

ExpresSeal®

The fastest way to
get the seal you need.

 Apple Rubber

applerubber.com

Materials

» Polyurethane

» H-NBR

» EPDM

» Teflon®

» Engineered Plastics

» Nitrile (Buna-N)

» Viton®

» Silicone

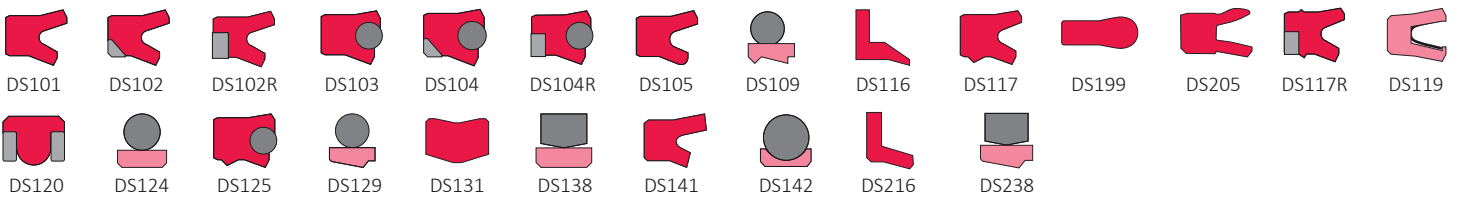
» Filled Teflon®

» Aluminum

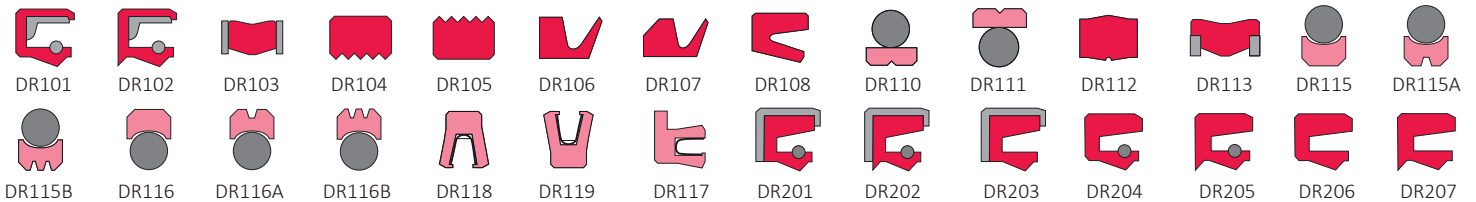
Symmetrical ID/OD Seals



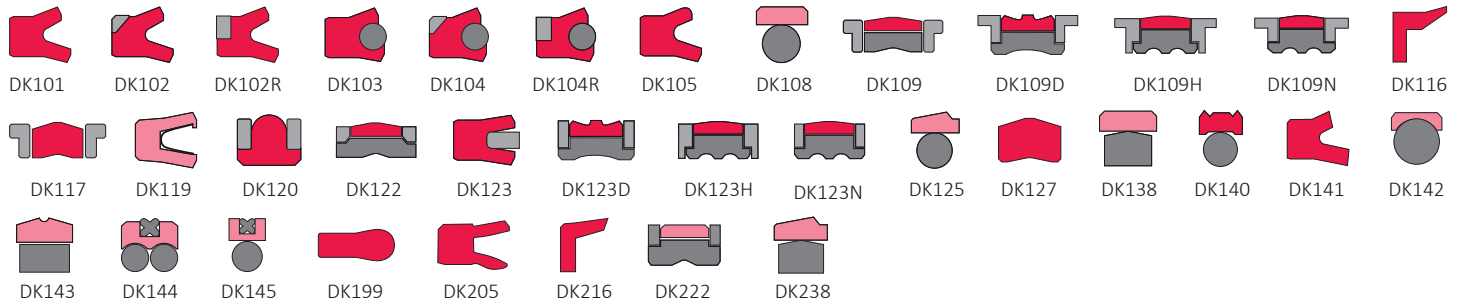
Rod/Shaft Seals



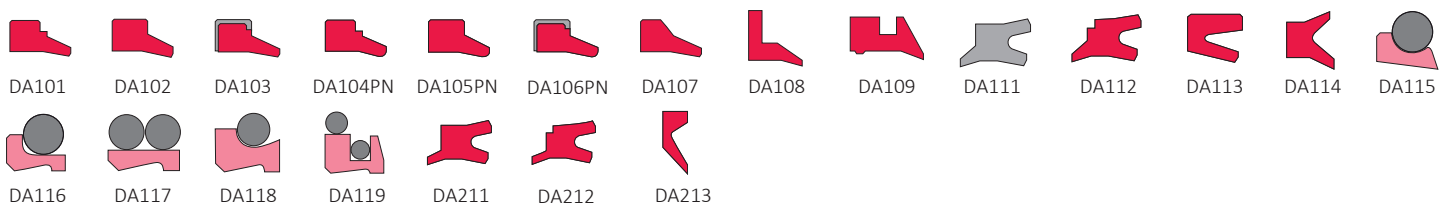
Rotary Seals



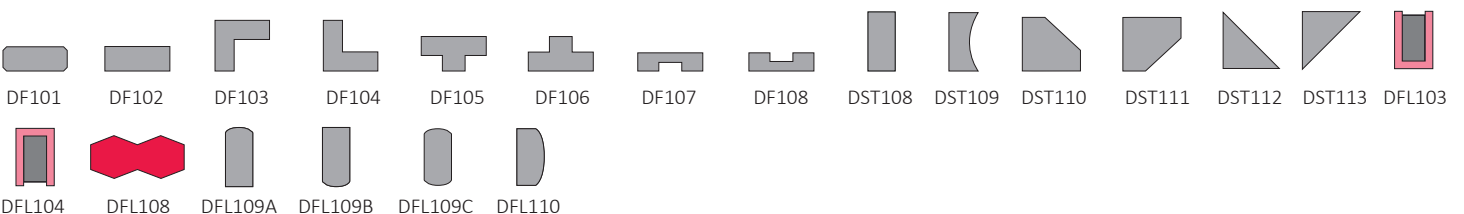
Piston/Bore Seals



Rod/Shaft Wipers



Wear Bands | Back-Up Rings | Gaskets | Bushings



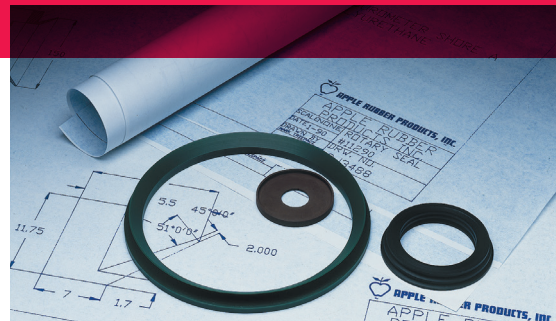
ExpresSeal® Solves Your Sealing Problems Fast

From hydraulic and pneumatic seals in virtually every profile to fast prototyping and complete application assistance services, ExpresSeal® is your best source to get the seal you need as fast as possible.

We can deliver custom prototypes for your product development needs, off-the-shelf standard seal profiles, or custom machined seals for emergency replacement. ExpresSeal® is set up to respond quickly to even the most challenging sealing requirements, combining our experience and integrated capabilities to give you distinct advantages.



From prototypes to custom designs, ExpresSeal® can solve your sealing problem fast.



Experienced, knowledgeable engineers can assist you with custom molded shapes and seals.

Application and Design Assistance

With a broad range of experience in every industry, ExpresSeal® can assist you at every stage of your sealing application, from prototype to production.

Complete Custom Manufacturing Capabilities

Whether you need a one-off emergency replacement seal or a large production run, ExpresSeal® has the manufacturing capabilities to respond to your specific requirements.

