

# P-REX™ Perfluoroelastomer

## Precision Molded Rubber Seals for Extreme Environments



Today's rubber seals are being required to perform in increasingly extreme conditions; sealing harsh chemicals at progressively higher temperatures. These extreme conditions require special materials to provide an acceptable seal in these environments. Perfluoroelastomers are often the best option for reliability, longevity and economy.



Perfluoroelastomers have been available for some time, but due to difficulties in processing, have not been readily available in all of the shapes that other polymers are. Custom tooling has been required for almost all products.

Precision Associates, long a leader in precision molded rubber seals, is now applying our unique rubber molding processes and skills to making Perfluoroelastomer seals. Our proprietary molding process allows us to produce smaller molded seals in shapes that other molding methods do not permit, with the added capability of holding tighter than industry standard tolerances.

We successfully manufacture P-REX™ X-Rings and other complex shapes requiring undercuts, that are not readily produced by traditional compression molding methods.

For applications without ultra low particulate requirements, we can, in many cases, use standard tooling. With molds for over 2,000 O-Ring sizes, we are able to quickly produce proto-type and short-run quantities in sizes that you are already using.

Our on-site mold making facility enables us to tool up for special items readily at a modest fee.

Standard P-REX™ compounds are:

P-REX™ 34860 for applications requiring a broad range of chemical resistance in applications at temperatures up to 428°F (220°C)

P-REX™ 34831 for applications that require chemical resistance and excellent compression set in applications at temperatures up to 572°F (300°C)

Contact your P-REX™ distributor or Precision Associates for additional information about these and other materials.



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## Precision Molded Rubber Seals for Extreme Environments



### Standard P-REX™ Compounds

#### For Best Chemical Resistance

#### P-REX™ 34860

Low permeation and swell  
in a broad range of chemicals

Low extractables in a wide  
range of chemicals

Low to no metal ion extractables

Upper temperature use  
of 428°F (220°C)

#### For Best Heat Resistance

#### P-REX™ 34831

Upper temperature use  
over 572°F (300°C)

Excellent compression set

Excellent plasma resistance

Good Chemical Resistance

Low to no metal ion extractables

| Typical Physical Properties |              |
|-----------------------------|--------------|
| Shore A Hardness            | 80 Durometer |
| Color                       | Black        |
| Tensile Strength            | 1800 psi     |
| Ultimate Elongation         | 150 %        |
| Modulus<br>100% Elongation  | 875 psi      |
| <b>Compression Set</b>      |              |
| 70 Hrs @ 392°F ( 200°C)     | 26 %         |
| 70 Hrs @ 450°F ( 232°C)     | 37 %         |
| 70 Hrs @ 500°F ( 260°C)     | 55 %         |

| Typical Physical Properties |              |
|-----------------------------|--------------|
| Shore A Hardness            | 80 Durometer |
| Color                       | Black        |
| Tensile Strength            | 1870 psi     |
| Ultimate Elongation         | 150 %        |
| Modulus<br>100% Elongation  | 1335 psi     |
| <b>Compression Set</b>      |              |
| 70 Hrs @ 446°F ( 230°C)     | 19 %         |
| 70 Hrs @ 518°F ( 270°C)     | 26 %         |
| 70 Hrs @ 572°F ( 300°C)     | 38 %         |

Data shown is typical for these materials. It should not be used for specification purposes.

Contact your P-REX™ distributor or Precision Associates for additional information about these or other high performance materials.

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