

NOTE: The pressure/temperature used simultaneously.

Thickness	up to 7/16 (11.5mm) 0 per (2.0mm) (up to 2.0)
Max. Temperature	500°F (260°C) 500°F (260°C) 500°F (260°C)
Max. Pressure (see chart)	125 (85) 1015 (70) 1015 (70)

PH	SH	SH	TH	RE	SH

1.4	1.4	1.4	1.4
1885 (152.0)	2320 (186.0)	2320 (186.0)	2320 (186.0)
209	209	209	209
2475	2475	2475	2475
13150	13150	13150	13150
8.1	8.1	8.1	8.1
17.7	17.7	17.7	17.7
F4521105	F4521105	F4521105	F4521105
NOTE: Data based on 1.27" (0.25 mm) material. Based on 1.76" (44.5 mm)			
Max. Compressive Stress	228		
Min. Yield			
Cold Compression Value			

PROXIMATE

BIG PROBLEM, LITTLE ONE...

talk to a **Flexitallic Representative** or an **Allied Distributor** today.

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GHX Industrial, LLC.
ghxinc.com

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Demopolis
Tel: 334-289-1002

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paramountsupply.com

Anchorage
Tel: 907-349-0280

ARIZONA
Cupp's Industrial Supply, Inc.
cupps-industrial.com

Phoenix
Tel: 602-269-2301
Tucson
Tel: 520-294-1922

ARKANSAS
Crown Products
crownproductsinc.com

Tulsa
Tel: 918-446-4591

CALIFORNIA
Industrial Gasket & Supply Company Inc.

Torrance
Tel: 310-530-1771
Benicia
Tel: 707-746-6000

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ghxinc.com

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paramountsupply.com

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Idaho Falls
Tel: 208-523-2692
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Tel: 208-237-1196
Soda Springs
Tel: 208-547-4912

ILLINOIS
Schimberg Company
schimbergco.com

Decatur
Tel: 217-877-0277

INDIANA
Exotic Automation & Supply
exoticautomation.com

Indianapolis
Tel: 317-871-5757

IOWA
Schimberg Company
schimbergco.com

Cedar Rapids
Tel: 319-365-9421

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crownproductsinc.com

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Tel: 316-267-1051

LOUISIANA
GHX Industrial, LLC.
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GHX Industrial, LLC.
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Geismar
Tel: 225-677-7070

Lake Charles Rubber & Gasket
lakescharlesrubber.com

Lake Charles
Tel: 337-433-1002

MAINE
Ray Engineering Company
rayengineeringco.com

Westbrook
Tel: 207-854-2991

MASSACHUSETTS
Ray Engineering Company
rayengineeringco.com

Westford
Tel: 978-392-9911

MICHIGAN
Exotic Automation & Supply
exoticautomation.com

Farmington Hills
Tel: 248-477-2122

Freeland
Tel: 989-695-5300

NEW MEXICO
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paramountsupply.com

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NEW YORK
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sealingdevices.com

Lancaster
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Tel: 585-321-3511

Liverpool
Tel: 315-457-0800

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fbw-cincy.com

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Tel: 541-385-7858

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Medford
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Tel: 503-232-4137

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A.P. Services
apservicesinc.com

Freeport
Tel: 724-295-6200

James E. Dooley Co.
dooleygasket.com

Broomall
Tel: 800-328-2720

Sealing Devices
sealingdevices.com

Erie
Tel: 814-833-9977

SOUTH CAROLINA
Munaco Packing & Rubber Company
munaco-online.com

Greenville
Tel: 864-676-2055

TEXAS
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crownproductsinc.com

Longview
Tel: 903-753-0341

Eastex Rubber
eastexrubber.com

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agsgroup.com

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Calgary
Tel: 403-236-7400

Red Deer
Tel: 403-343-7085

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Tel: 780-538-2073

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agsgroup.com

Samia
Tel: 519-332-8300

Mexico
MEXICO
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Guadalajara
Tel: (011523) 810-2435

