# INTERFACE SOLUTIONS **Gasket** Materials



# **Interface Solutions, Inc.**

# Technically Reliable Solutions

Interface Solutions, Inc. (ISI), a leading global manufacturer of sealing systems and engineered composite materials, offers durable, affordable and technically reliable solutions for a range of applications in the automotive, heavy-duty diesel, small engine and related industries. Committed to quality, all ISI processes and products are audited and meet the quality standards of leading customer programs worldwide. Our thorough design and validation processes include rigorous performance testing and every material shipment is lab-certified. Product and application engineers complete thousands of hours of functional testing validating material performance and long-term durability, resulting in robust solutions that satisfy the most stringent requirements. ISI helps customers meet global requirements for cost reduction, performance improvement and certainty of operation.



# Value Grade Materials

Interface Solutions, Inc. offers nearly 60 different gasket materials, encompassing a wide range of performance capabilities, price points and intended uses. A unique, high performance set of materials, known as the Value Grade line, give fabricator partners and end-users business advantages through superior performance, reduced lead times, assured availability, fast delivery and custom testing for specific applications. Value Grade materials are bolded throughout the materials list. For more information on the Value Grade line and complete material data sheets, visit www.sealinfo.com.

|                      |  |  | ASTM F 36<br>Compressibility, 9       |                           |                        | ASTM F 152  | Con                | nposition   |                      |                       |
|----------------------|--|--|---------------------------------------|---------------------------|------------------------|---|--------------------|---|----------------------|-----------------------|
| Interface<br>Product | Characteristics  | Uses   | Density g/cm3<br>(Ibs./cu.ft.) (min.) | at 34.5 MPa<br>(5000 psi) | Minimum<br>Recovery, % | MinimumTensile Strength<br>MPa (psi), AMD                     | Fiber              | Binder Type   | Classification       | ASTM F104<br>Call-Out |
| 2000 CMP-4000        | A high performance, compressed material with excellent sealability and torque retention properties.  | Short duration maximum temperatures up to 350°C<br>(650°F). Common applications include: OEM and<br>Industrial steam, water, oil and chemical sealing.   | 1.60 (100)*                           | 5 - 15                    | 50                     | < 0.8mm Gauge: 13.60 (1968)<br>All other Gauges: 18.60 (2700) | Synthetic<br>Blend | Fully Cured <sup>1</sup><br>Nitrile Butadiene<br>Rubber                             | Value Grade<br>Sheet | F722930E22M9          |
| CMP-4200             | A solvent-free, high performance compressed material<br>with exceptional sealability, torque retention and crush<br>and blowout resistance. Suitable for steam, water,<br>oil and chemical applications.                           | Short duration maximum temperatures up to 350°C<br>(650°F). Common applications include: OEM and<br>Industrial steam, water, oil and chemical sealing.   | 1.55 (97)                             | 7 - 17                    | 50                     | 12 (1740)   | Synthetic<br>Blend | Fully Cured <sup>1</sup><br>Nitrile Butadiene/<br>Styrene Butadiene<br>Rubber Blend | Value Grade<br>Sheet | F729190E33M9          |
| CN-705               | A low density and highly conformable material suitable<br>for use with oil, gasoline and water. Material contains<br>cork particles as a filler.   | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: light-duty, general oil, gas,<br>water and air sealing.   | 0.61 (38)                             | 25 - 40                   | 25                     | 5.52 (800)  | Cellulose          | Nitrile Butadiene   | Roll                 | F339199E99M9          |
| CS-301               | A low density and highly conformable material suitable<br>for use with oil and water. Material contains cork<br>particles as a filler.   | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: light-duty, general oil, water<br>and air sealing.  | 0.61 (38)                             | 25 - 40                   | 30                     | 4.83 (700)  | Cellulose          | Controlled Swell <sup>3</sup><br>Styrene Butadiene                                  | Roll                 | F339996E99M9          |
| D-7200               | A high density material with resistance to oil, fuel, water and coolant.   | Short duration maximum temperatures up to 180°C (350°F). Common applications include: oil, fuel, water and coolant sealing.  | 1.50 (93.8)*                          | 8 - 18                    | 40                     | 13.79 (2000)  | Cellulose          | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                       | Sheet                | F729900E32M6          |
| D-7201               | A high density material with excellent mechanical strength,<br>sealability and erosion resistance to high pressure, high<br>volume fluid flow and impingement.   | Short duration maximum temperatures up to 290°C (550°F).<br>Common applications include: heavy-duty automatic<br>transmissions and various military gaskets.   | 1.50 (93.8)                           | 5 - 20                    | 40                     | 15.86 (2300)  | Aramid             | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                       | Sheet                | F729900B4E33M9        |
| D-7280               | A compressible material with added resistance to fuel, oil, coolant and water.   | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: low to moderate load fuel,<br>oil, coolant and water sealing.   | 1.20 (75)                             | 15 - 30                   | 40                     | 10.34 (1500)  | Cellulose          | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                       | Sheet                | F729190B9E93M5        |
| D-7590               | A highly compressible, chemically resistant, and elevated<br>temperature material used as a filler in composite gasket<br>constructions.   | Maximum continuous operating temperatures up to 260°C (500°F). Common applications include: PTFE envelope and metal-jacketed gaskets.  | 0.565 - 0.665<br>(35.3 - 41.5)        | 30 - 50                   | 15                     | 2.76 (400)  | Aramid             | Acrylic   | Sheet                | F729190B9E93M5        |
| EMC-7201*            | A composite structure of high density gasket facings<br>chemically and mechanically fused to an expanded steel<br>core. Available in 0.042", 0.048" and 0.060" gauges in<br>a sheet size of 21" x 63" and 27" x 63" (usable area). | Short duration maximum temperatures up to 290°C (550°F).<br>Common applications include: diesel engine structural<br>joints, high pressure hydraulic joints and performance<br>and racing engine applications. | 2.0 (125)                             | 14                        | 50                     | 37.90 (5500)<br>MD: 15.20 (2200)                              | Aramid             | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                       | EnCore®<br>Sheet     | _                     |



