



PYROTEK LPDC SC31MX STALK AND RISER TUBE

LOW-PRESSURE DIE CASTING

Pyrotek offers complete feeding system consumables, including sprue filters, sprue bushings, inserts, intermediate tubes, and stalk tubes to provide an air-tight path for clean molten metal to travel from the holding reservoir to the casting dies.



Silicon carbide (SiC) based precast shapes are for applications that require high abrasion and wear resistance and low permeability. Pyrotek LPDC SC31MX stalk tubes are engineered to provide both strong performance and cost-efficiency.

COMPOSITION

Material	Approximate Percentage of Weight
SiC	31%
SiO ₂	57%
CaO	1%
Proprietary Compounds	11%

BENEFITS

- Excellent abrasion resistance
- Thermal shock resistant
- Nonwetting to aluminium and aluminium alloys

FEATURES

- Custom shapes and designs
- Coated or non-coated
- With or without filter

PREHEAT

SC31MX stalk tubes must be preheated before use to remove residual moisture and/or to reduce cracking from thermal shock.

Stalk tubes should be uniformly preheated to 200°C (392°F) in a furnace for a minimum of 30 minutes.

Do NOT use a direct flame as it will likely cause uneven thermal gradients within the material.

HEALTH AND SAFETY

Prior to use, refer to the product safety datasheet for proper handling and required personal protective equipment.

PHYSICAL PROPERTIES

Property	Value
Permanent Linear Change—after firing at 730°C (1350°F)	0.26%
Cold Modulus of Rupture—MPa (psi) after firing at 730°C (1350°F)	16 (2320)
Hot Modulus of Rupture—MPa (psi)	25 (3625)
Cold Crushing Strength—MPa (psi) after firing at 730°C (1350°F)	63 (9193)
Bulk Density—g/cm ³ (lb/ft ³)	2.16 (135)
Coefficient of Thermal Expansion	1.8 x 10 ⁻⁶ / °C
Abrasion Resistance—cm ³ (in ³)	6.6 (0.8)
Permeability—mD	<0.07
Maximum Operation Temperature	1000°C (1832°F)
Thermal Conductivity—W/m·K (BTU·in/ft ² ·hr·°F)	
at 101°C (213.8°F)	0.847 (5.87)
at 200°C (392°F)	0.950 (6.59)
at 400°C (752°F)	1.268 (8.79)
at 600°C (1112°F)	1.539 (10.67)
at 700°C (1292°F)	2.192 (15.20)
at 800°C (1472°F)	1.873 (12.99)
at 859°C (1578°F)	1.930 (13.38)

