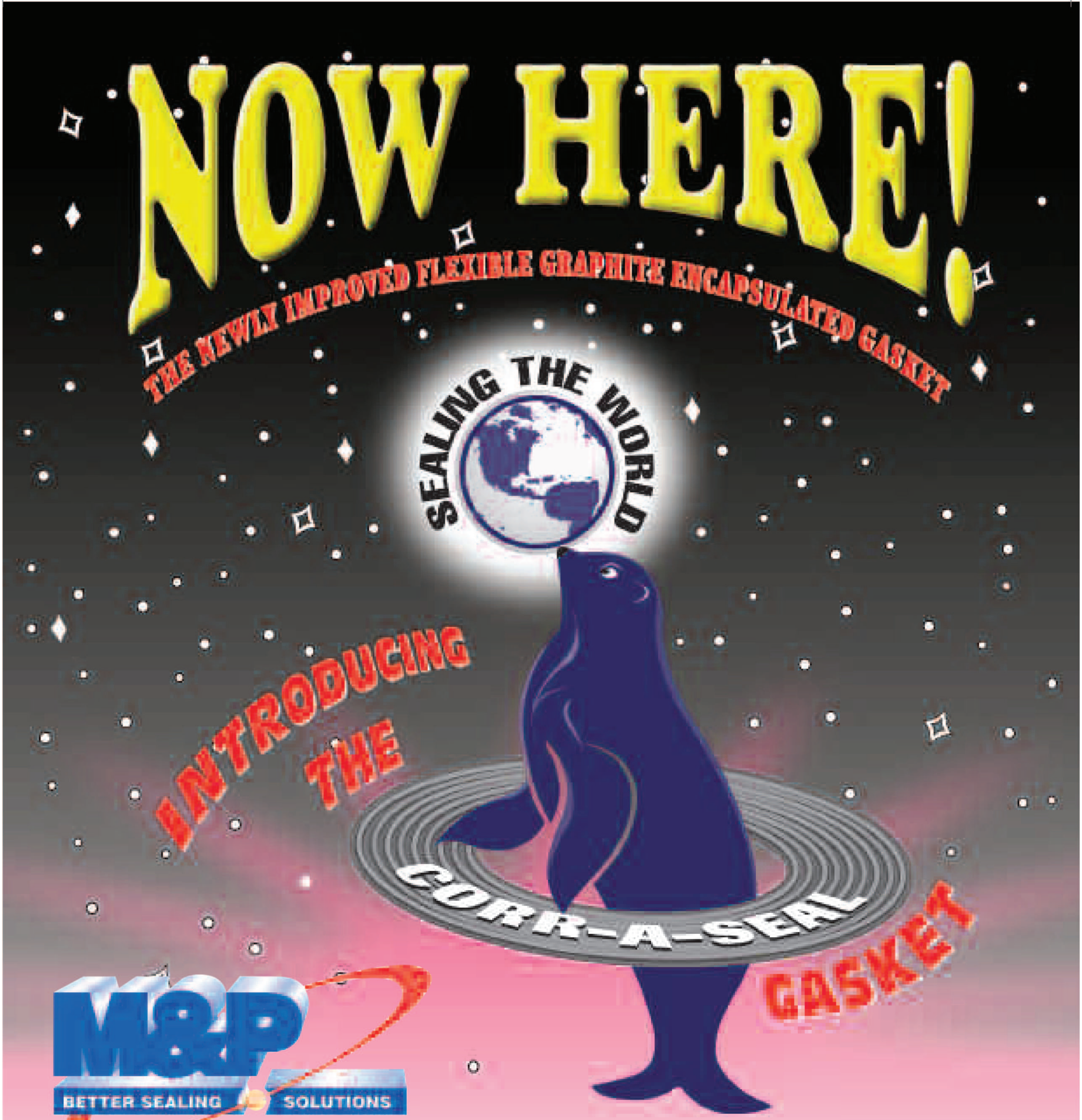

NOW HERE!

THE NEW AND IMPROVED FLEXIBLE GRAPHITE ENCAPSULATED GASKET!

