

# IRonul

## Silica Aerogel Granule



### Silica Aerogel Granule (IRonul<sup>©</sup>)

Known as frozen smoke, solid smoke, solid air or blue smoke, aerogel is the best thermal insulator and the lightest solid of any present-known substance in that over 90% of its volume is constituted of air in extremely tiny nano-pores and the rest is composed of clusters intertwined with three-dimensional, small silica solids.

Granular silica aerogel can be very conveniently used in many ways such as by filling them around the object to be insulated or these can be sandwiched between metal, glass, wood plates, fabric etc. and also can be used as an additive to paints, cement, bricks, insulation panels etc.

### Technical specifications

PROPERTY	UNIT	DATA
Apparent density	gr/cm <sup>3</sup>	0.07
Color	-	Blue - Yellow
Thermal conductivity	W/mK <sup>-1</sup>	0.011
Granule particle size range	mm	0.5-30
Transparency	-	Translucent
Pore size	nm	20-30
Porosity	%	>95
Particle size	nm	2-5
Specific surface area	m <sup>2</sup> /gr	500-600
Pore Volume	cm <sup>3</sup> /gr	~ 3-3.5
Surface chemistry	-	Super Hydrophobic
Thermal stability	°C	-200 → +800
Operating temperature (to keep hydrophobicity)	°C	-200 → +450
Acoustic Property	100-10000 Hz	20-50 dB
Heat Capacity	J/kgK <sup>-1</sup>	~ 1000
Resistivity	Ω.m	5.9 *10 <sup>13</sup>
Thermal diffusivity	mm <sup>2</sup> /s	~ 0.12
Package (Plastic Drum)	lit	100