|                      |  |   | ASTM F 36<br>Compressibility, %       |                           |                        | ASTM F 152  | Composition        |   |                      |                       |
|----------------------|--|---|---------------------------------------|---------------------------|------------------------|---|--------------------|---|----------------------|-----------------------|
| Interface<br>Product | Characteristics  | Uses  | Density g/cm3<br>(Ibs./cu.ft.) (min.) | at 34.5 MPa<br>(5000 psi) | Minimum<br>Recovery, % | MinimumTensile Strength<br>MPa (psi), AMD   | Fiber              | Binder Type   | Classification       | ASTM F104<br>Call-Out |
|                      | A high density material used in heavy-duty oil sealing<br>applications. The specification values are for 0.8mm<br>(0.031") gauge material.   | Short duration maximum temperatures up to 290°C<br>(550°F). Common applications include: heavy-duty oil<br>sealing such as diesel engine oil pan and front cover.   | 1.6 (100)*                            | 7 - 17                    | 40                     | 13.90 (2014)  | Aramid             | Controlled Swell <sup>3</sup><br>Styrene Butadiene/<br>Natural Rubber | Value Grade<br>Sheet | F729900B5E09M9        |
| . ()<br>HFL-971      | A high density material with superior mechanical<br>strength in heavy-duty applications. It has exceptional<br>tensile strength and crush, blowout and erosion<br>resistance. It is also resistant to shear and friction<br>damage in dynamic joints.  | Short duration maximum temperatures up to 350°C<br>(650°F). Common applications include: heavy-duty<br>applications sealing transmission fluid, axle lube,<br>oil, fuel, coolant, water and steam.  | 1.50 (93.6)                           | 7 - 17                    | 40                     | < 0.5mm Gauge: 12.40 (1800)<br>0.5 to 0.8mm Gauge: 24.10 (3500)<br>All other Gauges: 27.50 (3985) | Aramid             | Fully Cured <sup>1</sup><br>Nitrile Butadiene<br>Rubber               | Value Grade<br>Sheet | F729900E39M9          |
| HTX-900*             | A composite material consisting of graphite-coated, high-<br>temperature facing material chemically and mechanically<br>fused to an expanded steel core. Available in 0.043",<br>0.048", 0.060" and 0.093" gauges in a sheet size<br>of 20" x 63" (usable area).   | Designed for exhaust and heat shielding applications<br>at typical internal combustion engine temperatures.<br>Common applications include: exhaust manifold, header,<br>collector and EGR system and other industrial sealing<br>applications that require high strength, thermal integrity<br>and anti-stick performance. | 2.0 (125)                             | 12                        | 50                     | 27.50 (4000)<br>MD: 15.20 (2200)  | Hi-Temp<br>Blend   | Fully Cured¹<br>Nitrile Butadiene                                     | EnCore®<br>Sheet     | _                     |
| M-5201               | A high density material with added resistance to oil and fuel.   | Short duration maximum temperatures up to 290°C (550°F).<br>Common applications include: heavy-duty diesel engine.  | 1.55 (97)*                            | 7 - 17                    | 40                     | < 0.8mm Gauge: 13.80 (2000)<br>All Other Gauges: 16.60 (2405)                                     | Aramid             | Fully Cured <sup>1</sup><br>Nitrile Butadiene                         | Sheet                | F729900B4E43M9        |