Introducing the **CORR-A-SEAL**® Gasket. The company that has brought you award winning solutions in gasketing for the the last 40 years has done it again! The **CORR-A-SEAL**® Gasket! Remember who you are going to call when you need experience, integrity, and the technical expertise for your sealing solutions. M&P, that's who. The **CORR-A-SEAL**®!

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CHEMICAL RESISTANCE

The **CORR-A-SEAL**® Gasket Constants compare favorably against those of other gaskets.

- ***Gb*** This constant identifies the amount of initial load required to develop a tight initial seal. The higher the ***Gb***, the more initial gasket stress is needed to achieve an adequate seal.
- ***a*** This constant is related to "***Gb***" and helps track how much additional gasket stress reduces the leak rate. Typically, low a values mean that very slight increases in load result in very large reductions in leakage.
- ***Gs*** ***Gs*** is calculated independently of the first two constants and its purpose is to track stress cycling or how a gasket recovers from constantly changing gasket loads. ***Gs*** illustrates how much additional leakage occurs as the gasket undergoes the normal variations in bolt load inherent in almost every gasket application. As a result the higher the ***Gs***, the more leakage increases as the gasket load changes.

TABLE XX-6.2 (Preliminary)

CORR-A-SEAL® is safer with lower compressive loads at the normal Tp 3,000 than any other gasket. At elevated compressive loads flanges start to bend, rotation occurs, and over compression leads to damaged gaskets and potential leaks.

$Gb(Tp)^a = Sg$, (psi)
Sg = Gasket Stress

Tp (100) Sg (psi)	Tp (1,000) Sg (psi)	Tp (3,000) Sg (psi)	Tp (10,000) Sg (psi)	TYPE	MATERIAL	Gb (psi)	a	Gs (psi)
2,889	5,114	**6,715**	9,052	**CORR-A-SEAL**®	SS/Graphite	922	0.248	5.1
6,851	11,823	15,339	20,404	Spiral Wound:	SS/Graphite	2,300	0.24	13
8,364	14,204	18,286	24,121	Metal Jacketed	Stainless Steel	2,900	0.23	15
873	4,562	10,039	23,832	Elasta Graph		32	0.718	.001

EVER THINK ABOUT THIS:

Q. How many flanges in my plant are tightened to a Tp of 100 or 873 psi gasket stress.

A. ZERO

In the real world (not the laboratory) Tp starts at 3K minimum.

GASKET STRESS vs MASS LEAKAGE

Room Temperature Tightness Test

Gasket Sealing Area: (8.44 sq. in.) 5.875" x 4.875"

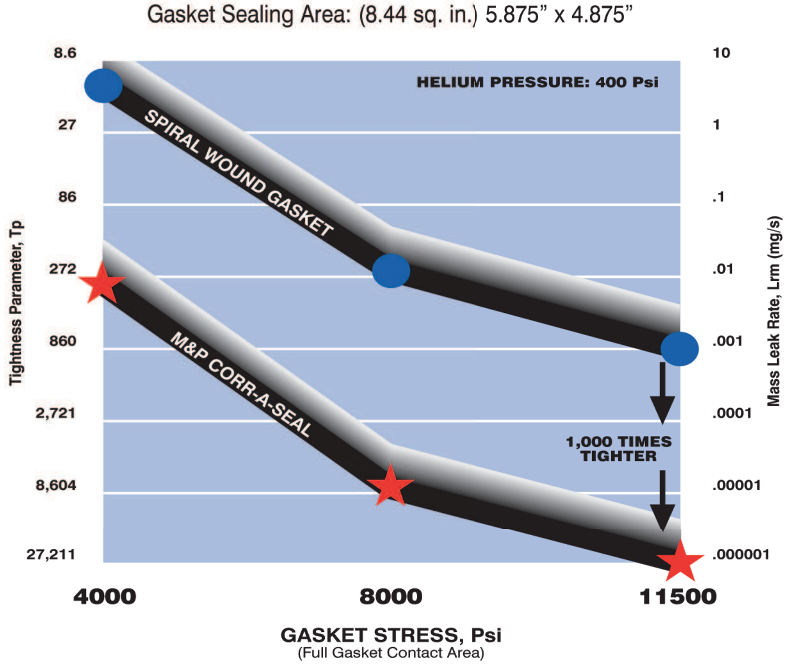


Figure 2

LOW INITIAL SEALING. At the initial assembly stage, the **CORR-A-SEAL**® gasket has a much lower leak rate (1,000 times) under the same load conditions than graphite filled spiral wound gasket. This advantage indicates a much more forgiving gasket in a wide range of initial bolt loading. This can translate into a higher margin of safety from potential "leakers". We do not suggest that anybody use the **CORR-A-SEAL**® gasket solely for this advantage, rather, it gives you another reason for seriously considering the **CORR-A-SEAL**® gasket.

