

*Advancing the Science of Sealing™*



# Garlock IFG®

*Compressed Inorganic Fiber Gasketing*



*Ideal for oil, steam, water and high temperature applications*

# Garlock

SEALING TECHNOLOGIES®

an EnPro Industries company

# Garlock IFG® Compressed Inorganic Fiber Gasketing

## Benefits

### Tighter seal

- Inorganic fiber gasketing offers excellent thermal stability with minimal weight loss
- Reduced creep relaxation and improved torque retention provide optimal sealability

### Temperature resistant

- Non-oxidizing fibers withstand a continuous operating temperature of up to 550°F (290°C), and maximum spike of 800°F (425°C)
- IFG® 5500 passed Garlock Fire Test

## Media

**IFG® 5500:** Water, aliphatic hydrocarbons, oils, gasoline, saturated steam, inert gases, most refrigerants

**IFG® 5507:** Water, saturated steam, mild chemicals and mild alkalies



## Typical Physical Properties

		IFG® 5500	IFG® 5507
<b>Color</b>		Gray	Sand
<b>Binder</b>		Nitrile (NBR)	EPDM
<b>Temperature</b>	Maximum	+800°F (+425°C)	+800°F (+425°C)
	Minimum	-40°F (-40°C)	-40°F (-40°C)
	Cont. max. <sup>1</sup>	+550°F (+290°C)	+550°F (+290°C)
<b>Pressure, cont. max.</b>	psig	1200	1200
	(bar)	(83)	(83)
<b>P x T, max.</b> (psig x °F) (bar x °C)	1/32", 1/16"	400,000	400,000
	(0.8 mm, 1.6 mm)	(14,000)	(14,000)
	1/8"	275,000	275,000
	(3.2 mm)	(9,600)	(9,600)
<b>M &amp; Y Factors</b>	1/16" M / Y (in psi)	6.6 / 2600	3.5 / 2400
	1/8" M / Y (in psi)	6.6 / 3300	5.5 / 3900
<b>Sealability (ASTM F37B)<sup>2</sup></b>			
<b>ASTM Fuel A</b>	ml/hr	0.2	0.1
<b>Nitrogen</b>	ml/hr	1.0	0.5
<b>Creep Relaxation (ASTM F38)</b>	%	15	15
<b>Compressibility Range (ASTM F36)</b>	%	7-17	7-17
<b>Recovery (ASTM F36)</b>	min. %	50	50
<b>Tensile Strength across grain (ASTM F152)</b>	psi (N/mm <sup>2</sup> )	1500 (10)	1500 (10)
<b>Density</b>	lbs/ft <sup>3</sup> (g/cm <sup>3</sup> )	110 (1.76)	110 (1.76)
<b>Gas Permeability (DIN 3535 Part 4)<sup>3</sup></b>	cc/min.	0.05	0.04

This is a general guide and should not be the sole means of selecting or rejecting this material. ASTM test results in accordance with ASTM F-104; properties based on 1/32" (0.8mm) sheet thickness.