| MBF-G*               | A high-temperature material combining an inorganic fiber,<br>low binder facing material with an 0.2mm (0.008") tang<br>perforated tin-plated steel core. Available in several gauges,<br>with roll widths up to 305mm (12") wide.<br>The following typical values were established using<br>an overall construction thickness of 1.6mm (0.063").   | Designed for exhaust and heat shielding applications<br>at typical internal combustion engine temperatures.<br>Common applications include: automotive and small<br>engine header, downpipe and collector, EGR, muffler<br>and other exhaust gas applications.  | 0.88 (55)<br>(facings only)           | 25 - 35                   | 20 -30                 | 29 (4250)   | Hi-Temp<br>Blend   | Nitrile Butadiene   | EnCore®<br>Roll      | _                     |
| MBG-C*               | A high performance material combining graphite facings<br>on a 0.2mm (0.008") tang perforated tin-plated steel core.<br>It is compressible and resilient, yet offers excellent bolt<br>torque retention and chemical and heat resistance.<br>The typical values were established using an overall<br>thickness of 1.2mm (0.047").  | Designed for use to 500°C in cylinder head, EGR, and exhaust systems.   | 1.00 (62.4)<br>(facings only)         | 30 - 37                   | 16 - 22                | 41.4 (6000)   | Graphite           | _   | EnCore®<br>Roll      |                       |
| MBG-D*               | A high performance material combining expanded graphite facings on 0.2mm (0.008") tang perforated tin-plated steel core. It is compressible and resilient, yet offers excellent bolt torque retention and chemical resistance and heat resistance. The typical values were established using an overall thickness of 1.2mm (0.047").   | Designed for use to 500°C in cylinder head, EGR, and exhaust systems.   | 1.12 (70)<br>(facings only)           | 23 - 30                   | 20 - 28                | 34.5 (5000)   | Graphite           | _   | EnCore®<br>Roll      | _                     |
| MBG-H*               | A high performance material combining expanded graphite facings on 0.2mm (0.008") tang perforated tin-plated steel core. It is compressible and resilient, yet offers excellent bolt torque retention and chemical resistance and heat resistance. The typical values were established using an overall thickness of 1.2mm (0.047").   | Designed for use to 500°C in cylinder head, EGR, and exhaust systems.   | 1.44 (90)<br>(facings only)           | 21 - 27                   | 24 - 30                | 37.9 (5500)   | Graphite           | _   | EnCore®<br>Roll      |                       |
| MCC*                 | A high performance, thermally stable material with 0.2mm (0.008") perforated tin-plated steel facings on one or both sides. The typical values were established using only the fiber core without cladding, with a thickness of 1.6mm (0.062"). Double-clad material is available in 1.2mm (0.047") and 1.6mm (0.062") thicknesses and single clad material is available in 1.0mm (0.039") and 1.2mm (0.047") thicknesses. | Designed for exhaust and heat shielding applications at typical internal combustion engine temperatures.  | 0.96 (60)                             | At 6.9<br>MPa: 30         | 49                     | 6.5 (943)   | Hi-Temp<br>Blend   | Nitrile Butadiene   | EnCore®<br>Sheet     |                       |
|                      | A material with excellent low flange pressure<br>sealability and bolt torque retention designed<br>for heavy-duty applications.  | Short duration maximum temperatures up to 205°C (400°F). Common applications include: heavy-duty applications including compressors and diesel engines.   | 1.54 (96)                             | 13 - 25                   | 50                     | 10.34 (1500)  | Synthetic<br>Blend | Polychloroprene   | Value Grade<br>Roll  | F729000M5             |