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Wujiang, Jiangsu 215200
P.R. China
Tel: +86 512 6303 2839



Scratch led to a leak,
which led to a
**SUPRANITE
MGM GASKET**

A nuclear facility's engineers discovered notching of a flange surface. Difficult to re-machine, they tried increasing the torque value on the spring-type gasket in place, but during qualification of the circuit it leaked. So they replaced with an expandable graphite gasket—a Supranite MGM. Under the same bolting and torque values the problem was solved—so they standardized the highly elastic Supranite MGM. That trend continues around the world—in a wide variety of assemblies and under a range of pressures and temperatures. Get the test results that show you just how valuable these gaskets are in metal-to-metal applications.

(Yeah, right.)

That's one of those dusty quips that really doesn't apply anymore. Especially in an industry with the regulatory, safety and cost-containment issues of power generation. Whether fossil-fired or nuclear, you can't afford to have a seal creep, leak, unwind—break. Today it's all about anticipating potential problems, before they get real.

Gaskets may not be top of mind. If you were going to improve the overall efficiency of your facility's systems, maybe flange and valve sealing are not the first places you'd look. The gasket is probably one of the least expensive and least considered items in any power plant. However, if improperly specified or installed, that changes—often resulting in a disproportionate amount of expense along with health and safety issues.

We're trying to make your life easier, honest. We're not here to create problems. In fact, what follows will be more in the category of "opportunities." Chances to cut maintenance costs. Prevent FME's. Reduce the risk of blowouts.

We like to solve problems. Flexitallic introduced the first spiral wound gasket (almost a century ago) and we've continued to innovate. For example, **Thermiculite®** is a revolutionary material that simulates the structure of exfoliated graphite, with one very important exception—it doesn't oxidize like graphite, rather it maintains its integrity up to 1800°F (982°C).

Take a look. Flexitallic can address specific issues in both fossil fuel and nuclear power generation. To get details and see all the products in each gasket line, visit **www.flexitallic.com**.



0/511/533

ent and Temperature

up to 1/16" (1.5 mm)	0.06" (2.0 mm)	1.0" (25.4 mm)
500°F (260°C)	500°F (260°C)	500°F (260°C)
1235 (68)	1235 (68)	1015 (70)

0-14

us standard 60" x 60"

1.5 in x 1.5 in

06

Physical Properties

Color: black

Density: 1.4

Chemical Properties

Rockwell Hardness: C 10

Grain Structure: fine

Market Constants & Design Information

SME m

2230

CCGT

CHP

AGR

15.4

PWR

2275

15.7

EPWR

BWR

CCS

KV/mm

6.1

HRSG

>>

GT

CWP

17.7

LP/HP

11

FDG >

0/511/533

ent and Temperature

up to 1/16" (1.5 mm)	0.06" (2.0 mm)	1.0" (25.4 mm)
500°F (260°C)	500°F (260°C)	500°F (260°C)
1235 (68)	1015 (70)	870 (60)

0-14

us standard 60" x 60"

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15.4

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15.7

EPWR

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CCS

KV/mm

6.1

HRSG

>>

GT

CWP

17.7

LP/HP

11

FDG >

FLEXITALLIC TO THE RESCUE

Save it with our flange rescue gasket. If you have pitting/corrosion/erosion between the gasket I.D. and the bore of the flange (e.g., service water, salt water, or fire water systems), here's a rescue strategy. Use a gasket that can seal the problem immediately and prevent against further damage. There is no need for specialized equipment. You minimize exposure time in hot areas and eliminate the expense of in-situ machining and reworking. For non-standard flanges, a combination of circular and non-circular shapes can be manufactured.

