Material Selection

Selecting Materials

This information is intended to help make general comparisons between different available materials.

Material	Features and Benefits
Stainless Steel	A corrosion-resistant material that provides high strength at high temperatures, helps prevent contamination of product being transported, maintains cleanliness, and retains a lustrous appearance. Harder than brass. *Type 304* is a low-carbon chromium-nickel stainless steel. *Type 316* is similar to type 304, but has a high nickel content as well as a molybdenum for stronger resistance to heat and corrosion. Often used for water, oil, gas, and steam in low- to high-pressure applications.
Brass	Has good corrosion resistance and is less expensive than stainless steel. Is softer and easier to thread than stainless steel and forms tight seals. It can be used interchangeably with copper where heavier walls are required. Found in plumbing and heating application. Also good with oil, natural gas, and air. Resists corrosion from salt water as well as fresh water polluted with waste from mineral acids and peaty soils. Use in low- to high-pressures applications.
Steel	Used in noncorrosive environments. This carbon- and iron-based metal is hard and strong. It is an economical alternative to stainless steel and brass in high-pressure applications. For use with water, oil, gas, and steam in low- to high-pressure applications where corrosion is not a problem.

Product application is based not only on material selection but on design of product for intended use. Please contact Dixon® for selection of the proper fitting for your application.

Corrosion Resistance of Coupling Material

⚠WARNING

The data on the following pages has been compiled from generally available sources and should not be relied upon without consulting and following the specific recommendations of the manufacturer regarding particular coupling materials. This chart is also available under Interactive Tools at dixonvalve.com.

Ratings

Metal	Non-Metal	Gasket/Seal Material
1 = Excellent 2 = Good 3 = Fair X = Not Recommended - = Contact Dixon®	A = Acceptable X = Not Recommended - = Contact Dixon®	T = PTFE V = FKM E = EPDM, EPR N = Neoprene B = Nitrile Rubber

1. Ratings given are based at **70°F (21°C)**. Chemical compatibility varies greatly with temperature. For applications at temperatures other than **70°F (21°C)**, contact Dixon for recommendations at 800.355.1991.
2. Gasket / seal materials are not necessarily listed in order of preference.
3. Chemical resistance of a material does not necessarily indicate the suitability of a fitting in a given application due to variables such as improper clamp and coupling application, special hose construction, gasket material, etc.

Special caution should be taken when handling hazardous materials.