

F-20

Silicone Foam Rubber

Saint-Gobain® Norseal® F-20 is a medium density closed-cell silicone foam rubber product designed to deliver environmentally stable, flame-retardant performance for gasketing, insulation and dampening applications. **Norseal F-20** offers excellent compression set resistance and is often the product of choice in aircraft, aerospace, mass transit, military and electronic applications with extremely stringent smoke, flame and toxicity requirements. F-20 offers excellent resistance to environmental conditions, making it an excellent choice for both indoor and outdoor sealing and gasketing applications.

Norseal F-20 is specially designed to provide the following features:

- Meets key industry standards: FAR 25.853, Bombardier SMP 800-C, NFPA 130, UL V0
- Recognized to UL 50E gasket and seals for electrical enclosures
- Non-toxic, low smoke generation and low flame spread
- Smooth surface on both sides for excellent sealing against air, dust, light and moisture
- Excellent compression set resistance
- Excellent resistance to ultraviolet light, ozone and extreme temperature ranges
- Meets requirements of FDA extractables 21.CFR177.2600 for food contact
- Closed-cell foam meets AMS 3195
- Non-corrosive for use with metals and in hostile environments
- Available as a pressure-sensitive adhesive tape under the **Norseal** Silicone SNS 520AF product line

Available Sizes

Standard thickness: .031, .063, .125, .188, .25, .375 and .50 in. (0.8, 1.6, 3.2, 4.8, 6.4, 9.6 and 12.7 mm)

Master roll size: 36 in. (914 mm) width. Length varies with thickness.

Special thickness and roll sizes also available.



APPLICATIONS

- Trains
- Medical equipment
- Aerospace
- Street lamps

Norseal F-20 — Properties

Performance tests are run using standard test procedures. The values presented are typical values and should not be used for specification purposes.

| Property | Unit of Measure | Value | Test Method |
|--|---|--------------------------------------|--------------------------------|
| Physical | | | |
| Colors | - | Gray | - |
| Tensile Strength | psi (kPa) | 30 (207) | ASTM D412 |
| Elongation at Break | % | 60 | ASTM D412 |
| Density | lb.ft ³ (kg/m ³) | 20 (320) | ASTM D3574 |
| Compression Deflection | psi (kPa) | 10 (70) | ASTM D1056 |
| Compression Set (50% for 22 hrs. at 212°F) | % | <5 | ASTM D1056 "D" |
| Surface Description | - | Smooth both sides | - |
| Flammability | | | |
| Flame Resistance (UL) | - | Pass | UL 94 V-0 |
| Flame Resistance (FAR) | - | Pass | FAR 25.853 (12s & 60s) |
| Flame Spread Index | L ₁ | <15 | ASTM E162 |
| Smoke Density | D ₂ | 1.5 minutes < 20 4.0 minutes < 50 | ASTM E662 |
| Toxic Gas Emissions Rating | - | Pass | SMP-800C |
| Flame Propagation | - | Pass | ASTM C1166 |
| Environmental | | | |
| Stain Resistance | - | Pass | ASTM D925 - 06e2, Method A |
| Ozone Effect Rating | - | No cracking | ASTM D1171-99 (2007), Method A |
| UV Resistance | Visual | No degradation | SAE J1960 |
| Water Absorption | % | <5 | ASTM D471 |
| Temperature Range | F° (°C) | -60 to + 400 (-51 to +204) | - |
| FDA Extractables | - | Pass | 21 CFR 177.2600 (food contact) |
| Gasket and Seals for Electronic Enclosures | - | Pass | UL 50E |
| Electrical and Thermal | | | |
| Dielectric Strength | volts/mil (VPM) | 80 | ASTM D149 |
| Dielectric Constant | - | 3.5 | ASTM 150 |
| Dissipative Factor | - | 0.03 | ASTM 150 |
| Dry Arc Resistance | Seconds | 127 | ASTM D495 |
| Volume Resistivity | ohms-cm | 3.39 × 10 ¹⁴ | ASTM 257 |
| Thermal Conductivity | W/m ² K | 0.074 | ASTM C518 |
| Thermal Insulation (R-value) | ft. ² • h • F°/Btu • in | 1.94 | ASTM C518 |
| Low Temperature Embrittlement | F° (°C) | -148 (-100) | DMA |

Authorized Distributor



K. R. Anderson, Inc.
www.krafab.com
408-825-1900

Important Instructions

Because **Saint-Gobain** cannot anticipate or control every potential application, we strongly recommend testing of this product under individual application conditions prior to commercial use.

Shelf Life

120 months from date of shipment for base material when stored in original packaging at temperatures up to 70°F (21°C), < 50% relative humidity, and away from direct sources of heat and direct sunlight. (See the applicable data sheets for pressure sensitive adhesive options).

IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Saint-Gobain products for all intended uses and that the materials to be used comply with all applicable regulatory requirements. Saint-Gobain assumes no responsibility for any product failures that occur due to misuse of the materials it provides arising out of the design, fabrication or application of the products into which the materials are incorporated.

WARRANTY: For a period of 6 months, Saint-Gobain warrants this product(s) to be free from defects in manufacturing. The only obligation under any applicable product warranty will be to replace any portion proving defective, or at our option, to refund the purchase price thereof. SAINT-GOBAIN DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Form #1331 | © Saint-Gobain October 2021 | **Norseal** and **Saint-Gobain** are trademarks of Saint-Gobain.



Saint-Gobain Tape Solutions

North America | South America | Europe | Asia

For a full list of locations, please visit
tapesolutions.saint-gobain.com/contact-us