

TECHNICAL SPECIFICATION FOR PTFE LINED PIPES & FITTINGS

1. CHEMICAL RESISTANCE :

PTFE is chemically inert to all chemical and solvents with the exception of molten alkali metals and strong Fluorine donors. We use fine virgin PTFE powder (not any recycled material) to produce PTFE liners with the ultimate chemical and physical properties. PTFE lined pipe work can be used with aggressive media such as HCl, H₂SO₄ (Various Conc.), HNO₃, Hot NaOH Solutions, all chlorides-Organic & Inorganic all phenols, all sulphates etc.

2. TEMPERATURE RESISTANCE :

PTFE has good flexibility and ductility in the temperature range of (-)50° to 235° C. It should be noted that PTFE can be used at higher temperature (above 200° C) and at lower temperature (Below (-) 10° C) under certain conditions.

3. OPERATING PRESSURE :

PTFE lined pipework can be used up to 20 bar/300 psi.g.

Full vacuum resistance depending upon the process conditions. Details to be provided by client for specific application.

4. RESISTANT TO LIGHT AND ATMOSPHERIC CONDITIONS :

PTFE may be used without any problem in the open air as there are no mechanical and electrical characteristics even then subject to extreme climatic conditions.

5. ELECTRICAL PROPERTIES :

PTFE has good electrical insulation with a very low dielectric constant.

6. MATERIAL SPECIFICATIONS :

- Pipe : ASTM-A 106 Gr.B, Seamless Sch. 40 All Pipe Spools have lap joint flange at one end and fix flange at other end. Lined pipes are available up to 3 mtrs. length max. (higher length available upon request.
- Flange : Flanges made from boiler quality plate material confirming to IS 2062 ASA 150 class and dimension as per ANSI B 16.5 depending upon material availability.

— Coller : Coller made from boiler quality plate/plate material confirming to IS 2062 depending upon the material availability

— Fittings : Formed and fabricated from seamless C.S. Pipe/So-iron lined with PTFE/FEP/PFA.

— Lining : As per ASTM F 1545 / 95

*Minimum flare thickness : >80 of the actual extruded liner thickness

7. INSPECTION & TESTING :

Dimensional Check : As per product catalogue.

Hydro Test : All 150 class pipes & fittings shall be tested at 25 bar after lining and 46.5 bar for 300 class pipes and fittings.

Electrostatic Test : A test voltage of 10KV to 25 KV depending upon liner thickness.

8. STORAGE :

- * Pipe Spools and Fittings should not be stored in open area.
- * Keep away from all sources of corrosive vapour / flame / heat during storage.
- * Keep flare cover till pipes/fittings are installed to avoid damage and deformation of the flare faces. Flange covers should be put back immediately, on any sections removed for inspection or for maintenance from the system.

9. INSTALLATION :

- * Gaskets are not required between piping components except, where they are connected to a flange face of other materials.
- * Metal part of Pipe/Fittings should not be used for electrical earthing.
- * Avoid rough handling, do not drop from a height.
- * Do not bend, weld, solder, braze on Lined Pipes/Fittings.
- * Use expansion joints for thermal expansion of long lengths of lined piping.