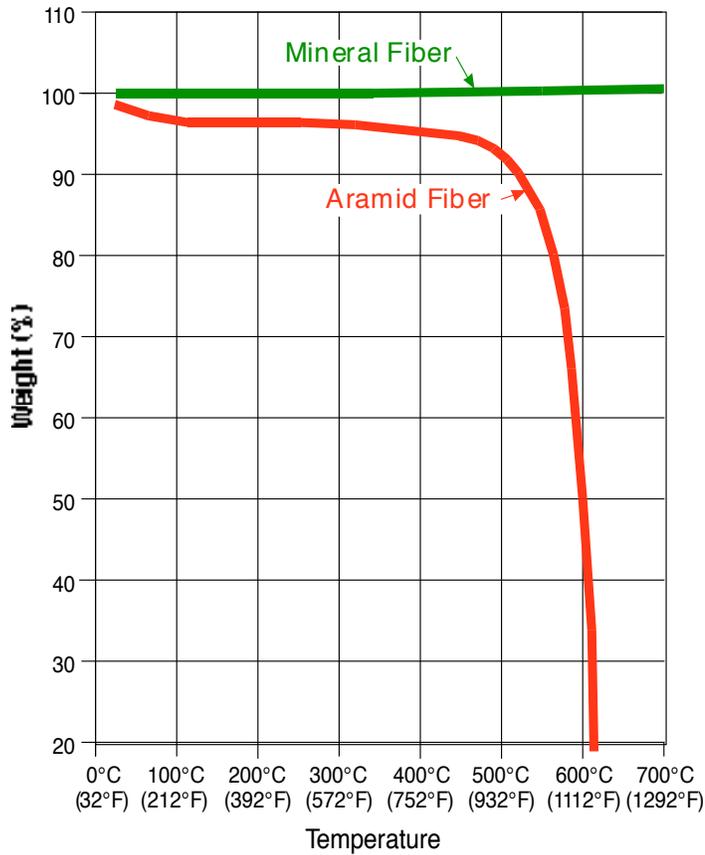
### Notes:

1. When approaching maximum pressure or continuous operating temperature, consult Garlock Applications Engineering.
2. **ASTM F37B Sealability**  
ASTM Fuel A (isooctane):  
Gasket load = 500 psi (3.5 N/mm<sup>2</sup>),  
Internal pressure = 9.8 psig (0.7 bar)  
Nitrogen:  
Gasket load = 3000 psi (20.7 N/mm<sup>2</sup>),  
Internal pressure = 30 psig (2 bar)
3. **DIN 3535 Part 4 Gas Permeability**,  
cc/min. (1/16" thick)  
Nitrogen:  
Gasket load = 4640 psi (32 N/mm<sup>2</sup>),  
Internal pressure = 580 psig (40 bar)

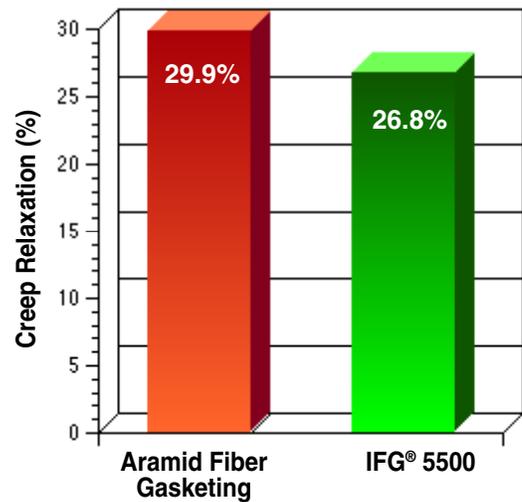
All styles are furnished with an anti-stick parting agent as standard.

# Test Results

## Thermo Gravimetric Analysis Oxygen Atmosphere

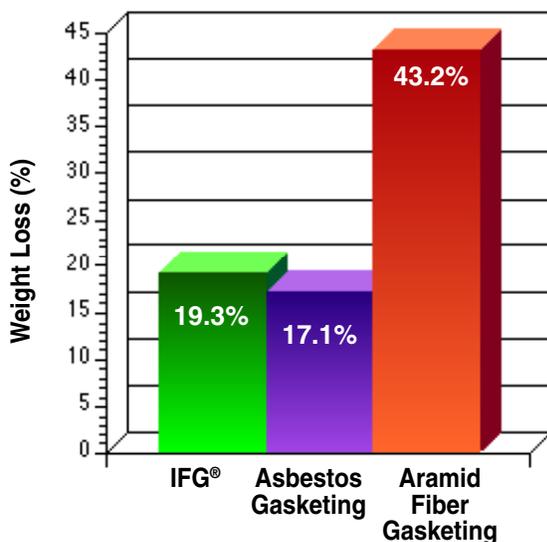


## ASTM F38: Creep Relaxation 22 Hours at 212°F (100°C) (1/16" Thickness)



**Note:** Results are an average of three (3) tests.

## Weight Loss Accelerated Oxidation — 24 Hours at 900°F (482°C) Typical Results



### WARNING:

Properties/applications shown throughout this brochure are typical. Your specific application should not be undertaken without independent study and evaluation for suitability. For specific application recommendations consult Garlock. Failure to select the proper sealing products could result in property damage and/or serious personal injury.

