



HANNA RUBBER COMPANY

Specification Sheet

Garlock Gasket Materials: ASTM F104 Line Callouts

Garlock Style ¹	ASTM Line Callout	A9: Leakage in		E99: % Increase in ASTM Fuel B	K: Thermal Conductivity*	M9: Tensile Strength
		Fuel A (Isooctane) ²	Nitrogen ³			
3000	F712100A9B4E22K5L101M5	Typical: 0.2 ml/hr Max: 1.0 ml/hr	Typical: 0.6 ml/hr Max: 1.5 ml/hr	—	K5	—
3200/3400	F712900A9B4E45K5L102M9	Typical: 0.1 ml/hr Max: 1.0 ml/hr	Typical: 0.4 ml/hr Max: 1.0 ml/hr	—	K5	2,250 psi min. (15 N/mm ² min.)
3300	F712400A9B4E34K5L103M6	Typical: 0.2 ml/hr Max: 1.5 ml/hr	Typical: 1.0 ml/hr Max: 2.0 ml/hr	—	K5	—
3700 ⁴	F712900A9B4E99K5L104M9	Typical: 0.1 ml/hr Max: 1.0 ml/hr	Typical: 0.7 ml/hr Max: 2.0 ml/hr	Weight: 100% max. Thickness: 20-50%	K5	2,250psi min (15 N/mm ² min.)
3750	F712800B4E05L100M9	—	—	—	—	3056 psi min. (21 N/mm ² min.)
3760 ⁵	F719990B6L100M3	—	—	—	—	—
IFG 5500	F712100A9B4E23K7L501M4	Typical: 0.2 ml/hr Max: 1.0 ml/hr	Typical: 0.5 ml/h Max: 1.5 ml/hr	—	K7	—
IFG 5507	F712500A9B2E36K9L504M5	Typical: 0.1 ml/hr Max: 1.0 ml/hr	Typical: 0.5 ml/ Max: 1.5 ml/hr	—	K9: 0.61 W/m ² K (4.27 btu-in./h-ft ² -°F)	—
9800	F712400A9B2E34K8L302M9	Typical: 0.1 ml/hr Max: 0.5 ml/hr	Typical: 0.1 ml/hr Max: 0.5 ml/hr	—	K8	1,400 psi min. (9.7 N/mm ² min.)
9850	F712200A9B2E22K8L301M9	Typical: 0.1 ml/hr Max: 0.5 ml/hr	Typical: 0.1 ml/hr Max: 0.5 ml/hr	—	K8	1,600 psi min. (11 N/mm ² min.)
G9900	F712100A9B2E22K9L401M5	Typical: 0.1 ml/hr Max: 0.5 ml/hr	Typical: 0.1 ml/hr Max: 0.5 ml/hr	—	K9: 0.87 W/m ² K (6.0 btu-in./h-ft ² -°F)	—
ST 706	F712100A9B3E34K5L501M9	Typical: 0.5 ml/hr Max: 1.5 ml/hr	—	—	K5	1,400 psi min. (9.7 N/mm ² min.)

GYLON® Style ⁶	ASTM Line Callout	Fourth Numeral 9: % Increase in IRM Oil #903	Fifth Numeral 9: % Increase in IRM Oil #903	Sixth Numeral 9: % Increase in Water	A9: Leakage in Fuel A (Isooctane) ⁷	E99: % Increase in ASTM Fuel B
3500	F451999A9B1E99K6M6	Thickness: 1.0% max.	Weight: 2.0% max.	Weight: 1.0% max.	Typical: 0.22 ml/hr Max: 1.0 ml/hr	Weight: 2.0% max. Thickness: 1.0% max.
3504	F456999A9B7E99K3M6	Thickness: 1.0% max.	Weight: 2.0% max.	Weight: 1.0% max.	Typical: 0.12 ml/hr Max: 1.0 ml/hr	Weight: 2.0% max. Thickness: 1.0% max.
3510	F451999A9B2E99K5M6	Thickness: 1.0% max.	Weight: 2.0% max.	Weight: 1.0% max.	Typical: 0.04 ml/hr Max: 1.0 ml/hr	Weight: 2.0% max. Thickness: 1.0% max.
3540 ⁵	F419000A9B2	—	—	—	Typical: 0.25 ml/hr Max: 1.0 ml/hr	—
3545 ⁵	F419000A9B3	—	—	—	Typical: 0.15 ml/hr Max: 1.0 ml/hr	—
HP 3560 ⁸	F451999A9B1E99K6M6	Thickness: 1.0% max.	Weight: 2.0% max.	Weight: 1.0% max.	Typical: 0.22 ml/hr Max: 1.0 ml/hr	Weight: 2.0% max. Thickness: 1.0% max.
HP 3561 ⁸	F451999A9B2E99K5M6	Thickness: 1.0% max.	Weight: 2.0% max.	Weight: 1.0% max.	Typical: 0.04 ml/hr Max: 1.0 ml/hr	Weight: 2.0% max. Thickness: 1.0% max.
3565	F457999A9B6E99M6	Thickness: 1.0% max.	Weight: 2.0% max.	Weight: 1.0% max.	Typical: 0.33 ml/hr Max: 1.0 ml/hr	Weight: 2.0% max. Thickness: 1.0% max.

Style ¹	ASTM Line Callout
660	F328148M4
681	F326128M6

¹ For these styles, thickness is 1/32".

² Gasket load = 500 psi (3.5 N/mm²); internal pressure = 9.8 psig (0.7 bar).

³ Gasket load = 3,000 psi (20.7 N/mm²); internal pressure = 30 psig (2 bar).

⁴ % Increase in ASTM #3 Oil (fourth numeral 9 is thickness, fifth numeral 9 is weight): 3200/3400- Thickness: 25-50%;

3700- Thickness: 60-100%; and 3760- Thickness: 75%, Weight: 85%.

⁵ Third numeral 9: F36 Compressibility: 3760: 15-30%, 3540: 70-85%, and 3545: 60-70%.

⁶ For Styles 3500 thru 3545, thickness is 1/32"; for Styles 3560-3565, thickness is 1/16".

⁷ Gasket load = 1,000 psi (7.0 N/mm²); internal pressure = 9.8 psig (0.7 bar).

⁸ F868 Line callout = OFMF9: 9 = Perforated stainless steel.

* NOTE:

K1 thru K9 thermal conductivity characteristics shall be determined in accordance with F-104, 9.10. The K-factor obtained in W/m²K (btu-in./h-ft²-°F) shall fall within the ranges indicated by the numeral of the K symbol:

K1 = 0 to 0.09 (0 to 0.65)
K2 = 0.07 to 0.17 (0.50 to 1.15)
K3 = 0.14 to 0.24 (1.00 to 1.65)
K4 = 0.22 to 0.31 (1.50 to 2.15)
K5 = 0.29 to 0.38 (2.00 to 2.65)
K6 = 0.36 to 0.45 (2.50 to 3.15)
K7 = 0.43 to 0.53 (3.00 to 3.65)
K8 = 0.50 to 0.60 (3.50 to 4.15)
K9 = as specified