|   |   |  |                                       | ASTM F 36<br>Compressibility, % | ASTM F 152             |   | Composition             |   |                     |                       |
|---|---|--|---------------------------------------|---------------------------------|------------------------|---|-------------------------|---|---------------------|-----------------------|
| Interface<br>Product                      | Characteristics   | Uses   | Density g/cm3<br>(Ibs./cu.ft.) (min.) | at 34.5 MPa<br>(5000 psi)       | Minimum<br>Recovery, % | Minimum Tensile Strength<br>MPa (psi), AMD                  | Fiber                   | Binder Type                                   | Classification      | ASTM F104<br>Call-Out |
| MP-2N                                     | A material specifically engineered to conform well<br>to irregular flange surfaces, with exceptional sealability<br>for coolant, lubrication and induction systems.   | Short duration maximum temperatures up to 205°C<br>(400°F). Common applications include: automotive<br>powertrain, marine and small engine applications<br>to seal coolant, lubrication and induction systems. | 1.35 (84)                             | 13 - 25                         | 35                     | 8.28 (1200)   | Synthetic<br>Blend      | Nitrile Butadiene                             | Value Grade<br>Roll | F729000M9             |
| N-2085G                                   | A material offering excellent resistance to water,<br>coolant, oil and fuel. Available in close tolerance gauges.   | Short duration maximum temperatures up to 190°C (375°F).<br>Common applications include: hermetic compressor<br>valve plate.   | 1.36 (85)                             | 10 - 20                         | 50                     | 13.79 (2000)  | Reinforced<br>Cellulose | Fully Cured <sup>1</sup><br>Nitrile Butadiene | Roll                | F723940E43M6          |
| N-8051                                    | An oil resistant, light-duty material.  | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: low internal pressure and<br>low flange pressure applications up to 13.8 MPa (2000 psi).                              | 1.30 (81)                             | 10 - 25                         | 40                     | 2.76 (400)  | Cellulose               | Nitrile Butadiene                             | Roll                | F339000M9, Z1         |
| N-8090                                    | A reinforced cellulose fiber material with excellent oil resistance and good sealing characteristics.   | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: water pump, transmission<br>housing and fuel systems.   | 1.28 (80)                             | 15 - 25                         | 35                     | 13.79 (2000)  | Reinforced<br>Cellulose | Latent Cure²<br>Nitrile Butadiene             | Roll                | F724900E49M6          |
| •<br>•••••••••••••••••••••••••••••••••••• | A material with excellent crush resistance at high<br>flange pressures and superior sealing properties<br>with oil, fuel and water.   | Short duration maximum temperatures up to 180°C<br>(350°F). Common applications include: automotive,<br>small engine and compressor applications.  | 1.20 (75)                             | 15 - 30                         | 35                     | 11.03 (1600)  | Reinforced<br>Cellulose | Nitrile Butadiene                             | Value Grade<br>Roll | F729900E59M9          |
| N-8092CT                                  | A material used primarily in applications that require close tolerance gauge control for shimming.  | Short duration maximum temperatures up to 180°C<br>(350°F). Common applications include: hermetic<br>compressor valve plate.   | 1.20 (75)                             | 15 - 30                         | 35                     | 11.03 (1600)  | Reinforced<br>Cellulose | Nitrile Butadiene                             | Roll                | F729900E59M9          |
