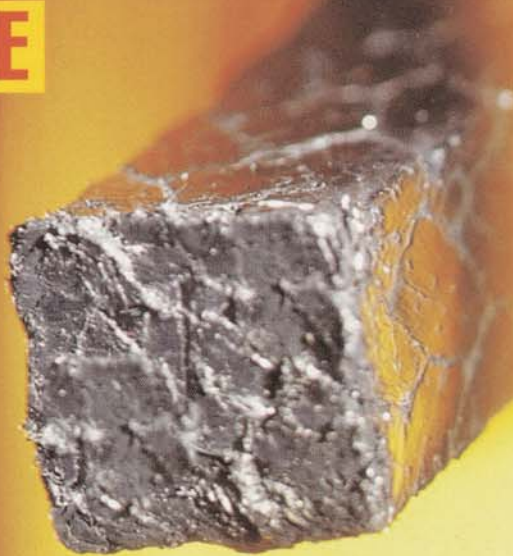


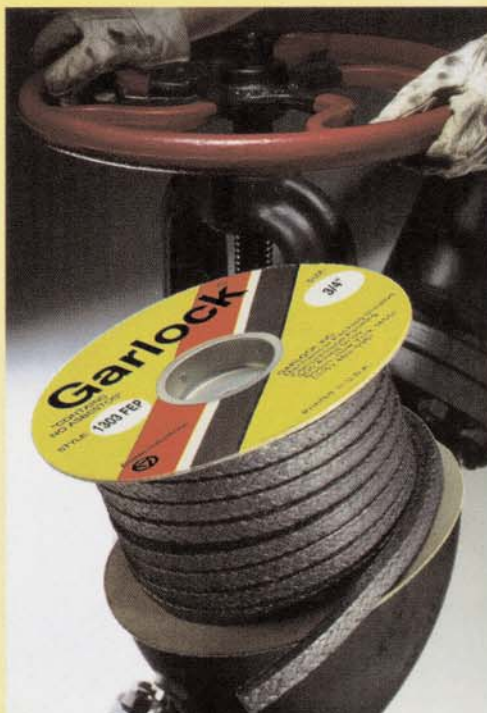
# GARLOCK STYLE 1303 FEP\* VALVE STEM PACKING

**\*FILAMENT  
ENCAPSULATED  
PACKING**

**FIRE SAFE**



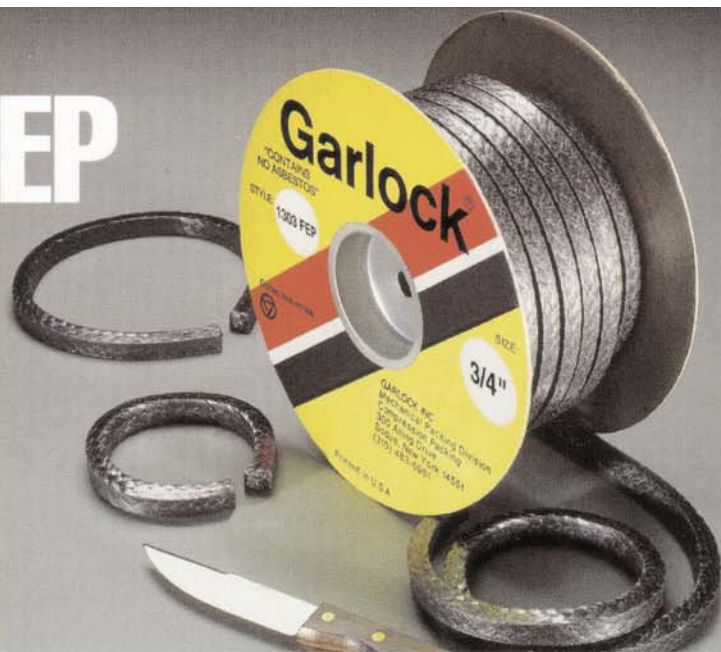
**EMISSION  
COMPLIANCE**



ISO 9002-94  
Cert. #001762



# STYLE 1303 FEP GRAPH-LOCK® PACKING FOR VALVES



- Flexible spool stock
- Proven emissions control
- Tested fire safe
- Non scoring
- Minimal weight loss
- Conformance to process safety management

## Style 1303 FEP Engineering Specifications

Temperature:	-328°F to +1200°F in steam +850°F atmosphere
	-200°C to +650°C in steam +455°C atmosphere
Pressure:	4500 psi / 320 BAR
pH:	0-14 (except strong oxidizers)

**Style 1303 FEP** Filament Encapsulated Packing has been engineered to deliver compliance to the most stringent VOC and VHAP emissions regulations while offering the security of fire safety.

