibility and recovery, excellent sealability, flexibility and cutting characteristics.

composition:

DURLON® 8500 contains high-strength aramid and inorganic fibers bonded with high-grade Nitrile (NBR) rubber.

fire testing:

DURLON® 8500 has successfully passed a modified version of the API 607 fire test. The duration of the direct flame portion of the test is 30 minutes and the flange temperature must reach 1200°F in the first 15 minutes. The internal pressure is held at a constant 30 psig. After the flame is shut off, the fixture is immediately water quenched with an overhead water blast. Leakage must not exceed 100 ml/min after a 6 minute cool down to successfully pass the test. Subsequent leakage testing is also performed.

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:	Green, branded
Fiber:	Aramid/Inorganic
Binder:	Nitrile (NBR)
Fluid Services:	Saturated Steam, Oils, Fuels, Dilute Acids & Alkalis, Solvents, Refrigerants
Density:	1.7 g/cm ³ (106 lbs./ft ³)
Tensile Strength, ASTM F152:	2,000 psi (13.8 MPa)
Compressibility, ASTM F36:	8 to 16%
Recovery ASTM F36:	50%
Temperature Range:	-100 to 700°F (-73 to 371°C)
Temperature Continuous, max:	548°F (287°C)
Pressure, max (ambient temperature):	1500 psig (103 bar)
Fluid Resistance - ASTM F146 IRM 903 oil, 5 h/300°F (149°C) Thickness Increase:	0 to 15%
Weight Increase:	15%
ASTM Fuel B 5 h/70°F (21°C) Thickness Increase:	0 to 10%
Weight Increase:	10%
Sealability ASTM F37 (Fuel A):	0.01 mL/hr
ASTM F37 (Nitrogen):	0.4 mL/hr
Volume Resistivity, ASTM D257:	4.2 x 10 ¹³ ohm-cm
Dielectric Breakdown, ASTM D149:	11.7 kV/mm (297 V/mil)
ASTM F2378 Gas Permeability:	0.03 cc/min
Creep Relaxation ASTM F38:	20%
Flexibility, ASTM F147:	10x
ASTM F104 Line Call-Out:	F712120-A9B3E12K5L151M6

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	2.7	4.2
Y psi (MPa)	2359 (16.3)	2931 (20.2)
Gasket Constants		
Gb psi (MPa)	650 (4.5)	400 (2.8)
a	0.330	0.350
Gs psi (MPa)	200 (1.4)	20 (0.1)

*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" 0.5mm	60 x 63	1524 x 1600	DG05-060-063	20	3 (1.4)
	60 x 126	1524 x 3200	DG05-060-126	10	7 (3.2)
1/32" 0.8mm	60 x 63	1524 x 1600	DG08-060-063	20	7 (3.2)
	60 x 126	1524 x 3200	DG08-060-126	10	14 (6.4)
1.0mm	60 x 63	1524 x 1600	DG10-060-063	20	9 (4.1)
	60 x 126	1524 x 3200	DG10-060-126	10	19 (8.6)
	120 x 126	3048 x 3200	DG10-120-126	5	37 (16.8)
1/16" 1.5mm	60 x 63	1524 x 1600	DG15-060-063	10	14 (6.4)
	60 x 126	1524 x 3200	DG15-060-126	5	28 (12.7)
	120 x 126	3048 x 3200	DG15-120-126	2	55 (25.0)
2.0mm	60 x 63	1524 x 1600	DG20-060-063	10	18 (8.2)
	60 x 126	1524 x 3200	DG20-060-126	5	38 (17.2)
	120 x 126	3048 x 3200	DG20-120-126	2	74 (33.6)
3/32" 2.5mm	60 x 63	1524 x 1600	DG25-060-063	8	22 (10.0)
	60 x 126	1524 x 3200	DG25-060-126	4	44 (20.0)
1/8" 3.0mm	60 x 63	1524 x 1600	DG30-060-063	8	28 (12.7)
	60 x 126	1524 x 3200	DG30-060-126	4	55 (25.0)
	120 x 126	3048 x 3200	DG30-120-126	1	110 (50.0)
3/16" 5.0mm	60 x 63	1524 x 1600	DG50-060-063	4	42 (19.1)
	60 x 126	1524 x 3200	DG50-060-126	2	83 (37.6)
	120 x 126	3048 x 3200	DG50-120-126	1	165 (75.8)

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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