

System Specification

SYGEF Standard

Piping systems in PVDF



SYGEF Standard – System Specification

Material	Polyvinylidene fluoride (PVDF)
Colour	opaque
Density	~1.78 g/cm ³ (ISO 1183 / ASTM D 792)
Surface tension	30–35 mJ/m ²
Linear expansion coefficient	0.12–0.18 mm/mK (DIN 53752)
E-modulus	≥1700 N/mm ² (EN ISO 527 / ASTM D 790)
Thermal conductivity	0.19 W/mK (EN12664)
Surface resistivity	5 x 10 ¹⁴ Ωcm (IEC 60093)
Dimension	d16 (3/8")–d315 (12") in accordance to ISO 10931
Pressure rating	Pipes/fittings: PN16 (d16–d 315), PN10 (d90–d315) Valves: separate specification
Temperature rating	From –20 °C to +140 °C (–4 °F to +284 °F)
Production	Fittings/valves: injection moulded Pipes: extruded Valves: injection moulded (additional available oil free treated and paint compatible / silicon free)
Surface finish	Inner surface Ra ≤ 0.5 µm (20 µin) for injection moulded and extruded components
Marking	All components are embossed with a permanent identification during the production process to ensure full traceability. Lot No Material Dimension Pressure Rating
Testing and inspection (ISO 10931)	Inclusions Visual inspection Surface finish Dimension tolerance Pressure testing
Approvals/conformance	DIBt ASME BPE FDA CFR 21 177.2510 USP 25 class VI (physiological non-toxic) FM-4910 listing
Welding technology	BCF Plus, bead and crevice free fusion, size d20 (1/2")–d110 (4") IR Plus, infrared fusion (DVS 2207-6), size d20 (1/2")–d315 (12") Butt fusion (DVS 2207-15), size d20 (1/2")–d315 (12") Socket fusion (DVS 2207-15), size d16 (3/8")–d63 (2")
Documentation*	Certificate of Conformance with FDA, USP EN 10204 2.2 EN 10204 3.1
Packing**	Multiple components single bagged in specified bag
Labeling	Brand Name Product Description Code Number Material Dimension
Main applications	Uses include delivery of pharmaceutical grade purified water (PW) and DI water, using hot water, steam chemical or ozone sanitisation. Due to its excellent chemical resistance it is widely used in chemical distribution systems.

* On request

** Not for socket fusion products