

# TRPlast™

PERFLUORO ELASTOMERS



Delivering Outstanding  
Sealing Solutions for the  
most severe of chemical  
and high temperature  
applications



An introduction to

# TRPlast™

Perfluoroelastomers

**T**he more aggressive and unforgiving your industrial environment, the more critical it becomes to optimise seal design and material selection. **TRP** can achieve your efficiency and reliability objectives. Assured leak free operation with extended service life and reduced maintenance costs.

Setting new performance standards, and your mind at rest, **TRP POLYMER SOLUTIONS** have developed their unique **TRPlast** range of perfluoroelastomers.

Offering exceptional chemical and thermal resistance, they combine the sealing force, resistance and recovery characteristics of an elastomer with chemical resistance comparable to that of PTFE.

The combination of Advanced Polymer Technology and Process innovation makes TRP POLYMER SOLUTIONS the natural choice for the FFKM specifier.

### Technical Advantages and Benefits

#### ■ Universal Chemical Resistance

TRPlast Perfluoroelastomer offers the broadest chemical resistance of any other sealing material available

#### ■ Extreme Temperature Resistance

TRPlast Perfluoroelastomer provides the widest possible range for dynamic sealing in extreme temperatures with a capability of -20°C to 330°C for continuous operation

#### ■ Sealing Solutions

TRPlast Perfluoroelastomer is available as International Standard sized O-Rings and Custom Moulded Components

#### ■ Materials

Speciality grades available including FDA Compliance and Explosive Decompression Resistance

TRPlast can be formulated in a unique range of colours for identification purposes

#### ■ Delivery

Rapid Tooling for reduced leadtimes on custom moulded components

Global Service and Technical Support from an approved Agent and Distribution network



Certificate No FM 82122





## Markets and Applications



### Chemical Processing

With near universal chemical resistance TRPlast Perfluoroelastomer seals are the natural choice for the Chemical Process Industry. With sealing integrity assured, TRPlast can increase the service life reducing plant downtime and maintenance costs. TRPlast is well proven for use in equipment such as Mechanical Seals, Pumps and Valves.

### Aerospace and Defence

The outstanding high temperature performance of TRPlast in combination with resistance to the most aggressive fuels, oils and hydraulic fluids used within the Military and Commercial Aerospace sectors. TRPlast is recommended for service within turbine engines, fuel delivery systems, hydraulic actuation, braking and landing gear. TRPlast is also particularly suited to meeting the needs of high performance automotive applications.

### Oil, Gas and Petrochemical

Future exploration and recovery of hydrocarbons will become even more difficult resulting in even higher temperatures, pressures and aggressive fluids in the extraction and refining process. TRPlast offers a range of materials suitable for the most severe downhole conditions with leading chemical resistance to sour gas and other fluids in combination with Explosive Decompression resistance TRPlast ED105 is the ideal selection for Plug Packers, Valves and Sampling Apparatus.

### Food, Pharmaceutical and Biotechnology

FDA compliance to article 21 CFR 177.2400 ensures that TRPlast 641 and 642 are suitable for use in these markets. Cleaning fluids and sterilisation with high pressure steam in CIP/SIP process creates a very aggressive environment for sealing. TRPlast can provide a safe and durable solution for mixing, pumping, sampling dispensing equipment.

### Road, Rail and Marine Transportation

Supporting the need for a global distribution of chemicals. Fluid Transfer from storage tankers into bulk containers and IBC's. The diversity of chemical media involved requires ancillary equipment that can withstand the severe working demands. TRPlast performs exceedingly well for these applications. Discharge Valves, Couplings and Pump Seals.





## Materials Portfolio

### TRPlast Perfluoroelastomer Competitive Grade Reference Table:

<b>TRPlast 260B Universal Black</b>	Combining the broadest chemical resistance available with outstanding physical properties TRPlast 260B is a Black 75 IRHD Perfluoroelastomer with maximum recommended operating temperature 260°C (500°F). <b>Equivalent grades: Kalrez® 6375, Chemraz® 505/605</b>
<b>TRPlast 300B High Temperature Hot Water/Steam</b>	A Black 75 IRHD Perfluoroelastomer with broad chemical resistance developed for higher temperature service. Particularly suited to use in hot water/steam and amines. Maximum recommended operating temperature 300°C (572°F). <b>Equivalent grades: Kalrez® 1050LF, Chemraz® 605/555</b>
<b>TRPlast 316B High Temperature Thermal Cycling</b>	A low compression set, Black 75 IRHD Perfluoroelastomer developed for optimum resistance through thermal cycling. Maximum recommended operating temperature 316°C (600°F). <b>Equivalent grades: Kalrez® 4079, Chemraz® 555</b>
<b>TRPlast 330B Ultra High Temperature</b>	Our highest thermally rated material, TRPlast 330B is a Black 75 IRHD Perfluoroelastomer developed for performance with constant elevated temperatures. Maximum recommended operating temperature 330°C (626°F). <b>Equivalent grades: Kalrez® 7075, Chemraz® 615</b>
<b>TRPlast 260W Universal White</b>	A White 75 IRHD Perfluoroelastomer developed for applications where carbon black is unsuitable. Particularly suited for use in strong oxidizing media and hot aqueous solutions. Maximum recommended operating temperature 260°C (500°F). <b>Equivalent grades: Kalrez® 2037, Chemraz® 514</b>
<b>TRPlast 641 FDA White</b>	A White 75 IRHD FDA Compliant Perfluoroelastomer developed for use in Food and Pharmaceutical applications. Maximum recommended operating temperature 260°C (500°F). <b>Equivalent grades: Kalrez® 6221, Chemraz® 517</b>
<b>TRPlast 642 FDA Black</b>	A Black 75 IRHD FDA Compliant Perfluoroelastomer developed for use in Food and Pharmaceutical applications. Maximum recommended operating temperature 260°C (500°F). <b>Equivalent grades: Kalrez® 6230, Chemraz® 625</b>
<b>TRPlast ED105 Explosive Decompression Resistant</b>	A Black 95 IRHD Explosive Decompression Resistant Perfluoroelastomer developed for use in high pressure applications. Maximum recommended operating temperature 260°C (500°F). <b>Equivalent grades: Kalrez® 3018, Chemraz® 526</b>