TEST METHOD: PVRC (Pressure Vessel Research Council) ROTT test method was applied in accord with thc Draft ASTM Standard No. 7, April 1990.

GASKET CONSTANTS FOR VARIOUS GASKETS

CHEMICAL RESISTANCE OF FLEXIBLE GRAPHITE

The resistance of the **CORR-A-SEAL**® gasket is usually governed by the compatibility of the metal core. The metal core may not be as resistant as the graphite alone. For example, it is recommended that Hastelloy C-276 metal be specified for service in dry chlorine gas, liquid chlorine, and phosgene. The flexible graphite overlay will resist corrosive attack by inorganic and organic acids and bases, solvents, waxes and oils, but not compounds with a powerful oxidizing action such as highly concentrated nitric or sulfuric acids, chloric acid, or molten salts with a powerful oxidizing action. Where no details of concentration and temperature are given for the media listed, it can be assumed that the concentration is 100% and that the temperature is boiling point or melting point.

Completely Resistant ● **Moderately Resistant □** **Not Resistant ○**

Acetic Acid	●
Acetone	●
Acrylic Acid Ethyl Ester	●
Air (<550°C)	●
Aluminum (Molten)	●
Ammonia	●
Ammonium Hydroxide Solution	●
Aqua Regia	○
Boric Acid	●
Bromine (Dry)	○
Bromine (Room Temperature)	□
Calcium Chloride (Molten)	●
Carbon Dioxide (<600° C)	●
Carbon Monoxide	●
Carbon Tetrachloride	●
Chlorides (Aqueous)	●
Chlorine (Dry)	●
Chlorine Dioxide	○
Chloroform	●
Chromates (<20%) (Aqueous)	●
Chromic Acid (<10%, <95° C)	●
Citric Acid	●
Copper (Molten)	●
Diethyl Ether	●
Dimethyl Sulfoxide	●
Dioxane	●
Ethanol	●
Ethanolamine	●
Ethylene	●

Ethylene Dichloride	●
Ethylene Glycol	●
Formaldehyde	●
Fluorine (>150° C)	□
Freon®	●
Gasoline	●
Heal Transfer Oil	●
Hydrochloric Acid	●
Hydrofluoric Acid	●
Hydrofluoric (>60% at room temperature)	□
Hydrogen Chloride	●
Hydrogen Fluoride	●
Hydrogen Peroxide (<85%)	●
Iodine (Room Temperature)	□
Iron (Molten)	○
Isopropyl Alcohol	●
Methanol	●
Methyl Ethyl Ketone	●
Motor Oils	●
Nitrates (Aqueous)	●
Nitric Acid (<20%)	●
Nitric Acid	○
Nitric Acid (>20% at room temperature)	□
Nitrobenzene	●
Oleum (Fuming Sulfuric Acid)	○
Oxygen (350° C)	●
Phenol	●

Phosphates (Aqueous)	●
Phosphoric Acid	●
Potash (Molten)	●
Potassium (<350° C) (Molten)	●
Potassium Chlorate (Molten)	○
Potassium Hydrogen Sulfate (Molten)	●
Potassium Hydroxide Solution (<400° C)	●
Potassium Nitrate (Molten)	○
Propane	●
Silicones	●
Silver (Molten)	●
Soda (Molten)	●
Sodium (<350° C) (Molten)	●
Sodium Hydroxide Solution (<400° C)	●
Sodium Peroxide (Molten)	○
Steam (<750° C)	●
Stearic Acid	●
Sulfur	●
Sulfur Dioxide	●
Sulfuric Acid (93-96% at room temperature)	□
Sulfuric Acid (70%-100% up to 100° C)	●
Sulfuric Acid (>96% over 100° C)	○
Sulfur Trioxide	○
Zinc (Molten)	●

