

# LeaderTherm NXT1020

## High-Temperature Sheet Material for Industrial Gasketing Applications

### DESCRIPTION

LeaderTherm NXT1020 is a high-performance phlogopite-based sheet material engineered for demanding industrial sealing applications requiring exceptional thermal stability, chemical resistance, and long-term durability. Crafted using a proprietary phlogopite mica material with a SS316 metal insert, LeaderTherm NXT1020 maintains sealing integrity under high temperature, thermal cycling, and exposure to harsh operating environments.

This sheet material provides excellent mechanical strength, oxidation resistance, and consistent compressibility — making it suitable for fabricating precision-cut gaskets used in refinery, petrochemical, power generation, and general industrial applications.

### APPLICATION

LeaderTherm NXT1020 is designed for gasket fabrication across a wide range of severe-service environments, including:

- Refining and Petrochemical Process Units (e.g., heaters, reformers, FCC components)
- Chemical Processing Plants requiring long-term stability in corrosive or oxidizing environments
- High-Temperature Flanged Joints where graphite oxidation is a concern
- Industrial Furnaces & High-Heat Equipment
- Turbocharger and Exhaust Systems (NOx applications)
- Power Generation (steam systems, turbines, high-pressure lines)

### CHEMICAL COMPATIBILITY

The phlogopite mica material ensures broad chemical resistance suitable for most industrial applications.

#### EXCELLENT RESISTANCE TO:

- Hydrocarbons, oils, fuels
- Steam and superheated steam
- Many acids and bases (excluding strong oxidizers at low temperature)
- Solvents and process chemicals
- Oxidizing atmospheres at high temperature

#### NOT RECOMMENDED FOR:

- Strong oxidizing acids at any temperature, due to the presence of the metal
- Molten alkali metals of any kind

NXT1020's inert chemistry supports extended service life in harsh environments.

### MATERIAL FORMAT & DIMENSIONS

LeaderTherm NXT1020 is supplied as sheet material for flexible gasket manufacturing needs.

#### Standard Sheet Size:

- 47.24" x 39.37" (1200 mm x 1000 mm)

#### Available Thicknesses:

- 1/16" (1.5 mm)
- 1/8" (3.0 mm)

### AVAILABLE OPTIONS

LeaderTherm NXT1020 can be supplied as:

- Full sheets in standard dimensions
- Custom-cut gaskets to ASME, EN, DIN, JIS, or customer drawings
- Complex or large-format gaskets for heat exchangers and pressure vessels
- Dovetailed joint sections to create extra-large gaskets beyond standard sheet dimensions

### LeaderTherm NXT Bonding Compound

For large gaskets requiring dovetailed joints, LeaderTherm NXT Bonding Compound is available to create high-strength, high-reliability bonded segments. This compound is designed specifically for compatibility with NXT1020, ensuring structural integrity and uniform sealing performance across oversized gasket assemblies.

### SEALING CHARACTERISTICS

LeaderTherm NXT1020 delivers reliable and consistent sealing performance through:

- High-Temperature Capability well beyond traditional fiber and graphite sheet limits
- Excellent Oxidation Resistance, supporting long-term gasket life
- Controlled Compressibility & Recovery ensuring tight flange seals
- Outstanding Recovery to maintain tightness during thermal cycling
- Strong Dimensional Stability ideal for precision-cut applications

These characteristics make NXT1020 a versatile and dependable sheet material for both standard and severe-service gasket applications.

## TECHNICAL DATA

Minimum Recommended Seating Stress at Assembly	2175 psi
Maximum Seating Stress	21,755 psi
Maximum Temperature	1832 °F
Maximum Pressure	1450* psi
Density	2.05 g/cm <sup>3</sup>
Leachable Chloride Content	10 ppm
Leachable Fluorine Content	10 ppm
M-Value	2.5
Y-Value	4300 psi
Residual Stress (572°F)	7,107 psi
Compressibility	40%
Recovery	20%
Specific Leak rate (1382°F / 72.5 psi / 4,351 psi / 200 h)	2 mg/m·s

\* Maximum temperature and pressure depend on flange construction.

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