

Purasil® / Purasil® XP

Quartz sleeve material tailored for UV water treatment

Heraeus Purasil® and Purasil® XP are high purity synthetic fused silica materials manufactured by flame hydrolysis of SiCl_4 . Purasil® and Purasil® XP are nearly perfect: devoid of bubbles and UV radiation resistant. It has a very high UV transmission and thus is best specified for deep UV sleeve material.

Product Scope

Synthetic multi-step tubes used as protective sleeves for the application of UV disinfection.

Outer diameter	25 – 45 mm
Wall thickness	1.5 – 3.0 mm

Geometrical Data

Outer Diameter (OD)	Tolerance	Wall Thickness (WT)	Tolerance
[mm]	[mm]	[mm]	[mm]
28 – ≤35	± 0.3	≥ 1.5 - ≤ 2.0	± 0.3
		> 2.0 - ≤ 2.8	± 0.4
		> 2.8 - ≤ 3.0	± 0.5
>35 – ≤40	± 0.4	≥ 1.5 - ≤ 2.0	± 0.3
		> 2.0 - ≤ 2.8	± 0.4
		> 2.8 - ≤ 3.0	± 0.5
>40 – ≤45	± 0.5	≥ 1.5 - ≤ 2.0	± 0.3
		> 2.0 - ≤ 2.8	± 0.4
		> 2.8 - ≤ 3.0	± 0.5

Feature	Area	Tolerance	Note
Ovality	manufactured length	≤ 0.3 mm	
Siding	manufactured length	≤ 0.5 mm	
Bow		<1 mm up to 1 m length or <2 mm up to 2,2m length	
Length	≥ 500 – ≤ 2200 mm	+ 20 mm / -0 mm	Snap cut

Thermal Characteristics (typical values)

Feature	Allowed
Outside surface distortion	None
Inclusions	None
Surface impurities (adherent)	None
Discolour	None

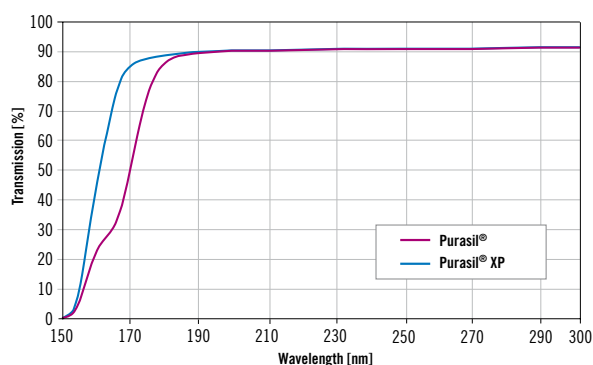
Chemical Properties

Typical trace elements – all details in ppm (bulk)

Element	Na	K	Fe	OH
Purasil®	<0.05	<0.02	<0.05	≤ 1
Purasil® XP	<0.05	<0.01	<0.02	150–300

Optical properties

Optical transmission at 2 mm wall thickness and 20 °C (typical)



Mechanical Properties

Density	2.20 g/cm ³
Bending strength	67 N/mm ²
Compressive strength	1150 N/mm ²
Modules of elasticity	7.0 * 10 ⁴ N/mm ²
Tensile strength	50 N/mm ²
Mohs-hardness	5.5–6.5

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