Quality Assurance

ExpresSeal® offers one of the most stringent quality assurance programs in the industry. We can offer quality assurance that includes both dimensional and material validation, plus full documentation is also available.

Custom Molded Seals and Shapes

ExpresSeal® has the resources to assist you in custom designing unusual, complex rubber seals specifically for your application, including microminiature shapes for your smaller designs and rubber-to-metal bonded parts.

We can handle any project that requires molding with a full range of capabilities, including liquid injection molding, plastic injection molding, transfer molding and compression molding.

Research and Development

If you require a truly unique sealing solution, ExpresSeal® has the resources to explore and develop new designs, materials and processes.

Machinable Grade Materials

Polyurethane (Red) (FDA Compliant)

- » Hardness: 95 Shore-A
- » Temperature range: -4°F to 240°F
- » HPU* (Hydrolysis Resistant Polyurethane)
- » Excellent wear and extrusion resistance
- » Suitable for use in high pressure hydraulic sealing applications
- » Hydraulic applications where water based fluids are being used

NBR (Black) (Nitrile Butadiene Rubber)

- » Hardness: 85 Shore-A
- » Temperature range: -22°F to 230°F
- » Good abrasion resistance
- » Elastic, allowing for ease of installation
- » Hydraulic and pneumatic applications

EPDM (Black) (Ethylene-Propylene-Diene Rubber)

- » Hardness: 85 Shore-A
- » Temperature range: -49°F to 266°F
- » Resistance to steam, ozone and direct sunlight
- » Flexibility at lower temperatures
- » Widely used in outdoor applications, automotive brake systems, automobile cooling systems, water and steam applications
- » Poor resistance to mineral oil, gasoline and hydrocarbon solvents

Fluorocarbon Rubber (Brown or Black) (Viton®)

- » Hardness: 85 Shore-A
- » Temperature range: -4°F to 428°F
- » Resistance to ozone, weathering and high heat
- » Excellent chemical resistance
- » Typically used in HFD fluids (Phosphate Ester and Chlorinated Hydrocarbon based Fluids)

Silicone Rubber (Light Blue or Orange)

- » Hardness: 85 Shore-A
- » Temperature range: -76°F to 392°F
- » Good chemical resistance
- » Excellent temperature range
- » Poor abrasion and tear resistance
- » Typically used in static applications

H-NBR (Green)

- » Hardness: 85A durometer
- » Temperature range: -4°F to 302°F
- » H-NBR is a Hydrogenated Nitrile Butadiene rubber compound
- » Strongest compound of all the elastomers
- » Excellent abrasion and tear resistance
- » Widely used in applications involving water based fluids, especially water-glycol fluids
- » Good replacement for Viton® in applications where the temperature does not exceed its physical properties
- » Key uses: Oil resistant applications, including exposure to such oil additives as detergents, anti-oxidants and anti-wear agents. Exposure to oil soured with metal sludge. Seals for oil well applications. Seals for automotive fuel handling systems.

POM (White or Black) (Polyoxymethylene/Polyacetal) (Hard Plastics)

- » Temperature range: -49°F to 212°F
- » Used for sealing components such as back-up rings and special shapes
- » Low absorption of water (low swelling) and strong mechanical properties make this material ideal for bearings and guide-rings

Virgin Teflon® (White) – PTFE (Polytetrafluoroethylene)

- » Temperature range: -300°F to +450°F
- » Excellent temperature range
- » Chemically inert to virtually all industrial chemicals, even at elevated temperatures
- » Good chemical resistance to solvents such as acetone, MEK and xylene
- » Very poor elastic memory
- » Will cold flow (creep) over time
- » Low friction

Nickel Teflon® (Grey) – NTFE (Nickel/Moly/Glass Filled Teflon)