FLEXPRO

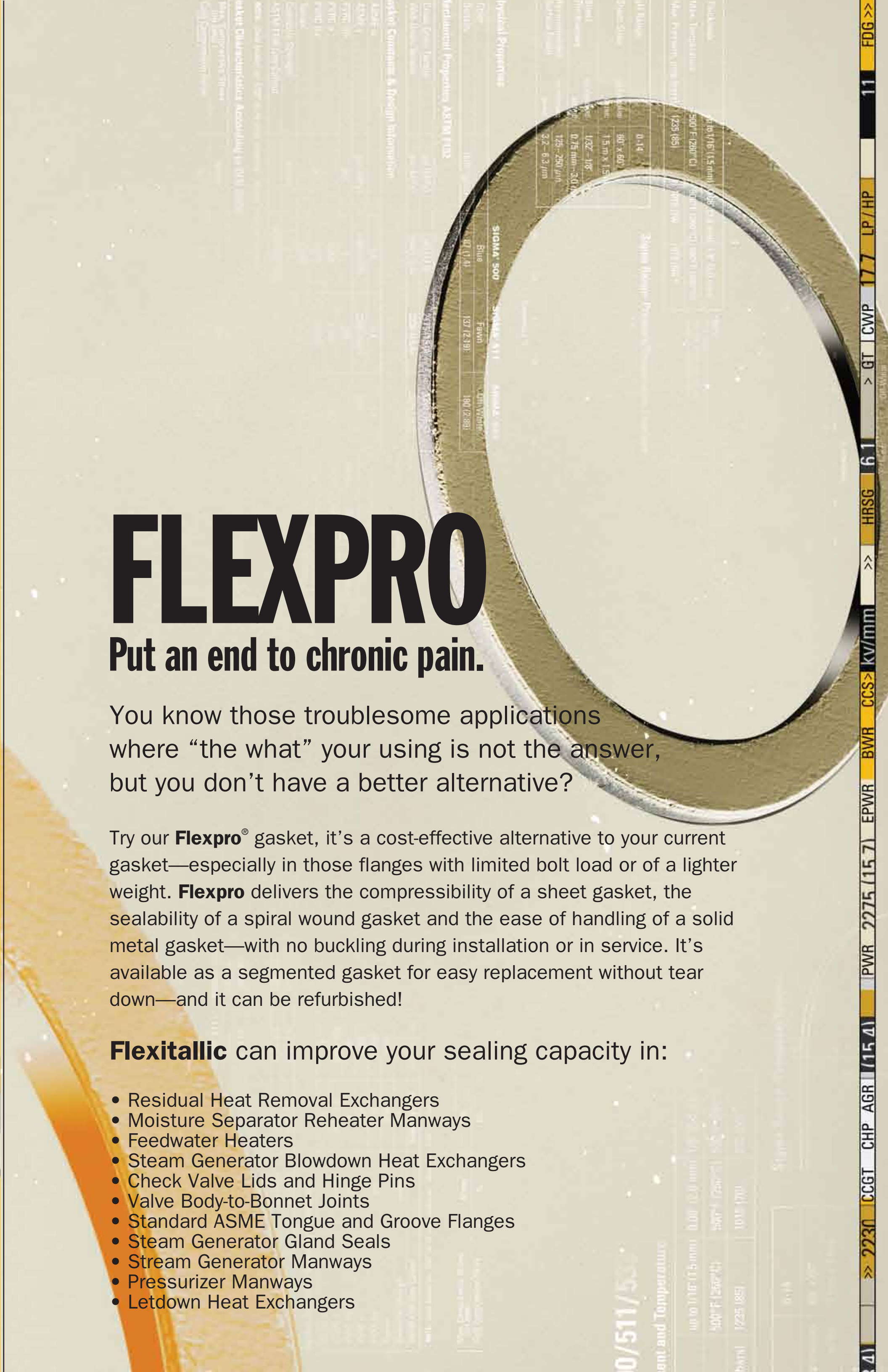
Put an end to chronic pain.

You know those troublesome applications where “the what” your using is not the answer, but you don't have a better alternative?

