1. **Natural Rubber (NR)**

   Natural rubber is derived from the latex sap of the Para rubber tree. It has a high tensile strength and is resistant to fatigue from wear, such as chipping, cuts or tearing. On the downside, it only has a moderate resistance to heat, light and weathering (UV) damage.

2. **Styrene-butadiene rubber (SBR)**

   Styrene-butadiene rubber is a lower cost synthetic rubber that offers excellent abrasion resistance, excellent impact strength, good resilience and high tensile strength. However, SBR offers poor resistance to sunlight, ozone, steam and oils.

3. **Butyl (IIR)**

   Butyl rubber is a great option for shock absorption. It offers exceptionally low gas and moisture permeability and outstanding resistance to heat, ageing, weather, ozone, chemicals, abrasion and tearing. Butyl is resistant to phosphate ester based hydraulic fluids, and has excellent electrical insulation properties. It can trap air, blister and creep during manufacture.

4. **Nitrile (NBR)**

   Nitrile (NBR) is the seal industry's most widely used and economical elastomer. This is partly because it displays excellent resistance to petroleum-based oils, fuels, water, alcohols, silicone greases and hydraulic fluids. Nitrile has an operating temperature of between -35 and 125°C and has a good balance of desirable properties like low compression set, high abrasive resistance and high tensile strength.

5. **Neoprene® (CR)**

   Neoprene® which is classified as a general purpose elastomer, is unusual in that it is moderately resistant to petroleum oils and weather (Ozone, UV, oxygen). It is therefore uniquely qualified for certain sealing applications where many other materials would fail. It has relatively low compression set, good resilience and abrasion, and is flex cracking resistant.

6. **EPDM**

   EPDM rubber is a versatile rubber offering excellent heat, ozone, weathering and ageing resistance, as well as low electrical conductivity, low compression set and low temperature properties. EPDM can be used as a cost effective alternative to silicone and, when installed in the correct environment, can last a long time before embrittling.

7. **Silicone (Q)**

   Silicone performs well with water, steam or petroleum fluids. Although it can operate with a temperature range of -70 to 180°C, silicone has beenshown to withstand short exposures to lows of -115°C. Silicone displays poor tear resistance, abrasion and tensile strength, making it better suited to static rather than dynamic applications. Silicone's chemical stability means it is commonly used in the food and beverage and medical industries.

8. **Viton® (FKM)**

   Viton® is fluoroelastomer material capable of handling a diverse array of applications. This durable synthetic rubber and fluoropolymer elastomer offers excellent temperature stability ranging from -30 to 200°C. The disadvantages of the material are that it can swell in fluorinated solvents, is relatively expensive, and can fail if the wrong grade is chosen.

9. **Polyurethane (AU)**

   Polyurethane is well regarded for its all round general toughness, as well as for its notable abrasion and extrusion resistance. Polyurethane would not be suitable for applications requiring good compression and heat resistance