| N-8094                                    | A low density material that conforms well to irregular<br>flange surfaces and has very good crush resistance<br>at high flange pressures.   | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: oil, fuel and water flanges<br>where moderate conformability is needed.   | 0.87 (54)                             | 28 - 42                         | 20                     | > 1.2mm Gauge: 6.90 (1000)<br>All Other Gauges: 8.62 (1250) | Reinforced<br>Cellulose | Nitrile Butadiene                             | Roll                | F729900E99M9          |
| NI-2085                                   | A material resistant to oil, fuel, water and coolant with excellent strength and sealability characteristics.   | Short duration maximum temperatures up to 190°C (375°F). Common applications include: oil, fuel, water and coolant applications.   | 1.36 (85)                             | 10 - 20                         | 50                     | 13.79 (2000)  | Reinforced<br>Cellulose | Nitrile Butadiene                             | Roll                | F723940E43M6          |
| NI-2086                                   | A material resistant to oil, fuel, water and coolant with excellent strength and sealability characteristics.   | Short duration maximum temperatures up to 190°C (375°F). Common applications include: oil, fuel, water and coolant applications.   | 1.36 (85)                             | 10 - 20                         | 50                     | 13.79 (2000)  | Reinforced<br>Cellulose | Fully Cured <sup>1</sup><br>Nitrile Butadiene | Roll                | F723940E43M6          |
| NI-2095A                                  | A standard cylinder head facing material designed to<br>deliver the performance required for worldwide cylinder<br>head applications. It is easily combined on perforated and<br>solid metal core. (Minimum order requirements may apply).      | Designed for cylinder head and intake facing for water-<br>cooled engines.   | 1.15 (72)                             | 15 - 30                         | 25                     | 4.14 (600)  | Hi-Temp<br>Blend        | Nitrile Butadiene                             | Roll                | F729150E92M9          |
| NI-2098                                   | A heavy-duty cylinder head facing material used with<br>both solid and perforated metal cores. It is compatible<br>with most polymers used in bead printing processes.  | Designed for use in high-performance engine cylinder head and intake manifolds.  | 1.19 (74)                             | 15 - 30                         | 20                     | 1.72 (250)  | Aramid                  | Nitrile Butadiene                             | Roll                | F729990E52M2          |
| NI-2900                                   | An economical facing material designed to deliver<br>the performance required for worldwide cylinder head<br>and manifold applications. It is easily combined<br>on perforated and solid metal core. (Minimum order<br>requirements may apply). | Designed for cylinder head and intake facing for water-<br>cooled engines.   | 1.04 (65)                             | 27 - 37                         | 18                     | 3.79 (550)  | Hi-Temp<br>Blend        | Nitrile Butadiene                             | Roll                | F729150E52M9          |
| NI-4002                                   | A facing material with low ignition loss and good<br>torque retention properties that, when combined<br>on perforated metal core, is intended for elevated<br>temperature applications.   | Common applications include: high temperature applications such as exhaust systems.  | 0.88 (55)                             | 15 - 30                         | 25                     | 2.07 (300)  | Hi-Temp<br>Blend        | Nitrile Butadiene                             | Roll                | F339997E92M9          |