Performance data published in this brochure has been developed from field testing, customer field reports and/or in-house testing.

While the utmost care has been used in compiling this brochure, we assume no responsibility for errors. Specifications subject to change without notice. This edition cancels all previous issues. Subject to change without notice.

# Ordering Information

Nominal Thickness (Inches)	Sheet Size (Inches)	IFG®-5500 Order Code	IFG®-5507 Order Code
1/64	60 x 60	39505-2438	39507-2438
	60 x 120	39505-2440	39507-2440
	60 x 180	39505-2801	39507-2801
	150 x 150	39505-1797	39507-1797
1/32	60 x 60	39505-2480	39507-2480
	60 x 120	39505-2482	39507-2482
	60 x 180	39505-2802	39507-2802
	150 x 150	39505-1799	39507-1799
3/64	60 x 60	39505-2501	39507-2501
	60 x 120	39505-2503	39507-2503
	60 x 180	39505-2803	39507-2803
	150 x 150	39505-1800	39507-1800

Nominal Thickness (Inches)	Sheet Size (Inches)	IFG®-5500 Order Code	IFG®-5507 Order Code
1/16	60 x 60	39505-2521	39507-2521
	60 x 120	39505-2523	39507-2523
	60 x 180	39505-2804	39507-2804
	150 x 150	39505-1801	39507-1801
3/32	60 x 60	39505-2563	39507-2563
	60 x 120	39505-2565	39507-2565
	60 x 180	39505-2806	39507-2806
	150 x 150	39505-1803	39507-1803
1/8	60 x 60	39505-2605	39507-2605
	60 x 120	39505-2607	39507-2607
	60 x 180	39505-2808	39507-2808
	150 x 150	39505-1805	39507-1805

**NOTE:** Available in other thicknesses and sizes upon request.

## ASTM Line Callouts

Style	Thickness	ASTM Line Callout	A9: Leakage in		K9: Thermal Conductivity
			Fuel A (Isooctane) <sup>1</sup>	Nitrogen <sup>2</sup>	
IFG® 5500	1/32" (0.8 mm)	F712100A9B2E23K7M5	Typical: 0.2 ml/hr Max: 1.0 ml/hr	Typical: 0.5 ml/hr Max: 1.5 ml/hr	0.48 W/m <sup>2</sup> K (3.36 btu·in./h·ft <sup>2</sup> ·°F)
IFG® 5507	1/32" (0.8 mm)	F712500A9B2E36K9M5	Typical: 0.1 ml/hr Max: 1.0 ml/hr	Typical: 0.5 ml/hr Max: 1.5 ml/hr	0.61 W/m <sup>2</sup> K (4.27 btu·in./h·ft <sup>2</sup> ·°F)

**NOTES:**

1. Gasket load = 500 psi (3.5 N/mm<sup>2</sup>);  
Internal pressure = 9.8 psig (0.7 bar).
2. Gasket load = 3,000 psi (20.7 N/mm<sup>2</sup>);  
Internal pressure = 30 psig (2 bar).

## AUTHORIZED REPRESENTATIVE

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an EnPro Industries company

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<b>Sydney, Australia</b>	Phone 61.2.9793.2511	Fax 61.2.9793.2544
<b>Auckland, New Zealand</b>	Phone 64.9573.5651	Fax 64.9573.5636
<b>São Paulo, Brazil</b>	Phone 55.11.4352.6161	Fax 55.11.4352.8181
<b>Sherbrooke, Canada</b>	Phone 1.819.563.8080	Fax 1.819.563.5620
<b>W. Yorkshire, England</b>	Phone 44.1422.313600	Fax 44.1422.313601
<b>Saint-Étienne, France</b>	Phone 33.4.7743.5100	Fax 33.4.7743.5151
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