

# SİLİCA AEROGEL POWDER

**FIRE AND THERMAL INSULATION**  
**NANO TECHNOLOGICAL HIGH HEAT RESISTANCE AND INSULATION**

## SUPER INSULATOR

Nano-technology-based superhydrophobic silica Izogin Aerogel provides superior performance compared to traditional insulation materials, operating within a temperature range of -200°C to +650°C.

**SUPERHYDROPHOBICITY:** With a surface contact angle of 165°, it prevents water and moisture from affecting thermal insulation performance.

**SOUND INSULATION FEATURE:** Has the capacity to absorb sound up to 25 dB.

**NON-COMBUSTIBILITY:** Maintains its hydrophobic properties up to 650°C without deterioration.

**TRANSPARENCY:** Transparency level can be adjusted according to project requirements.

**THERMAL BARRIER FEATURE:** Has a thermal conductivity of 12–16 mW/m·K.

**EXCELLENT ENERGY DAMPING. VIBRATION BARRIER FORMATION:** Can block noise caused by mechanical vibrations in the 1000–2000 Hz frequency range.

**OVER 90% AIR PERMEABILITY:** Provides high-performance thermal insulation under all conditions.

**OLEOPHILIC:** Used in the cleanup of oil spills, heavy metals, and hazardous chemicals.

**POROUS STRUCTURE:** One gram of aerogel has an approximate surface area of 700 m<sup>2</sup>, making it ideal for filtration and capturing space dust.

**HUMAN & ENVIRONMENTALLY FRIENDLY:** Harmless to human health. When disposed of, it has no negative environmental impact. Also used in the cosmetics industry to regulate skin oil balance.

## TECHNICAL SPECIFICATIONS

- Operating Temperature: -200 °C ~ +650 °C
- Density: 0.115 g/cm<sup>3</sup>
- Thermal Conductivity Coefficient: 0.012 – 0.016 W/m·K
- Porosity: 90–95% (in powder form)
- Color: White or Light Cream
- Water Vapor Permeability: 5 – 5.5 μ
- Fire Classification: A2-s1-d0
- Compressive Strength: 40 kPa at 10% (for Izogin Aerogel Granules and Powder)
- Environmental Impact: 5.4 kg CO<sub>2</sub> per m<sup>2</sup> (1 cm thickness)
- Heat Capacity: 1000 J/kg·K (for Izogin Aerogel Granules and Powder)
- pH: 8
- Sound Absorption Coefficient (500 Hz): -20 dB
- Specific Surface Area: 700–800 m<sup>2</sup>/gGranule
- Size: Min. 1 micron – 2 mm
- Water Repellency: Superhydrophobic
- Dielectric Constant:  $k < 2$

