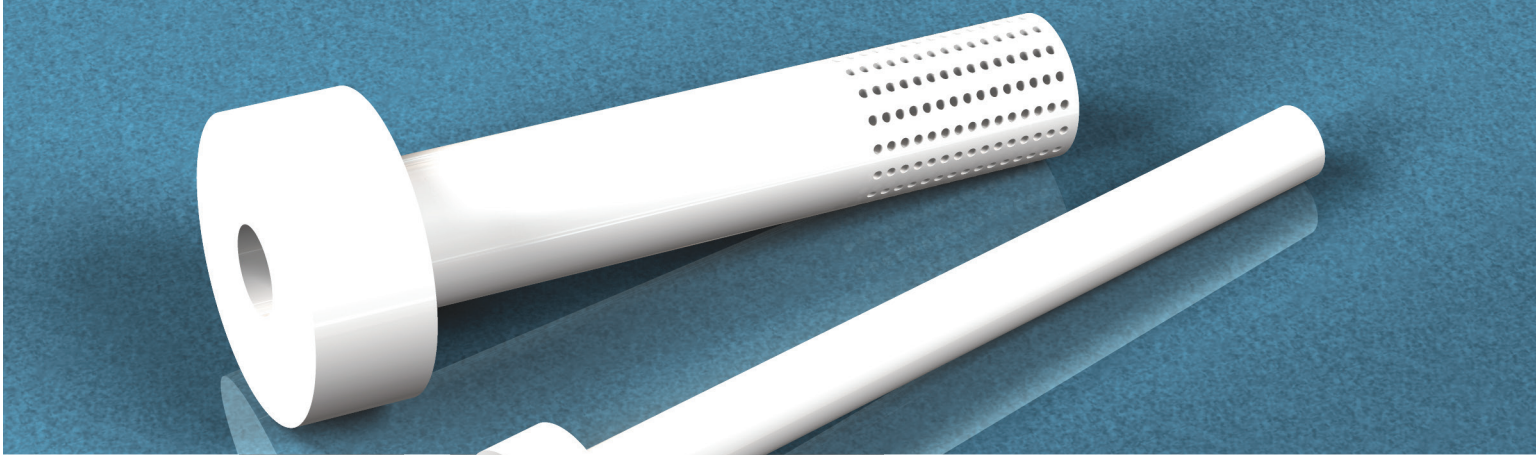


# TECHNICAL BULLETIN: DIP TUBES & SPARGERS



## PTFE TUBES

DESIGNED & MANUFACTURED,  
CUSTOM MADE PER APPLICATION

IPM-TEK designs and manufactures Dip Tubes and Spargers from, molded Virgin PTFE, heavy-wall tubing. Used in applications where metallic tubing may have adverse interactions, PTFE remains inert and will not contaminate any materials or liquids it comes in contact with. Our flanged tubes and spargers are threaded and assembled, then back welded to ensure rigidity.

Designed for use in non-agitated applications at temperatures up to 500°F. Our PTFE Tubes and Spargers are custom made for each application to ensure premium performance in given conditions.

With a wide variety of designs, from open end flanged tubes, curved or angled tubes, to closed end tubing drilled for flow control, the possibilities are only limited by your imagination\*. Contact us today to make your design a reality!

CD = Cross Direction

The data we are herewith providing are all based on laboratory testing and are proposed to technical designers as possible and useful advice. Deviations from the values indicated may occur, but they do not constitute themselves either detriment of quality or reason for rejection.

PTFE G400 (Virgin PTFE)			
Properties	Unit	Method	Typical Value
<b>PHYSICAL - MECHANICAL</b>			
Density	g/cm <sup>3</sup>	ASTM D792	2.14 - 2.18
Hardness - Shore D	points	ASTM D2240	51 - 60
Tensile strength - CD	MPa	ISO 527	≥ 20
Elongation at break - CD	%	ISO 527	>200
Compressive strength at 1% deformation - CD	psi	ASTM D695	580 - 725
Deformation under load at room temperature after 24 hours at 13.7 N/mm <sup>2</sup> - CD	%	ASTM D621	14 - 17
Permanent deformation as above after 24 hours of rest at room temperature - CD	%	ASTM D621	7 - 8
Deformation under load at 260°C, after 24 hours at 41 N/mm <sup>2</sup> - CD	%	ASTM D621	
Permanent deformation as above after 24 hours of rest at room temperature - CD	%	ASTM D621	7 - 8
Impact strength Izod	J/m	ASTM D256	153
<b>TRIBIOLOGICAL</b>			
Dynamic coefficient of friction	/	ASTM D1894 ASTM D3702	0.06
Wear factor K	/	ASTM D3702	2.900
PV limit	N/mm <sup>2</sup> • m/min	/	2.4 4.2 5.7
<b>THERMAL</b>			
Service Temperature ( min - max )	°F	/	-328 / +500
Thermal expansion coefficient ( linear ) 25 - 100°C	10 <sup>-5</sup> in/in/°F	ASTM D696	6.625 - 7.206
<b>ELECTRICAL</b>			
Dielectric strength (specimen 0.5 mm thick)	KV/mm	ASTM D149	≥ 40
Dielectric Constant at 60 Hz and 106 Hz	/	ASTM D150	2.05 - 2.10
Volume Resistivity	Ω • cm	ASTM D257	10 <sup>18</sup>
Surface Resistivity	Ω	ASTM D257	10 <sup>17</sup>

\*The availability of industry standard tube stock sizes will determine design limitations and what designs are able to be fabricated.

2352 N. Lobdell Avenue  
Baton Rouge, LA 70806  
Office: 225-928-0114  
Fax: 225-218-4272  
sales@ipmtek.com

**IPM TEK**  
Industrial Plastics and Machine TEK, LLC  
THE AMERICAN PTFE MANUFACTURER