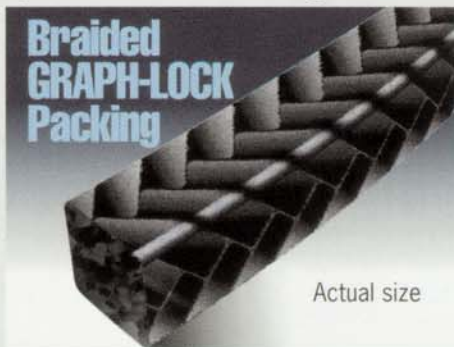
**Style 1303 FEP** handles easily, retains integrity when cut, packed or formed, and reduces inventories and downtime by offering the convenience of a spool stock.

**Style 1303 FEP** is ideally suited to the hydrocarbon and chemical processing industries, power generation or anywhere a reliable spool stock packing is required.

The Style 1303 FEP process combines GRAPH-LOCK flexible graphite with a thermally conductive, non-scoring INCONEL\* filament. It is self-lubricating, non-hardening, dimensionally stable and impervious to gases and fluids. Style 1303 FEP does not require the use of end rings.



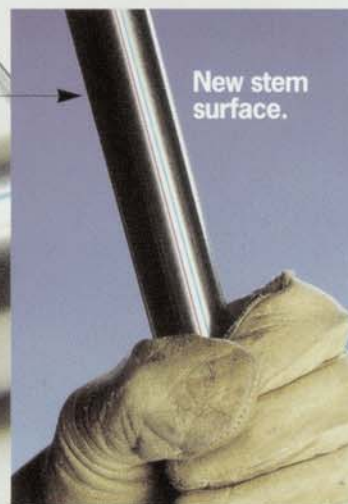
A single strand of 100% GRAPH-LOCK contained by a non-scoring .004" INCONEL filament jacket.



Our exclusive in-process control results in a superior product.

**Before and after surface tests show no stem scoring.**

After 1500 cycles.



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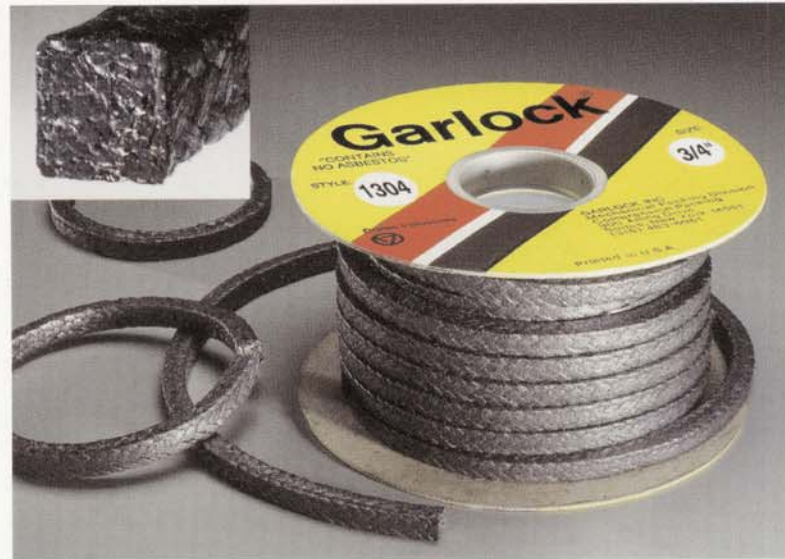
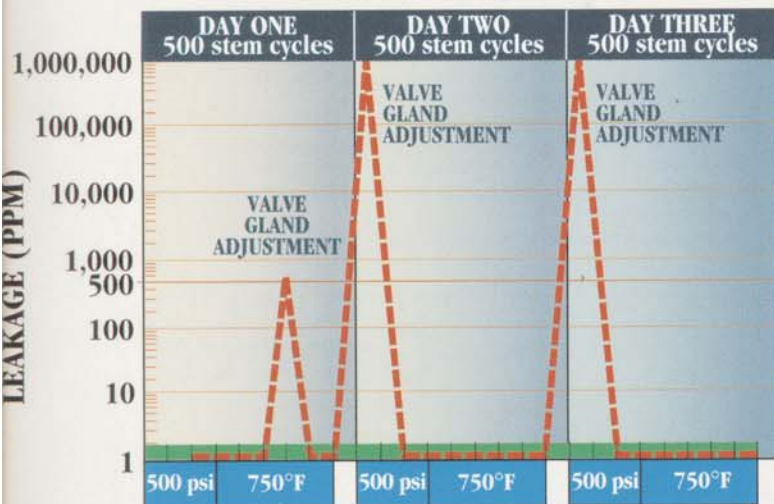
# Style 1304 GRAPH-LOCK Packing with aramid filament for pumps and low pressure valve stem applications.