|                      |  |   |                                       | ASTM F 36<br>Compressibility, % |                        | ASTM F 152                                | Composition             |  |                     |                       |
|----------------------|--|---|---------------------------------------|---------------------------------|------------------------|---|-------------------------|--|---------------------|-----------------------|
| Interface<br>Product | Characteristics  | Uses  | Density g/cm3<br>(lbs./cu.ft.) (min.) | at 34.5 MPa<br>(5000 psi)       | Minimum<br>Recovery, % | MinimumTensile Strength<br>MPa (psi), AMD | Fiber                   | Binder Type  | Classification      | ASTM F104<br>Call-Out |
| NV-512               | An increased strength and fluid resistant material with very high tensile strength and crush resistance.   | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: air pump, carburetor, gear<br>box and transmission.  | 0.96 (60)                             | 10 - 20                         | 60                     | 20.69 (3000)                              | Cellulose               | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                  | Roll                | F333949E43M7          |
| NV-519               | A material with excellent tensile strength, crush<br>and erosion resistance against high volume fluid flow<br>and impingement.   | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: automatic transmission<br>valve body, pump, and accumulator/channel plate as well<br>as carburetor and air compressor. | 0.96 (60)                             | 5 - 15                          | 60                     | 27.59 (4000)                              | Cellulose               | Nitrile Butadiene  | Roll                | F332949E42M8          |
| NV-565               | A low density gasket material with good oil, fuel and water resistance that conforms well to irregular flange surfaces.  | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: carburetor, fuel system<br>and water pump.   | 0.64 (40)                             | 15 - 30                         | 40                     | 40  | Cellulose               | Nitrile Butadiene/<br>Styrene Butadiene  | Roll                | F339997E93M9          |
| PF-4N                | A material with maximum fluid resistance and excellent sealability in a variety of environments and flange conditions.   | Short duration maximum temperatures up to 290°C (550°F).  | 1.44 (90)                             | 12 - 20                         | 45                     | 8.97 (1300)                               | Synthetic<br>Blend      | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                  | Value Grade<br>Roll | F729000M9             |
| PF-4S                | A material designed for various oil, air and coolant<br>applications. It is a replacement for styrene butadiene<br>rubber bound calendared sheet materials and offers<br>improved oil sealability over nitrile butadiene<br>bound materials. | Short duration maximum temperatures up to 290°C<br>(550°F). Common applications include: oil pan, front<br>cover, intake manifold and rear seal.  | 1.44 (90)                             | 9 - 23                          | 45                     | 8.62 (1250)                               | Synthetic<br>Blend      | Fully Cured <sup>1</sup><br>Styrene Butadiene                                  | Value Grade<br>Roll | F729000M9             |
| RN-8011              | A low density material providing excellent sealing properties for oil and water at low flange pressures.   | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: engine and transmission<br>pan, water pump and environmental sealing.  | 0.61 (38)                             | 35 - 60                         | 15                     | 1.52 (220)                                | Cellulose               | Nitrile Butadiene  | Roll                | F339099E09M9          |
| S-207                | A material used in many aftermarket oil and coolant applications.  | Short duration maximum temperatures up to 180°C (350°F). Common applications include: oil and coolant aftermarket sealing.  | 0.88 (55)                             | 10 - 30                         | 30                     | 9.66 (1400)                               | Cellulose               | Controlled Swell <sup>3</sup><br>Styrene Butadiene                             | Roll                | F339999E99M9          |
| S-8091               | A material used in many OEM and aftermarket oil and coolant applications.  | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: oil, fuel and low pressure<br>steam sealing for low to moderate loads.   | 1.20 (75)                             | 15 - 25                         | 25                     | 12.41 (1800)                              | Reinforced<br>Cellulose | Controlled Swell <sup>3</sup><br>Latent Cure <sup>2</sup><br>Styrene Butadiene | Roll                | F724900E09M9          |
| SV-360               | A low density, general purpose material.   | Short duration maximum temperatures up to 180°C (350°F).<br>Common applications include: anti-squeak, dust seal,<br>heater, oil seal, shim stock and water pump.  | 0.67 (42)                             | 15 - 30                         | 40                     | 10.34 (1500)                              | Cellulose               | Styrene Butadiene  | Roll                | F339197E93M5          |
| TN-9000              | A material with good tensile strength, low creep relaxation and excellent fuel and oil resistance.   | Short duration maximum temperatures up to 400°C (750°F).<br>Common applications include: applications with high flange<br>pressures and temperatures.   | 1.44 (90)                             | 7 - 17                          | 50                     | 17.24 (2500)                              | Aramid                  | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                  | Roll                | F729900E33M9          |
| TN-9001              | A heavy-duty material with excellent oil resistance.   | Short duration maximum temperatures up to 400°C (750°F).<br>Common applications include: small engine muffler gaskets<br>and general heavy-duty diesel engine oil sealing.                                      | 1.28 (80)                             | 15 - 30                         | 40                     | 13.79 (2000)                              | Aramid                  | Latent Cure <sup>2</sup><br>Nitrile Butadiene                                  | Roll                | F729900E49M6          |
| TN-9004              | A heavy-duty, high density material with good tensile strength and excellent resistance to fuel and oil.   | Short duration maximum temperatures up to 350°C (650°F).<br>Common applications include: general heavy-duty engine<br>and transmission oil sealing.   | 1.52 (95)                             | 5 - 20                          | 45                     | 17.24 (2500)                              | Aramid                  | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                  | Roll                | F729100E33M9          |
| TN-9005              | A heavy-duty material that conforms well to irregular flange surfaces.   | Short duration maximum temperatures up to 350°C (650°F). Common applications include: fuel/air delivery, transmission, and coolant systems.   | 1.28 (80)                             | 15 - 30                         | 25                     | 10.34 (1500)                              | Aramid                  | Latent Cure <sup>2</sup><br>Nitrile Butadiene                                  | Roll                | F729900E59M5          |
| TN-9014              | A material with excellent fuel and oil resistance.   | Short duration maximum temperatures up to 290°C (550°F).<br>Common applications include: water pumps and general<br>automotive, light diesel and small engine oil sealing.                                      | 1.44 (90)                             | 7 - 20                          | 45                     | 17.24 (2500)                              | Aramid /<br>Cellulose   | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                  | Roll                | F729900E99M9          |