Fire Integrity Certification of **CORR-A-SEAL®** Gaskets

To determine the ability of the the **CORR-A-SEAL®** gasket to maintain tightness in a fire, two tests were conducted at École Polytechnique, Department of Mechanical Engineering, University of Montreal, Canada, Gasket Testing Facility. The test procedure was the FITT test (Fire Tightness Test) which gives a good indication of the fire survival potential of a gasket in a real fire. It measures leakage at realistic loads while rapidly heating and soaking a gasket at 1,200° F for 15 minutes.

GRAPH BELOW

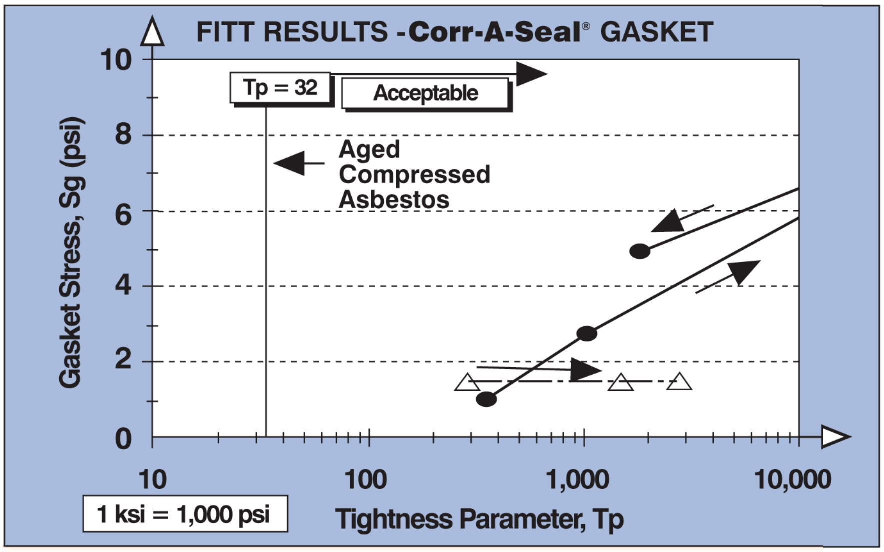
At 1,500 psi Gasket Stress, the triangles represent the tightness behavior during the test at 1,200 °F. The arrow above the triangles indicate that during the monitoring, the Tightness Parameter, Tp, values increased nearly 20 fold to about Tp of 2,800. This means that the leak rate decreased over 300 fold. For comparing performance, The Tp value of 32 represents the average performance of a well aged compressed asbestos sheet material. From this test, it was concluded that th **CORR-A-SEAL®** has fire integrity.

EXCEEDS THE PERFORMANCE OF FLEXIBLE GRAPHITE LAMINATE SHEET

The post-exposure tightness of the **CORR-A-SEAL®** specimens exceeded that of flexible graphite laminate sheet and equaled graphite filled spiral wound gaskets. **WARNING:** A word of caution is needed to point out that no matter how fire-safe the gasket, the bolted joint containing that gasket may open up under certain conditions of flame or fire-water impingement during a real fire. In a fire, the bolts get sloppy and stretch, separating the flange faces. But the **CORR-A-SEAL®** does not burn up. It stays in place, helping control the release. The result is valuable extra time to control the fire. Tests indicate that the **CORR-A-SEAL®** has the ability to regain tightness when cooled.

TEST PROCEDURE

1. A 5-7/8 in. OD x 4-7/8 in. ID **CORR-A-SEAL®** gasket was installed in the test rig within a heavy platen assembly.
2. The gasket was compressed to 4 levels from 1,025 psi up to 8,000 psi at room temperature and the leakage was measured. The load was reduced to 5,000 psi then the pressure and load were removed.
3. The hot loading platen was heated to 800°F and the gasket assembly was introduced.
4. Gasket stress of 1,500 psi was applied.
5. Applied 400 psi internal pressure with helium.
6. Maintain pressure until temperature stabilizes at 1,200 °F.
7. Hold temperature and pressure for 15 minutes while the leakage rate was monitored.



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