Try our **Flexpro**® gasket, it's a cost-effective alternative to your current gasket—especially in those flanges with limited bolt load or of a lighter weight. **Flexpro** delivers the compressibility of a sheet gasket, the sealability of a spiral wound gasket and the ease of handling of a solid metal gasket—with no buckling during installation or in service. It's available as a segmented gasket for easy replacement without tear down—and it can be refurbished!

Flexitallic can improve your sealing capacity in:

- Residual Heat Removal Exchangers
- Moisture Separator Reheater Manways
- Feedwater Heaters
- Steam Generator Blowdown Heat Exchangers
- Check Valve Lids and Hinge Pins
- Valve Body-to-Bonnet Joints
- Standard ASME Tongue and Groove Flanges
- Steam Generator Gland Seals
- Steam Generator Manways
- Pressurizer Manways
- Letdown Heat Exchangers



PUTTING DOWNTIME IN A SPIRAL.

Flexitallic spiral wound gaskets deliver unmatched performance under pressure in flanged joints and similar assemblies and protect against virtually every known corrosive and toxic media.

For example, a boiler manway door may not be centered creating an excessive gap in one quadrant that allows the gasket to extrude—possibly springing apart and resulting in leakage or gross blowout. **Our exclusive MCS spiral wound gasket** has an inner ring that centers the gasket and acts as a compression stop—preventing overcompression and **keeps the gasket centered on the door.**

GH!

Stop Buckling

Flexitallic CGI series — spiral wound gaskets with all the breakthrough heat and chemical resistance of Thermiculite, but with an inner ring to protect against deterioration and resulting FMEs.

Stop Teardown

Turn a six-day teardown into a six-hour change-out. Order a segmented **Flexpro** gasket and replace a gasket in a fraction of the time. Perfect for large equipment where space is tight. Park heavy duty equipment or shorten your team's stay in a high-rad area. Get in and out quickly and safely with **Flexpro** segmented gaskets—available in a wide range of sizes.

Sigma 600

Sigma 600—an actuator's best friend. **Flexitallic** takes high-performance sealing to another level with the introduction of SIGMA 600. Ideal for lube oil systems and actuators, our proprietary manufacturing process creates this biaxially orientated **R₂PTFE** gasket material. The unique restructuring process requires no filler materials and delivers dimensional stability for long-term sealing integrity.

ENOUGH

EXTEND THE LIFE

of your heat exchangers and turbines.

When you need operational flexibility combined with rigorous heat resistance, consider **Thermiculite 715** and **Thermiculite 815**. Both are available in sheet and gasket forms for use in a wide range of applications including: turbine crossovers, flanges, and heat exchangers. Thermiculite 715 and 815 meet API 6FA fire test standards—so they don't oxidize from exhaust or hot air. Which is why they are being used to replace Aramid Fiber, Inorganic Fiber, Carbon Fiber, and Graphite gaskets around the world.



NO LONGER NEVER

End the leaks. Eliminate FMEs.

Foreign Material Exclusion (FME) is a regulatory focus. Guidelines from the Institute of Nuclear Power Operations urge maintenance supervisors to:

“Prohibit the use of metallic crush-style gaskets without an inner metal ring and purge them from the spare part inventory.” Why? “Buckling or springing of spiral wound gaskets can result in winding and unraveling with debris entering the flow stream.” Full text of the more precise language from the ASME guidelines is below.

Previous Language: Inner rings shall be furnished with all spiral-wound gaskets having PTFE filler material. Since there have been reports of inward buckling of gasket windings with other filler materials, it is recommended that inner rings be specified by the user for materials where his experience has shown inward buckling of the gasket.

New Language in 2008 Edition: Inward buckling of spiral-wound gaskets has been identified as a potential problem. Inner rings shall be furnished with all spiral-wound gaskets having PTFE (polytetrafluoroethylene) filler material. Inner rings for flexible graphite filled spiral wound gaskets shall be furnished unless the purchaser specifies otherwise.

-ASME B16.20 Para 3.2.5