

## MATERIALS FOR DOOR SEALS AND GASKETS



Pyrotek offers a wide range of asbestos-free ropes and tadpoles. Proven to provide optimal seals, Pyrotek ropes and tadpoles minimize the costs associated with downtime, energy loss and maintenance. Many of the products itemized on the following pages are available exclusively from Pyrotek. Specialized designs can be fabricated to meet exact requirements of temperature resistance, size, density and wear resistance. Contact your sales engineer for additional details.

### APPLICATIONS

- Furnaces
- Crucible lids
- Collector bars
- Burners
- Flues
- Pot lids
- Ladles
- Doors
- Side mains
- Port plugs

### ADVANTAGES

- Coatings add air seal and abrasion resistance
- Durable jackets of 304 stainless steel or Inconel mesh
- Asbestos-free and ceramic fiber-free materials available
- Minimizes energy costs by providing improved seals
- Custom-designed tadpoles

## ROPES & TADPOLES

| ROPES | DESCRIPTION   | CROSS SECTION DIMENSIONS                               | MAX TEMP.        | DENSITY  | ABRASION RESISTANCE | COMPRESSION AND RECALL |
|-------|---|--|------------------|--|---------------------|------------------------|
| A-1   | Compressible, inexpensive rope. Glass fiber core with heavy gauge glass fabric jacket. Loses tensile strength after 340°C (650°F) but remains intact. | 1.5 - 51 mm<br>0.0625 - 2.0 in<br>(Diameter)           | 540°C<br>1000°F  | 800 kg/m <sup>3</sup><br>50 lbs/ft <sup>3</sup>  | Good                | Good                   |
| A-2   | An A-1 substitute fiberglass rope.  | 1.5 - 51 mm<br>0.0625 - 2.0 in<br>(Diameter)           | 540°C<br>1000°F  | 640 kg/m <sup>3</sup><br>40 lbs/ft <sup>3</sup>  | Good                | Good                   |
| D-1   | A-1 rope with silicone coating to increase abrasion resistance and air sealing properties.  | 1.5 - 51 mm<br>0.0625 - 2.0 in<br>(Diameter)           | 540°C<br>1000°F  | 960 kg/m <sup>3</sup><br>60 lbs/ft <sup>3</sup>  | Excellent           | Good                   |
| F-10  | Silicone core with double jacket of heavy gauge fiberglass cloth. Silicone coated overall.  | 13, 25, 38, 51 mm<br>0.5, 1.0, 1.5, 2.0 in<br>(Square) | 425°C<br>800°F   | 1538 kg/m <sup>3</sup><br>96 lbs/ft <sup>3</sup> | Good                | Good                   |
| J-1   | Available in braided or twisted form. Excellent tensile strength and abrasion resistance. Low thermal conductivity.                                   | 6 - 51 mm<br>0.25 - 2.0 in<br>(Diameter)               | 1260°C<br>2300°F | 432 kg/m <sup>3</sup><br>27 lbs/ft <sup>3</sup>  | Excellent           | Fair                   |
| J-9   | Square ceramic rope.  | 6 x 6 mm<br>51 x 51 mm<br>0.25 x 0.25 in<br>2.0 x 2.0  | 1315°C<br>2400°F | 1090 kg/m <sup>3</sup><br>68 lbs/ft <sup>3</sup> | Excellent           | Fair                   |
| KF-40 | A dense rope with solid fiberglass core covered with a tightly woven Kevlar® jacket. Very abrasion resistant and does not expel fibers quickly.       | 6 - 12 mm<br>0.25 - 0.5 in<br>(Diameter)               | 425°C<br>800°F   | 785 kg/m <sup>3</sup><br>49 lbs/ft <sup>3</sup>  | Excellent           | Excellent              |
| R-3   | Dense, solid, square braided glass rope. Good where physical abuse and abrasion are a problem.  | 6 - 51 mm<br>0.25 - 2.0 in<br>(Square)                 | 540°C<br>1000°F  | 1250 kg/m <sup>3</sup><br>78 lbs/ft <sup>3</sup> | Good                | Good                   |
| R-3C  | R-3 rope with silicone coating to increase abrasion resistance and air sealing properties.  | 6 - 51 mm<br>0.25 - 2.0 in<br>(Square)                 | 540°C<br>1000°F  | 1410 kg/m <sup>3</sup><br>88 lbs/ft <sup>3</sup> | Excellent           | Good                   |

Kevlar® is a registered trademark of the Dupont Corporation.