Please note that Equivalent grades are displayed for reference purposes only. For specific technical advice for your application, please refer your enquiry to TRP Polymer Solutions.

Kalrez® is a registered trademark of DuPont Performance Elastomers. Chemraz® is a registered trademark of Greene Tweed.





**TRP POLYMER SOLUTIONS** have created an infrastructure to support the continued growth of the TRPlast business and facilitate a high volume manufacturing capability.

Key activities are contained and manufactured in the dedicated 'TRPlast FFKM Clean Room' to provide the necessary processing environment for contamination free sealing products used in Food and Pharmaceutical applications.

TRP Polymer Solutions work in close partnership with their Polymer suppliers to ensure that the very latest technologies are included into the TRPlast formulations. Thus ensuring that we offer market leading innovations.

### **Quality**

Quality is built into every aspect of the TRPlast philosophy. Operating under a quality system in accordance with ISO9001:2000 with traceability from raw materials to finished goods. Produced under the strictest of process control within clean room conditions ensures reliability and repeatability of performance of your seals.

### **Supporting Customer Specific Requirements**

We pride ourselves on our Technical knowledge and Application Engineering expertise gained through working in the most challenging of sealing environments.

To complement our existing portfolio of TRPlast grades, TRP Polymer Solutions will formulate tailor made compounds to meet your application specific requirements.

Please consult with TRP Polymer Solutions to utilise our comprehensive 'Concept through to Production' technical support and materials selection service.







## Delivering the Competitive Advantage with Technical Moulded Products

**B**acked with over 26 years of expertise, **TRP POLYMER SOLUTIONS** have developed a world class manufacturing capability to supply a range of custom rubber moulded products many of which have solved problems where standard solutions have failed.

PTFE Protected  
Gaskets for use  
in Chemical  
Processing  
applications

High  
Performance  
PTFE/Rubber  
Bonded  
Diaphragms

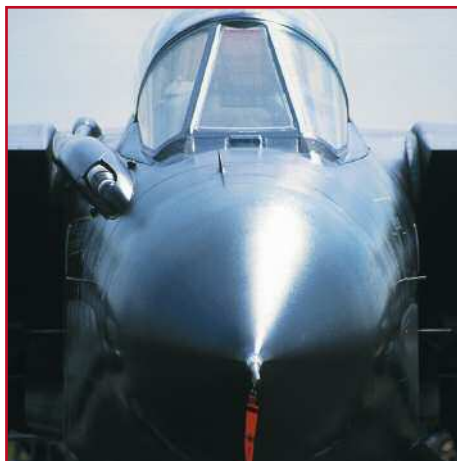


Soft Seated  
PTFE/Rubber  
Bonded Butterfly  
Valve Seals

Precision  
Rubber to Metal  
Bonded Valve  
Assemblies

TRP Polymer Solutions have an extensive database of formulations utilising the latest materials to offer a moulding capability from the complete elastomeric spectrum.

Natural Rubber (NR), Isoprene (IR), Butadiene (BR), Styrene Butadiene (SBR), Butyl (IIR), Ethylene Propylene (EPDM), Nitrile (NBR), Hydrogenated Nitrile (HNBR), Epichlorohydrin (CO), Polychloroprene (CR), Chlorosulfonated Polyethylene (CSM), Chlorinated Polyethylene (CPE), Polyurethane (PU), Polysulfide (TR), Silicone (SI), Fluorosilicone (FSI), Tetra-Fluoroethylene/Propylene (FEP), Fluorocarbon (FKM), Perfluoroelastomer (FFKM)





**TRPlast™**



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Rotherwas Industrial Estate

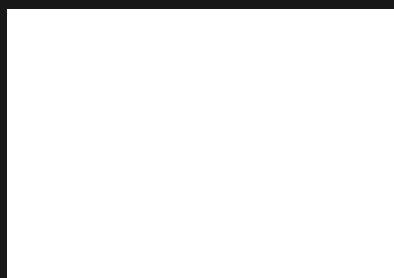
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**Authorized Agents**



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