|                      |  |  |                                       | ASTM F 36<br>Compressibility, % |                        | ASTM F 152                                | Composition           |  |                     |                       |
|----------------------|--|--|---------------------------------------|---------------------------------|------------------------|---|-----------------------|--|---------------------|-----------------------|
| Interface<br>Product | Characteristics  | Uses   | Density g/cm3<br>(lbs./cu.ft.) (min.) | at 34.5 MPa<br>(5000 psi)       | Minimum<br>Recovery, % | MinimumTensile Strength<br>MPa (psi), AMD | Fiber                 | Binder Type  | Classification      | ASTM F104<br>Call-Out |
| TN-9015              | A material that conforms well to irregular flange surfaces<br>and has excellent resistance to fuel and oil.  | Short duration maximum temperatures up to 290°C (550°F). Common applications include: fuel/air delivery, transmission, natural gas and coolant systems.  | 1.28 (80)                             | 12 - 27                         | 30                     | 10.34 (1500)                              | Aramid /<br>Cellulose | Latent Cure <sup>2</sup><br>Nitrile Butadiene                                  | Roll                | F729900E99M5          |
| TN-9040              | A high density material with high mechanical integrity.<br>It has excellent crush resistance, good creep relaxation<br>properties and high tensile strength.   | Short duration maximum temperatures up to 290°C (550°F).<br>Common applications include: heavy-duty flanges with high<br>load and or high shear forces, and high internal pressure<br>ATF gaskets. | 1.49 (93)                             | 7 - 17                          | 40                     | 27.59 (4000)                              | Aramid                | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                  | Roll                | F729900E43M8          |
| TN-9045              | A heavy-duty material for use in elevated temperature applications.  | Designed for exhaust sealing at typical internal combustion<br>engine temperatures. Common applications include:<br>exhaust header and collector gaskets.  | 1.28 (80)                             | 10 - 25                         | 45                     | 10.34 (1500)                              | Acrylic<br>Blend      | Acrylic  | Roll                | F729900E93M5          |
| TS-9003              | A material with good oil sealing characteristics at low<br>flange pressure that conforms well to irregular flange<br>surfaces. It is an alternative to high-swell compressed<br>sheet materials.     | Short duration maximum temperatures up to 350°C (650°F). Common applications include: oil pans and stamped cover gaskets.  | 1.44 (90)                             | 15 - 30                         | 20                     | 6.90 (1000)                               | Aramid                | Controlled Swell <sup>3</sup><br>Latent Cure <sup>2</sup><br>Styrene Butadiene | Roll                | F729900E09M4          |
| TS-9006              | A heavy-duty, high density material.   | Short duration maximum temperatures up to 350°C (650°F). Common applications include: oil, water and steam applications with high flange pressures.  | 1.52 (95)                             | 5 - 20                          | 40                     | 10.34 (1500)                              | Aramid                | Fully Cured <sup>1</sup><br>Styrene Butadiene                                  | Roll                | F729900E09M5          |
| TS-9013              | A material that conforms well to irregular flange surfaces.  | Short duration maximum temperatures up to 290°C (550°F).<br>Common applications include: water and oil sealing.  | 1.36 (85)                             | 12 - 25                         | 25                     | 8.28 (1200)                               | Aramid /<br>Cellulose | Styrene Butadiene  | Roll                | F729900E09M9          |
| TS-9016              | A fully cured material for additional strength and degradation resistance.   | Short duration maximum temperatures up to 290°C (550°F).<br>Common applications include: water and oil sealing.  | 1.44 (90)                             | 10 - 25                         | 40                     | 12.41 (1800)                              | Aramid /<br>Cellulose | Fully Cured <sup>1</sup><br>Styrene Butadiene                                  | Roll                | F729900E09M9          |
| VB-72                | A high performance material with excellent erosion<br>resistance, designed specifically for valve body<br>and other heavy-duty applications with exposure<br>to high fluid pressures and flow rates. | Short duration maximum temperatures up to 290°C (550°F). Common applications include: heavy-duty applications with exposure to high fluid pressures and flow rates.                                | 1.47 (92)                             | 5 - 20                          | 40                     | 15.86 (2300)                              | Synthetic<br>Blend    | Fully Cured <sup>1</sup><br>Nitrile Butadiene                                  | Value Grade<br>Roll | F729900M9             |
| 2331                 | An environmentally compatible, low density gasket material formulated from recycled gasket materials.  | Short duration maximum temperatures up to 180°C<br>(350°F). Common applications include: general, light-duty<br>applications.  | 0.56 (35)                             | 15 - 35                         | 35                     | 6.90 (1000)                               | Cellulose             | Styrene Butadiene  | Roll                | F339177E73M4          |