## ROPES & TADPOLES

| CORES           | DESCRIPTION                 | CROSS SECTION DIMENSIONS   | MAX TEMP.        | ABRASION RESISTANCE | COMPRESSION AND RECALL |
|-----------------|-----------------------------|----------------------------|------------------|---------------------|------------------------|
| Stainless Steel | Stainless steel mesh. Flat. | 13 - 64 mm<br>0.5 - 2.5 in | 870°C<br>1600°F  | Excellent           | Good                   |
| Inconel Mesh    | Flat mesh.                  | 13 - 64 mm<br>0.5 - 2.5 in | 1095°C<br>2000°F | Good                | Good                   |
| Steel Mesh      | Tube shaped.                | 13 - 64 mm<br>0.5 - 2.5 in | 870°C<br>1600°F  | Excellent           | Good                   |
| Silicone Rubber | Custom-shaped profiles.     | N/A                        | 260°C<br>500°F   | Good                | Good                   |

**Custom tadpoles can be constructed from any combination of rope or core material listed and a fabric covering. Select from the popular fabrics shown below or contact your Pyrotek sales engineer for additional alternatives.**

| FABRIC | DESCRIPTION  | THICKNESS          | MAX TEMP.        | WEIGHT  |
|--------|--|--------------------|------------------|---|
| H-10B  | Ideal covering for high-temperature compressible gaskets.  | 1.3 mm<br>0.05 in  | 1095°C<br>2000°F | 1355 kg/m <sup>2</sup><br>40 oz/yd <sup>2</sup> |
| S-1    | Excellent mechanical strength and abrasion resistance. Low air permeability.   | 0.4 mm<br>0.015 in | 650°C<br>1200°F  | 1271 kg/m <sup>2</sup><br>8 oz/yd <sup>2</sup>  |
| S-2    | Coarse fabric with low air permeability. Excellent mechanical strength and abrasion resistance.                      | 2 mm<br>0.08 in    | 315°C<br>600°F   | 745 kg/m <sup>2</sup><br>22 oz/yd <sup>2</sup>  |
| T-20   | Close woven fiberglass. Does not cause sever skin irritation. Lightweight, light-brown, chemical resistant fabric.   | 1.4 mm<br>0.055 in | 760°C<br>1400°F  | 1084 kg/m <sup>2</sup><br>32 oz/yd <sup>2</sup> |
| V-5    | Wear resistant acid leached fiberglass. Heavy cloth.   | 1.4 mm<br>0.054 in | 1630°C<br>3000°F | 1285 kg/m <sup>2</sup><br>38 oz/yd <sup>2</sup> |
| Z-5    | Fiberglass, coarse textile fiber. Woven fabric.  | 2 mm<br>0.08 in    | 815°C<br>1500°F  | 1185 kg/m <sup>2</sup><br>35 oz/yd <sup>2</sup> |
| A-5C   | Z-5 with proprietary Pyroseal red coating on one side to provide an airtight covering while maintaining flexibility. | 2.3 mm<br>0.09 in  | 815°C<br>1500°F  | 1525 kg/m <sup>2</sup><br>45 oz/yd <sup>2</sup> |
| Z-6W   | Wire reinforced, this material is good for any area requiring an abrasion-resistant material.                        | 2.3 mm<br>0.09 in  | 815°C<br>1500°F  | 1355 kg/m <sup>2</sup><br>40 oz/yd <sup>2</sup> |
| ZP2500 | Splash guards, thick curtains, tadpoles, tapes.  | 3 mm<br>0.125 in   | 1090°C<br>2000°F | 2032 kg/m <sup>2</sup><br>60 oz/yd <sup>2</sup> |

## ROPES & TADPOLES

| TADPOLES              | DESCRIPTION   | CROSS SECTION DIMENSIONS                               | MAX TEMP.        | DENSITY   | ABRASION RESISTANCE | COMPRESSION AND RECALL |
|-----------------------|---|--|------------------|---|---------------------|------------------------|
| A-1/S-1               | A-1 glass fiber core with highly abrasion-resistant S-1 fabric jacket and mounting flange.                              | Bulb to 51 mm (2 in) flange width as required.         | 260°C<br>500°F   | 800 kg/m <sup>3</sup><br>50 lbs/ft <sup>3</sup> | Excellent           | Good                   |
| A-1/Z-5               | A-1 rope core with jacket and mounting flange of densely woven glass cloth or wire reinforced glass cloth.              | Bulb diameter and flange width made to specifications. | 540°C<br>1000°F  | 800 kg/m <sup>3</sup><br>50 lbs/ft <sup>3</sup> | Good                | Good                   |
| Mesh core/<br>Z-6W    | 304 stainless steel mesh core with jacket and mounting flange consisting of wire reinforced, densely woven glass cloth. | Bulb diameter and flange width made to specifications  | 540°C<br>1000°F  | 190 kg/m <sup>3</sup><br>12 lbs/ft <sup>3</sup> | Excellent           | Excellent              |
| Jacketed<br>mesh core | 304 stainless steel mesh core with continuous fiberglass jacket. Excellent where no mounting flange is required.        | Bulb diameter and flange width made to specifications  | 540°C<br>1000°F  | 190 kg/m <sup>3</sup><br>12 lbs/ft <sup>3</sup> | Good                | Excellent              |
| Mesh core/<br>V-5     | Inconel mesh core with jacket and mounting flange consisting of high-temperature, ceramic fiber fabric.                 | Bulb diameter and flange width made to specifications  | 1095°C<br>2000°F | 190 kg/m <sup>3</sup><br>12 lbs/ft <sup>3</sup> | Fair                | Excellent              |

Note: The physical and chemical properties listed represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice.

Product Type: 160

Commodity Code: 11011