

SILICON NITRIDE PROTECTION TUBE

SIALON

JMS Southeast, Inc. offers a protection tube for use in molten non-ferrous materials such as molten aluminum, brass, and copper. This special JMS protection tube material is a solid solution of alumina oxide in silicon nitride. Maximum temperature is 1250°C (2280°F) in molten metals. The physical properties are shown below.

TYPICAL PHYSICAL PROPERTIES (SIALON)

Bulk Density	(g/cm ³)	3.25
App. Specific Gravity	(g/cm ³)	3.26
Porosity	(%)	<1
Cold Bend Strength	(25°C) (MPa)	945
	(kpsi)	137
Hot Bend Strength	(1200°C) (MPa)	560
	(kpsi)	81
Elastic Modulus	(GPa)	288
	(x 10 ⁶ psi)	42
Ther. Exp. Coeff.	(x 10 ⁻⁶ C ⁻¹)	3.04
	(20-1000°C)	
Thermal Conduct	(400°C) (W/mK)	21.3
Critical ΔT	(°C)	950
Hardness (VRN, 1 kg Load)		1650

#1	SERIES			
5E	Silicon Nitride Protection Tube (Sialon)			
	#2	TUBE SIZES	BUSHING	THREAD SIZE
	1	28mm OD x 16mm ID (1.1" OD x .630" ID)	1 1/4"	1 1/4"
	2	22mm OD x 12mm ID (.866" OD x .472" ID)	1"	1"
	3	16mm OD x 9mm ID (.630" OD x .354" ID)	3/4"	3/4"
	4	12.5mm OD x 6.5mm ID (.492" OD x .256" ID)	1/2"	1/2"
	X	Other, specify		
	#3	TOTAL TUBE LENGTH		
	A	5.91" (150mm)		
	B	11.81" (300mm)		
	C	15.75" (400mm)		
	D	17.72" (450mm)		
	E	23.62" (600mm)		
	X	Other, specify		
	#4	TUBE STYLE		
	B	Mounting bushing		
	S	Carbon steel mounting sleeve - (4" long sleeve is standard)		
	X	Other, specify		
	Z	No fitting		
	5E	1	A	S