

Phlogopite Mica with Silicone Binder
S90, L316, T316

Durlon[®] HT1000[®] consists of phlogopite mica paper impregnated with an inorganic binder at less than half the binder amount found in vermiculite-phyllsilicate filled products. This lower binder content allows for superior weight retention, less than 4% weight loss at 800°C (1,472°F), and results in ultimate extreme temperature sealing performance up to 1,000°C (1,800°F).

Phlogopite mica is a non-toxic naturally occurring hydrated silicate of potassium and magnesium with a lamellar and non-fibrous structure. It is flexible, elastic, has a high tensile strength, can withstand substantial mechanical pressure perpendicular to the lamellar plane, chemically resistant, fireproof, infusible, incombustible, non-flammable and is a known alternative to asbestos. Durlon[®] HT1000[®] ensures efficient sealing and performance characteristics in extreme temperature applications.

Durlon[®] HT1000[®] has very unique characteristics which allows for it to be used as a sealing material on its own as well as being combined with various carrier media to provide a very wide range of extreme high performance gaskets for tough, heat exchangers, exhaust manifolds, and other commonly found in the refinery, power generation, and chemical industries.

Note: ASTM properties are based on 1/16" sheet thickness, except ASTM F38 which is based on 1/32" sheet thickness. This is a general guide only and should not be the sole means of accepting or rejecting this material. The data listed here falls within the normal range of product properties, but should not be used to establish specifications limits nor used alone as the basis of design. For applications above Class 300, contact our technical department.

| | |
|---|------------------------------------|
| Colour | Metallic Gold |
| Fibre System | Phlogopite Mica, 90% min. |
| Binder | Silicone |
| Temp.: Min Max | -55°C (-67°F) 1,000°C (1,800°F) |
| Density, g/cc (lbs/ft ³) | 1.7 (106) |
| Compressibility, % ASTM F36 | 18-22 |
| Recovery, % ASTM F36J | 39-43 |
| Creep Relaxation, % ASTM F38 | 55 |
| Tensile Strength across grain ASTM F152, MPa (psi) | 29.6 (4,300) |
| Ignition Loss, % @ 800°C | <4 |
| Nitrogen Sealability, cc/min ASTM F2378 | 8 |
| Dielectric Breakdown, kV/mm (V/mil) ASTM D149 | 20 (508) |

Durlon[®] HT1000[®] sheets and cut gaskets are available in 3 sheet forms:

S90: Phlogopite mica paper impregnated with an inorganic binder and no carrier.

L316: Phlogopite mica paper impregnated with an inorganic binder laminated with a 0.002" thick 316 stainless steel carrier.

T316: Phlogopite mica paper impregnated with an inorganic binder laminated with a 0.004" thick 316 stainless steel perforated carrier.