- \* **<u>Typical Values</u>**: Average values determined in accordance with ASTM F104 testing methods for Type 7 materials. Should not be used as a basis for material specifications. Material thickness of 0.8mm (0.031") used for all testing. All specifications developed on 3 sigma limits of physical property data.
- (1) **Fully Cured** materials have rubber binders which are vulcanized during formation or in subsequent processes for added initial strength and fluid resistance.
- (2) Latent Cure materials are specially formulated for initial conformability which help to seal rough flanges. The presence of heat in the application activates ingredients which vulcanize the material to provide the benefits of fully cured<sup>1</sup> products.
- (3) **<u>Controlled Swell</u>** materials are latent cure<sup>2</sup> products which use Styrene Butadiene Rubber (SBR) binders. Significant thickness increase occurs at the exposed internal edge of the gasket with many fluids, dramatically improving sealability. The heat of application then vulcanizes the material to limit further swelling and provide fully cured<sup>1</sup> performance.



## North America Sales Office

Center of Customer Excellence Interface Sealing Solutions 22260 Haggerty Road Suite 200 Northville, MI 48167 USA Tel: (248) 596-2800 Fax: (248) 596-2880

# **Corporate Headquarters**

Interface Solutions, Inc. 216 Wohlsen Way Lancaster, PA 17603-4043 USA Tel: (717) 207-6000 Fax: (717) 207-6080

Visit us at *www.sealinfo.com* or call *Toll-free:* 800-9GASKET (800-942-7538)

©2012 Interface Solutions, Inc. 3K (3/12) DML EGT







