

# 8400 Phenolic/NBR Rubber Binder

COMPRESSED SHEET GASKET MATERIAL § ASTM F104: F712120-A9B4E22K5L911M5



## application:

With an extremely wide pH application range, DURLON® 8400 can be used in process piping and equipment in chemical, pulp and paper, and other general industrial applications. A unique high-performance compressed sheet DURLON® 8400 is an excellent gasket material for use in steam, mild caustics and acids in Class 150 and 300 service

## composition:

DURLON® 8400 contains high temperature phenolic fibers and minerals combined with high-grade Nitrile NBR rubber. It exhibits higher temperature limits than aramid based materials and the handling and cutting characteristics are greatly improved over carbon and glass fiber products.

## 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).

## pH range:

DURLON® 8400 has a pH application range of 2 to 13 at room temperature, the widest any compressed sheet gasket material produced today. This makes DURLON® 8400 especially suitable in pulp and paper, and chemical plant applications.

## typical properties:

Color:	Gold, branded
Fiber:	Phenolic
Binder:	Nitrile (NBR)
Fluid Services:	Steam, Oils, Solvents, Caustics, Fuels, Dilute Acids & Alkalis, Hydrocarbons, Refrigerants
Density:	1.7 g/cm <sup>3</sup> (106 lbs./ft <sup>3</sup> )
Tensile Strength, ASTM F152:	1,800 psi (12.4 MPa)
Compressibility, ASTM F36:	8 to 16%
Recovery ASTM F36:	50%
Temperature Range:	-100 to 800°F (-73 to 427°C)
Continuous, max:	554°F (290°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:	15%
Sealability ASTM F37 (Fuel A):	0.01 mL/hr
ASTM F37 (Nitrogen):	0.3 mL/hr
Volume Resistivity, ASTM D257:	3.1 x 10 <sup>13</sup> ohm-cm
Dielectric Breakdown, ASTM D149:	14.6 kV/mm (371 V/mil)
Nitrogen Permeability ASTM F2378:	0.03 cc/min
Creep Relaxation ASTM F38:	25%
Flexibility, ASTM F147:	8x
ASTM F104 Line Call-Out:	F712120-A9B4E22K5L911M5

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	2.9	4.5
Y psi (MPa)	2410 (16.6)	3967 (27.4)
Gasket Constants		
Gb psi (MPa)	2000 (13.8)	1076 (7.4)
a	0.194	0.289
Gs psi (MPa)	340 (2.3)	94 (0.7)
*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	GD05-060-063	20	3 (1.4)
	60 x 126	1524 x 3200	GD05-060-126	10	7 (3.2)
1/32" 0.8mm	60 x 63	1524 x 1600	GD08-060-063	20	7 (3.2)
	60 x 126	1524 x 3200	GD08-060-126	10	14 (6.4)
1.0mm	60 x 63	1524 x 1600	GD10-060-063	20	9 (4.1)
	60 x 126	1524 x 3200	GD10-060-126	10	19 (8.6)
	120 x 126	3048 x 3200	GD10-120-126	5	37 (16.8)
1/16" 1.5mm	60 x 63	1524 x 1600	GD15-060-063	10	14 (6.4)
	60 x 126	1524 x 3200	GD15-060-126	5	28 (12.7)
	120 x 126	3048 x 3200	GD15-120-126	2	55 (25.0)
2.0mm	60 x 63	1524 x 1600	GD20-060-063	10	18 (8.2)
	60 x 126	1524 x 3200	GD20-060-126	5	38 (17.2)
	120 x 126	3048 x 3200	GD20-120-126	2	74 (33.6)
3/32" 2.5mm	60 x 63	1524 x 1600	GD25-060-063	8	20 (9.07)
	60 x 126	1524 x 3200	GD25-060-126	4	39 (17.69)
1/8" 3.0mm	60 x 63	1524 x 1600	GD30-060-063	8	28 (12.7)
	60 x 126	1524 x 3200	GD30-060-126	4	55 (25.0)
	120 x 126	3048 x 3200	GD30-120-126	1	110 (50.0)

## 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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