S90



L316



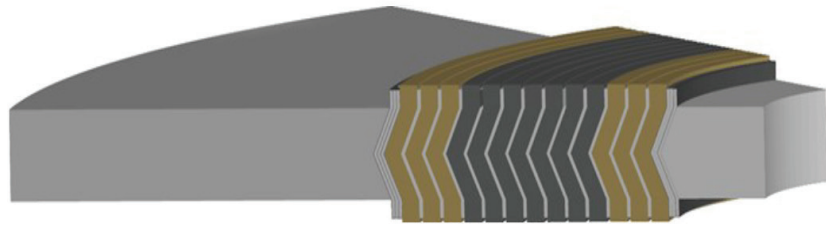
T316



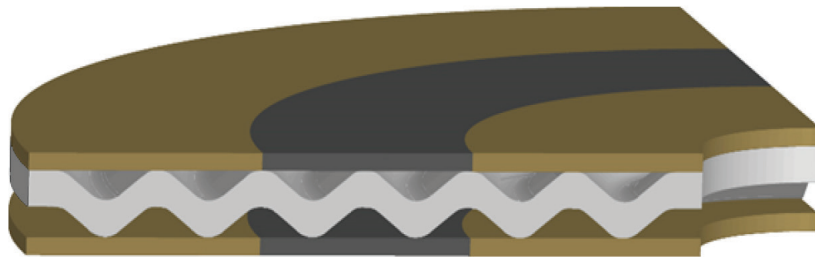
Warning: Durlon[®] gasket materials should never be recommended when both temperature and pressure are at the maximum listed. Properties and applications stated are typical. No applications should be undertaken by anyone without independent study and evaluation for suitability. Never use more than one gasket in one flange joint and never reuse a gasket. Improper use or gasket selection could cause property damage and/or serious injury. Data reported is a compilation of field testing, field service reports and/or in-house testing. While the utmost care has gone into publishing the information contained herein, we assume no responsibility for errors. Specifications and information contained in this flyer are subject to change without notice. This edition cancels and obsoletes all previous editions. REV. 2019/04

Durlon[®] HT1000[®] is available as a component material in our exclusive ETG (Extreme Temperature Gaskets) series of products in order to significantly enhance the upper temperature limits of existing semi-metallic gasket configurations. Super Inhibited Graphite meets the requirements of Shell Specification MESC SPE 85/203.

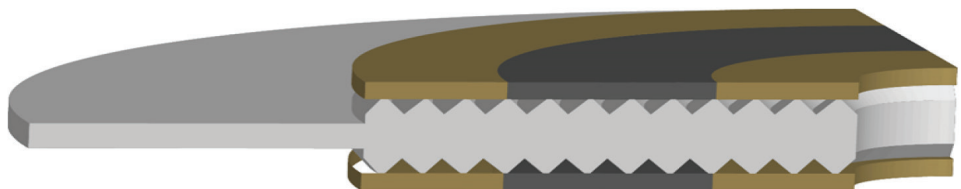
DRI-ETG Spiral wound gaskets 3 full layers of HT1000[®] on the ID and OD of the sealing element and oxidation inhibited flexible graphite layers as the central sealing component.



Durtec[®]-ETG Both faces of the unique Durtec[®] core design have a central oxidation inhibited flexible graphite ring surrounded on its ID and OD with a ring of HT1000[®] which acts as an oxidation barrier.



K40-ETG Both faces of the serrated metal core have a central oxidation inhibited flexible graphite ring surrounded on its ID and OD with a ring of HT1000[®] which acts as an oxidation barrier.



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HT1000[®] Paste

High Temperature Sealing Compound



Durlon[®] HT1000[®] Paste is a sealing compound designed to be used in conjunction with our HT1000[®] sheet material specifically for large dovetail gaskets. The paste allows end users to create larger diameter gaskets using cost effective dovetail gasket segments. The HT1000[®] Paste allows end users to eliminate possible leak paths of traditional dovetail gaskets, while providing end users the one piece gasket construction and lower leakage rates similar to one-piece gasket.

Sizes:
90 g and 170 g containers.

SHELF LIFE:
6 months in unopened container from the date it was packaged.

- INSTRUCTIONS:**
1. Make sure gasket segments are aligned and laying flat pre-assembled. Ensure that both the gasket and flange are free of debris, oils and grease.
 2. Open container of HT1000[®] Paste and apply a thin, even layer to the dovetail portion of the gasket, using a disposable brush or putty knife, smoothing out any uneven portions.
 3. Assemble flange and tighten bolts according to gasket manufacturer's recommendations (torque, bolt-up method, etc.).
 4. HT1000[®] Paste will begin to cure in service (Please see applicable curing time chart to right).

Note: In high pressure gasket sealing applications or if ambient pressure testing is being performed, it is recommended that the HT1000[®] Paste be pre-cured with a heat source such as a heat gun or oven if available prior to putting the gasket into pressurized service.

| Physical Properties | |
|-------------------------|------------------------------------|
| Temp.: Min Max | 260°C (500°F) 1,000°C (1,800°F) |
| Curing Temperature | Required Cure Time |
| 149°C (300°F) | 4 Hrs |
| 204°C (400°F) | 3 Hrs |
| 260°C (500°F) | 2 Hrs |
| 316°C (600°F) | 1 Hrs |
| 371°C (700°F) or Higher | <1 Hrs |

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