Molded Rubber Products

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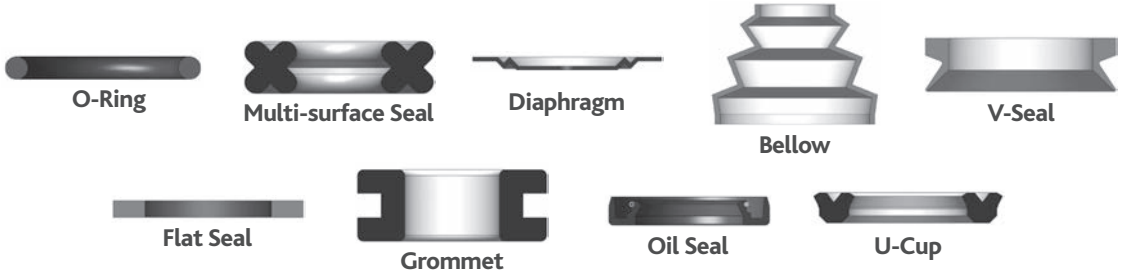
GBSA

Custom Rubber Molding Solutions

Low cost, quick turnaround, multiple applications



Injection molding is a manufacturing process where raw, uncured rubber is forced into a heated mold using a rotating screw. The material is formed and cured under the heat and pressure, then removed to cool as a custom shape.

Compression molding is done by taking a pre-measured amount of raw rubber material and is placed into a heated open lower mold cavity. The top cavity is then forced closed, causing the raw material to flow through the shape of the mold. After curing, the shapes can be removed.

Transfer molding is where raw rubber material is measured and inserted into a pot. The pot is pre-heated and plunger forces the material into mold cavities through a funnel, or sprue. The mold is heated to cure the raw material. After curing, the shapes can be removed.

Rubber Extrusion is a process where material is pushed or drawn through a die of the desired cross-section. The two main advantages of this process over other manufacturing processes are its ability to create complex cross-sections and long lengths. It also forms finished parts with an excellent surface finish.

GBSA provides you with a multitude of Value-Added Services. Our integrated engineering service includes complete product testing and evaluation, reverse or design engineering. Just-In-Time stocking programs make ordering and tracking inventory shipments easy and at a reduced cost. Kitting leads to a faster receipt of goods and a complete reduction in down time. Custom packaging is always available when required.

For additional information or to submit a quote request, see our website at GBSA.com. You can also call our sales or engineering department at 800.837.4272

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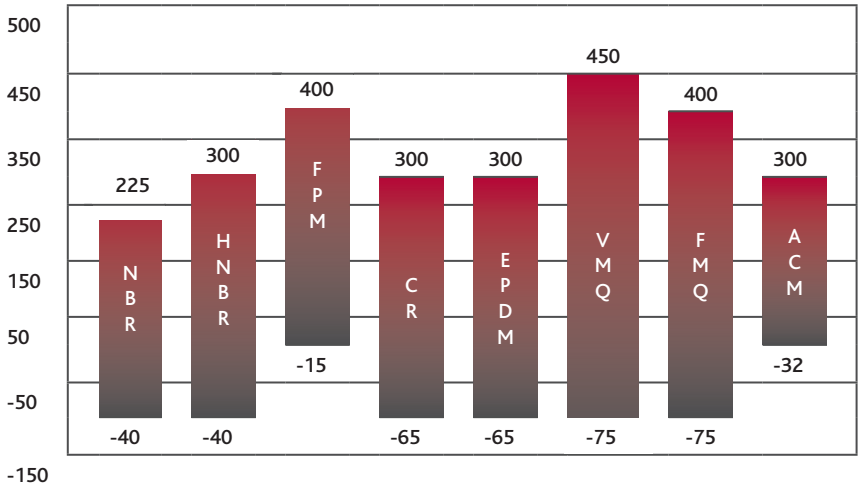
A very important component of a seal or custom rubber part is the elastomer type. GBSA can specially compound elastomers for specific sealing requirements. Below we provide general properties and fluid compatibilities.

ELASTOMER TYPE	HARDNESS SHORE A	GENERAL PROPERTIES
NITRILE (NBR) Acrylonitrile Butadiene	35 to 95	Low, medium and high nitriles are available based on increasing acrylonitrile content which significantly affects low temperature and fluid swell properties. Nitrile compounds can exhibit very good tear and abrasion resistance and excellent compression set. Unless specifically compounded, they do not have a good resistance to ozone, sunlight or weather.
THERBAN (HNBR) Hydrogenated Acrylonitrile Butadiene	55 to 75	This material is a hydrogenated acrylonitrile butadiene and unlike standard nitriles it exhibits resistance to the ozone and other atmospheric conditions. Therban also exhibits a very good resistance to heat and aging in the 300°F range and refrigeration. All other properties are NBR.
FLUOROCARBON (FPM) Fluorinated Hydrocarbon	55 to 93	This polymer exhibits very good resistance to petroleum products, low compression set and high temperature resistance.
NEOPRENE (CR) Chloroprene	40 to 70	Compounds from neoprene exhibit good ozone and weather resistance. Due to the excellent resistance to refrigerants such as Freon, these compounds are used in refrigeration systems.
ETHYLENE PROPYLENE (EPDM) (EPM)	35 to 85 30 to 80	Compounds of this material exhibit excellent resistance to automotive brake fluids and steam as well as ozone, sunlight and weather.
SILICONE (VMQ)	20 to 90	Silicone compounds are noted for their excellent heat resistance and exhibit the best over all temperature range of all available elastomers. Not recommended for dynamic applications.
FLUOROSILICONE (FMQ)	35 to 80	This polymer is used in aerospace and automotive applications for fuel systems. It substitutes FPM where low temperature resistance is required.
POLYACRYLATE (ACM)	60 to 80	Due to the excellent resistance to automotive transmission fluid, oil, flex, and oxidation cracking, this material is used in power steering and transmission applications.

Material and Temperature



*Elastomer & Rubber Compounds: Due to the number of interacting forces, it is highly recommended that your elastomer selection be rigorously tested in the actual application. Performance assumptions must be checked so that you are certain all variables have been carefully considered.