Style 1303 FEP has been successfully fire safe tested to API 589 standards at API 607 temperatures and pressures. In hot air weight loss tests, Style 1303 FEP experiences less weight loss than all other spool stock packings tested.

Style 1303 FEP completed a 3-day Garlock standard emissions test exhibiting no detectable leakage -"0" ppm. The test was performed in 99.995% helium using a Mark Products 9822 helium detector with 0.01% to 100% detection capability. Leakage was monitored from ambient temperatures and pressures to 750°F, 500 psi, three complete thermal cycles and 1500 stem actuations. Contact Garlock for details on this and other emissions tests.

## EMISSIONS TEST



## Style 1304 Engineering Specifications

<b>In Pumps,</b> Temperature:	-328°F to +700°F -200°C to +370°C
Pressure:	500 psi / 34 bar (rotary equipment)
pH:	0 - 14 (except strong oxidizers)
Shaft speed:	4,000 ft/min. / 20 m/sec.
<b>In Valves,</b> Temperature:	-328°F to +700°F -200°C to +370°C
Pressure:	3,000 psi / 206 bar*
pH:	0 - 14 (except strong oxidizers)

\* For critical service or frequently cycled valves, Garlock recommends the use of Style 9000 EVSP.

----- Competitive 5-Ring Packing  
————— Garlock Style 1303 FEP 5-Ring Packing

### 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 have been developed from field testing, customer field reports and/or in-house testing.

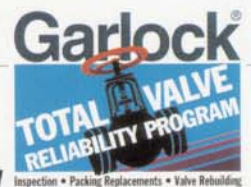
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## For Total Valve Reliability and Compliance

*On schedule and guaranteed.*

Check our exclusive Garlock Total Valve Reliability Program. Comprehensive valve inspections, repacking, rebuilding and documentation by a Garlock Authorized Installer.

Let us help you manage the change. Meet the highest standards - ISO 9002-94 registered by QMI.





# Garlock GRAPH-LOCK Packing Ordering Information

## Style 1303

Sizes		Yield		Standard Packaging Sizes	
Inches	mm	ft/lb	m/kg	lbs	kgs
1/8	3 x 3	95.0	63,7	1 & 5	1
—	4 x 4	66.5	44,5	1 & 5	1
3/16	5 x 5	37.7	25,0	1 & 5	1
—	6 x 6	28.6	19,2	1 & 5	2,5
1/4	6,5 x 6,5	24.1	16,0	1 & 5	2,5
5/16	8 x 8	16.5	11,0	1 & 5	2,5
3/8	9,5 x 9,5	11.2	7,5	1 & 5	2,5
—	10 x 10	10.4	7,0	1 & 5	2,5
7/16	11 x 11	8.9	6,0	5 & 10	2,5
—	12 x 12	7.7	5,2	5 & 10	2,5
1/2	12,7 x 12,7	6.6	4,4	5 & 10	2,5
9/16	14 x 14	5.6	3,8	5 & 10	5
5/8	16 x 16	4.3	2,9	5 & 10	5
11/16	18 x 18	2.6	1,7	5 & 10	5
3/4	19 x 19	2.4	1,6	5 & 10	5
13/16	20 x 20	2.1	1,4	10	5
7/8	22 x 22	1.9	1,3	10	5
1 inch	25 x 25	1.5	1,0	10	5

## Style 1304

Sizes		Yield		Standard Packaging Sizes	
Inches	mm	ft/lb	m/kg	lbs	kgs
1/8	3 x 3	108.0	72,5	1 & 5	1
—	4 x 4	87.0	58,3	1 & 5	1
3/16	5 x 5	66.0	44,0	1 & 5	1
—	6 x 6	47.5	31,9	1 & 5	2,5
1/4	6,5 x 6,5	29.0	19,5	1 & 5	2,5
5/16	8 x 8	16.4	11,0	1 & 5	2,5
3/8	9,5 x 9,5	12.5	8,4	1 & 5	2,5
—	10 x 10	10.7	7,2	1 & 5	2,5
7/16	11 x 11	8.9	6,0	5 & 10	2,5
—	12 x 12	8.2	5,5	5 & 10	2,5
1/2	12,7 x 12,7	7.4	5,0	5 & 10	2,5
9/16	14 x 14	6.3	4,2	5 & 10	5
5/8	16 x 16	5.0	3,3	5 & 10	5
11/16	18 x 18	4.3	2,9	5 & 10	5
3/4	19 x 19	3.5	2,3	5 & 10	5
13/16	20 x 20	3.1	2,1	10	5
7/8	22 x 22	2.7	1,8	10	5
1 inch	25 x 25	2.0	1,3	10	5

Additional cross-sections available on request. Contact your local representative or Garlock, Compression Packing Division.

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[www.garlock.net](http://www.garlock.net)

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