→ Completely Controlled Process

Product Specification

SYGEF® Plus

piping systems in PVDF-HP

+GF+

GEORG FISCHER
PIPING SYSTEMS

High purity system solution for high end water applications

+GF+

SYGEF® Plus – Product Specification

Material Colour Density Surface tension Linear expansion coefficient E-module (tensile strength) Thermal conductivity Surface resistivity	High Purity Polyvinylidene fluoride (PVDF HP) Virgin material, translucent ~1.78 g/cm^3 (ISO 1183 / ASTM D 792) 30–35 mJ/m^2 0.12–0.18 mm/mK (DIN 53752) 2100 N/mm^2 (EN ISO 527/ASTM D 790) 0.19 W/mK (DIN 52612) 5 x 10^{14} Ωcm (IEC 60093)
Dimension	d 20 (½")–d 315 (12") in accordance to ISO 10931
Pressure rating	Pipes/fittings: PN 16 (d 20–d 225), PN 10 (d 90–d 315) Valves: separate specification
Temperature rating	from –20 °C to 140 °C (-4 °F–284 °F)
Production[1]	Fittings/diaphragm valves: injection moulded Pipes: extruded Produced under clean room ISO 14644-1 Class 7 (U.S. Fed. Std. 209E Class 10'000) conditions. Subsequent assembling, quality inspection and cleaning is carried out using 18 MΩ pure water under clean room ISO 14644-1 Class 5-6 (U.S. Fed. Std. 209E Class 100-1000) conditions.
Surface finish	Inner surface ≤ d 225 Ra ≤ 0.2 µm (9 µin) / > d 225 Ra ≤ 0.3 µm (12 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 Periodic leachout per SEMI F 40/F 57
Approvals/conformance	ASME BPE FDA CFR 21 177.2510 USP 25 class VI (physiological non-toxic) SEMI F57
Welding technology	BCF® Plus, bead and crevice free fusion, size d 20 (½")–d 110 (4") IR® Plus, infrared fusion (DVS 2207-6), size d 20 (½")–d 315 (12")
Documentation[1]	Certificate of Conformance with FDA, USP EN 10204 2.2 EN 10204 3.1b
Packing[2]	Pipes capped and each component double bagged in an specified inner bag and an outer bag under clean room ISO 14644-1 Class 6 (U.S. Fed. Std. 209E Class 1000) conditions.
Labeling	Brand Name Product Description Code Number Material Dimension CE-labeling
Main applications	Uses include delivery of ultrapure water in the semiconductor/electronic industry, pharmaceutical grade water (WFI/PW) and analytical DI water to highest purity requirements. A wide range of sanitisation methods is suitable such as Ozone, hot water or steam.

[1] on request
[2] Excluding pressure regulating valves. Products are cleaned and double bagged after production assuring controlled process and highest product standards.

SYGEF® Plus → packed to preserve value

Any questions? Would you like for us to contact you?
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The technical data is not binding and not an expressly warranted characteristic of the goods.
It is subject to change. Please consult our General Conditions of Supply.

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Fi 5780/4a (12.04)

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CH-8201 Schaffhausen/Schweiz, 2004

Printed in Switzerland

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