- » Temperature range: -300°F to +450°F
- » Same advanced physical and chemical properties with better creep behavior than virgin PTFE
- » Good for anti-extrusion rings, back-up rings, guide rings and in chevron packing sets
- » Some chemicals may not be compatible with the fillers

Bronze Filled Teflon® (Brown) – BTFE (Bronze Filled Teflon)

- » Temperature range: -300°F to +450°F
- » Better wear, creep resistance and higher thermal conductivity than virgin and glass fiber filled PTFE
- » Used in applications which undergo high mechanical loads or high-speed rubbing contacts
- » Poor chemical resistance in the presence of acids and alkali

Carbon Filled Teflon® (Black) – CTFE (Carbon Filled Teflon)

- » Temperature range: -300°F to +450°F
- » Good chemical resistance to corrosive environments
- » Exhibits good initial wear and rubbing characteristics, both dry and water applications

Special Order Machinable Grade Materials

Minimums May Apply to Some Materials

Polyurethane – Self Lubricating (Grey)

- » Hardness: 95 Shore-A
- » Temperature range: -4°F to 230°F
- » SL-PU® hydrolysis resistant polyurethane with internal solid lubricants
- » For applications with sparse system lubrication
- » Commonly used in hydraulic and pneumatic applications

Polyurethane – Low-Temp (Dark Blue)

- » Hardness: 95 Shore-A
- » Temperature range: -58°F to 230°F
- » LT-PU® high performance polyurethane designed to perform in low temperatures
- » This material maintains its performance characteristics in extremely cold climates
- » Not hydrolysis resistant

Polyurethane (Yellow)

- » Hardness: 55 Shore-D
- » Temperature range: -4°F to 240°F
- » HPU 55D® hydrolysis resistant polyurethane
- » Ideal for high pressure and heavy duty applications
- » May be used to replace Teflon® seals because of exceptional wear resistance, competitive price and ease of installation

EPDM – FDA (Black) (White)

- » Hardness: 85 Shore-A
- » Temperature range: -49°F to 266°F
- » FDA compliant with the same features as regular EPDM

Glass Filled Teflon (White) – GTFE (Glass Fiber Filled Teflon)

- » Temperature range: -300°F to +450°F
- » Good chemical and electrical properties
- » Greatly improved mechanical properties (compressive and wear resistance) over unfilled PTFE
- » Resists acids and oxidation
- » Not recommended for alkali environments

Virgin Teflon® – FDA (White) – PTFE

- » Temperature range: -300°F to +450°F
- » FDA compliant with the same features as regular Virgin Teflon®

Hytrel®

- » Thermoplastic polyester elastomers
- » Provides the flexibility of rubber and the strength of plastics
- » Ideal for parts requiring excellent flex fatigue and broad use temperature
- » Resists tearing, flex-cut growth, creep and abrasion
- » Outstanding toughness while resisting hydrocarbons and many other fluids



One Source for All Your Sealing Needs

Apple Rubber stocks AS568 and ISO 3601 standard sizes, most common metric sizes, plus a wide variety of non-standard o-ring sizes. Our materials meet mil-spec, medical and automotive specifications.

Apple Rubber offers expert custom molding for non-standard rubber products. With in-house tooling, we save more time and resources compared to offshore operations. We offer expertise at any level of production, from prototype to high volume tooling.

When you call Apple Rubber, you deal directly with the manufacturer. Our experienced staff provides complete and comprehensive service to help you get the correct product for your application.

Full Line of Quality Apple Rubber Products

Products:

O-Rings — standards, metrics, MicrOrings®, MacOrings®

LSR (Liquid Silicone Rubber)

Composite seals (rubber bonded to plastic or metal)

Custom-molded seals and shapes

Medical seals

Thermobonded seals

FilterSeal™

Military specs

Standard and exotic materials

Services:

Design capabilities

Prototyping and production runs

Full quality-control laboratory

Class 10,000 (7) Cleanroom

ISO 9001 / AS 9100 Certifications

ITAR Registered



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