

ASCO VALVE MATERIAL SELECTION GUIDE



GENERAL INFORMATION ON ELASTOMER MATERIALS:

This guide is not intended as a specific recommendation; factors beyond our control could affect valve operation or materials.

Buna "N": Buna "N" is commonly referred to as a nitrile rubber and is ASCO's standard synthetic elastomer for accomplishing resilient-type seating or sealing. It has excellent compatibility for most air, water and light oil applications. It has a useful temperature range of 0°F (-18°C) to 180°F (+82°C).

Neoprene: Neoprene is principally used as an external seal in refrigeration applications. It is also utilized for oxygen service. It has a useful temperature range of 0°F (-18°C) to 180°F (+82°C).

Ethylene Propylene: Ethylene propylene is selected for applications which are above the Buna "N" temperature range such as handling hot water and steam. Ethylene propylene has an extremely wide range of fluid compatibility but has the distinct disadvantage that it cannot be used with petroleum-based fluids or fluids so contaminated (such as lubricated air). It has a useful temperature range of -10°F (-23°C) to +300°F (+149°C).

Viton*/Fluorel, etc.:** Viton is a fluorocarbon elastomer which was primarily developed for handling hydrocarbons such as jet fuels, gasolines, solvent, etc., which normally caused detrimental swelling to Buna "N". Viton has a high temperature range similar to ethylene propylene but has the advantage of being somewhat more resistant to "dry heat". Viton has a rather wide range of chemical compatibility. It has a useful temperature range of 0°F (-18°C) to 350°F (+177°C).

Teflon*: Teflon and teflon with fillers are considered more of a plastic than a resilient-type material. They are virtually unattacked by any fluid. Their temperature usage has ranged from discs for cryogenic valves to discs for steam valves. They are not easily fabricated and are known to have "cold flow" characteristics which may contribute to objectionable leakage particularly on gases.

* DuPont Co. Trademark

** 3M Trademark

OPTIONAL FEATURES FOR ASCO SOLENOID VALVES:

ASCO offers a wide variety of Optional Electrical and Construction Features to meet your specific application requirements.

How to select and specify: Not all optional features are appropriate or available for all valves.

Tables 1 and 2 below list the Optional Electrical Features available for each solenoid and coil. Specify these features by adding the indicated *prefixes* to the valve model number. Table 3 on the following page lists the Optional Construction Features available for each valve Series. Specify these features by adding the indicated *suffixes* to the valve model number.

Table 1: Optional Electrical Feature Prefixes – RED-HAT® Solenoids

PREFIX	SOLENOID
EF	Type 7 explosionproof
F	Factory assembly manifolds
HE	Type 7 group B explosionproof
J	Type 1 splice box
R	Rainproof
U	Open frame
WP	Submersible/watertight splice box
PREFIX	COIL
DF	Class F – High temperature – dual voltage
DP	Class F – Intermediate power – dual voltage
HB	Class H – Intermediate power
HC	Class H – Battery charging circuits
HT	Class H – High temperature
IS	Intrinsically safe
KB	Class H – Intermediate power – screw terminals
KF	Class F – High temperature – screw terminals
KP	Class F – Intermediate power – screw terminals
SB	Class B – High temperature – spade terminals
SC	Class F – High temperature – DIN connection
SD	Class F – Intermediate power – DIN connection
SF	Class F – High temperature – spade terminals
SP	Class F – Intermediate power – spade terminals
PREFIX	FEATURE
L	72" continuous leads
X	Other special constructions

Table 2: Optional Electrical Feature Prefixes – RED-HAT II™ Solenoids

PREFIX	SOLENOID
EF	Type 7 explosionproof
GP	Panel mount type 1 general purpose solenoid
J	Junction box
JP	Panel mount junction box
OF	Open frame spade and screw terminal solenoids
OP	Panel mount spade, screw and DIN terminal solenoids
EFP	Panel mount type 7 explosionproof
PREFIX	COIL
HB	Class H – Intermediate power
HC	Class H – Battery charging circuits
HT	Class H – High temperature
KB	Class H – Intermediate power – screw terminals
KC	Class H – Battery charging circuit – screw terminals
KF	Class F – High temperature – screw terminals
KH	Class H – High temperature – screw terminals
KP	Class F – Intermediate power – screw terminals
SC	Class F – High temperature – DIN connection
SD	Class F – Intermediate power – DIN connection
SF	Class F – High temperature – spade terminals
SP	Class F – Intermediate power – spade terminals
SS	Class H – Intermediate power – spade terminals
ST	Class H – High temperature – spade terminals
SU	Class H – High temperature – DIN connection
SV	Class H – Intermediate power – DIN connection
SW	Class H – Battery charging circuit – spade terminals
PREFIX	ACCESSORIES
L	72" continuous leads
X	Other special constructions