

Limits of use / Main duties

BALL VALVES

Ball Valve Seat and Seal Material

Virgin PTFE

Virgin PTFE are basically used as ball valve seat material, with chemical compatibility to fill the widest possible range of service applications.

Color	Density (g/cm ³)	Elongation (%)	Tensile Strength (MPa)	Continuous Working Temp. (°C)
White	2,17	390	54	150

Reinforced PTFE

Reinforced PTFE, 15% glass reinforced PTFE, chemical resistance is compatible to virgin PTFE but with better cycle life and greater P-T rating, recommended to used in Class150 and Class300 ball valve, limited use in Class600 ball valves with below NPS12.

Color	Density (g/cm ³)	Hardness (Shore D)	Compressive Strength (MPa)	Continuous Working Temp. (°C)
Off-white	2,1	76	68	180

Carbon Fiber Filled PTFE

Carbon Fiber Filled PTFE, 25% Carbon Graphite with 75% TFE, retain virtually all the chemical compatibility properties of virgin PTFE but with better cycle life than PTFE, typically used for Class600&below trunnion mounted ball valve.

Color	Density (g/cm ³)	Hardness (Shore D)	Compressive Strength (MPa)	Continuous Working Temp. (°C)
Black	2,23	68	60	240

Nylon

Nylon primarily used in high pressure ball valves upto Class2500, it can be used in high pressure oil, air and other gas systems except oxygen, it is not recommended for water.

Color	Density (g/cm ³)	Hardness (Shore D)	Water Absorption (%)	Compressive Strength (MPa)	Continuous Working Temp. (°C)
White	1,2	65	3,5	100	90

Devlon

Devlon is improved version of Nylon, inherit basic properties of Nylon however with higher temperature limit, ideal seat material for high pressure ball valves.

Color	Density (g/cm ³)	Hardness (Shore D)	Water Absorption (%)	Compressive Strength (MPa)	Continuous Working Temp. (°C)
Bright Yellow	1,14	79	3	140	125

Values given just for reference. Please consult us for each particular application

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PEEK

Polyetheretherketone, excellently suitable for high pressure and temperature service, meanwhile offer very good corrosion resistance, with stable sealing in COMEVAL made Class2500 ball valves.

Color	Density (g/cm ³)	Hardness (Shore D)	Compressive Strength (MPa)	Continuous Working Temp. (°C)
Sallow	1,29	85	118	260

PPL

Polyphenylene, recommended for use in medium high pressure and temperature floating ball valves, similar properties to PTFE, good abrasive resistance and higher deformation rating and density than PTFE.

Color	Density (g/cm ³)	Hardness (Shore D)	Compressive Strength (MPa)	Continuous Working Temp. (°C)
Chocolate Brown	2,4	65	40	200

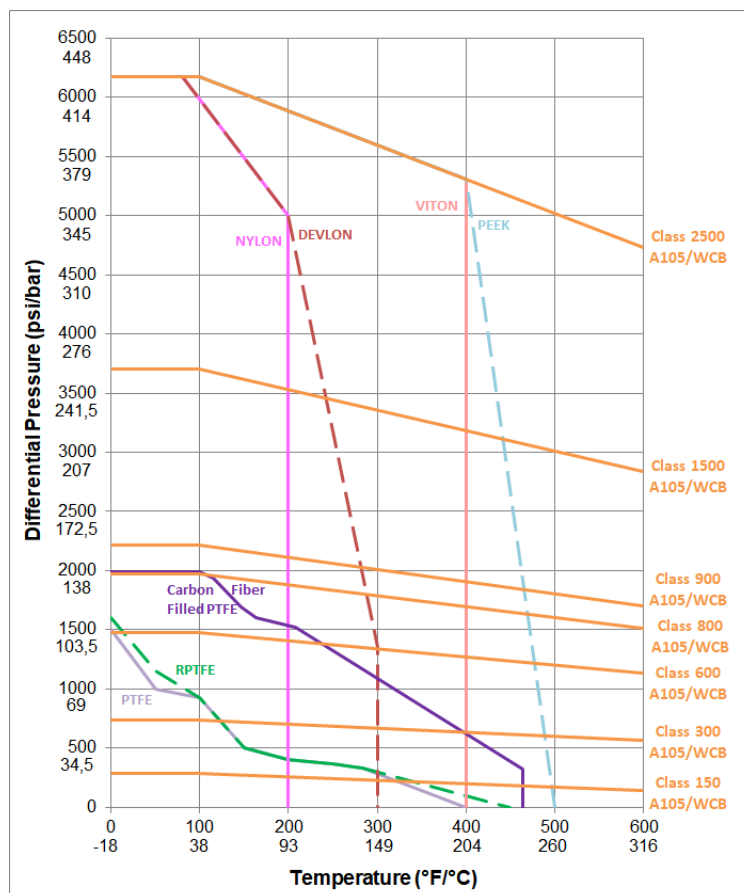
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Besides the soft seat ball valves, COMEVAL VALVE SYSTEMS accumulated pretty rich experiences in metal seat ball valves, all our metal seat ball valves with basic acceptance criteria of zero-leakage, successfully applied in very strict working conditions and known well for it's excellent performance stability.

Typical Metal Sealings:

- TCC-Tungsten Carbide Coating
- Nickle Base Alloy Spraying Welding like Inconel, Hastelloy, Monel, etc
- Cobalt Base Alloy Spraying Welding-Stellite

Pressure / Temperature Chart *



*Only for reference. Please consult us for each particular application

Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsible for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information