

SİLİCA AEROGEL GRANUL

FIRE AND THERMAL INSULATION
NANO TECHNOLOGICAL HIGH HEAT RESISTANCE AND INSULATION

WHAT IS THE AEROGEL?

Izogin Aerogel Granul, demonstrates extraordinary performance compared to traditional insulation materials due to its synthetic, porous, and lightweight structure. High levels of thermal insulation can be achieved with minimal insulation thickness. Additionally, it is superhydrophobic when in contact with water and maintains the same performance throughout its service life. Izogin Aerogel Granul is a high-temperature resistant insulation product made from silica aerogel.

WHY AEROGEL?

Aerogel is the world's best-known insulation material. It was first used by NASA in space technologies. Its raw material is silica. Silica aerogel, produced using the sol-gel technique, is also the lightest known solid material. Aerogel consists of 95–98% air. Thanks to its porous molecular structure, heat transfer between cells is minimized. Its thermal conductivity coefficient is 0.016 W/m·K. In our R&D laboratories, various aerogel products such as polymer aerogel, metal oxide aerogel, carbon aerogel, and cellulose aerogel are being developed. Structurally, a service life of 20 years or more can be easily anticipated.

APPLICATIONS

Izogin Aerogel is used in a wide range of applications. In thermal insulation, it is applied to buildings, aerospace, military and civilian vehicles, pipelines, and packaging. In electronic components, it is used for capacitors, humidity sensors, batteries, fuel cells, soft magnets, Geiger counters, and IR detectors. In casting technology, aerogel granules are used for casting sands. In architecture, it finds applications in lighting, super-lightweight concrete, and wall insulation. It is also utilized in ultra-lightweight composite materials, advanced lasers, and for material interaction studies. In information and communication technology, it is used in non-linear optics applications. Additionally, aerogel is applied in cosmetics, and in medical and pharmaceutical fields to balance drug concentrations in the bloodstream. In clothing and sports equipment, it is used in ski outfits, military uniforms, tennis rackets, and safety or sports shoes. In space applications, it provides insulation for space suits, liquid tanks (splash prevention), and cryogenic storage. Other applications include maritime products, anti-radar coatings, thermostatic products, ammunition protection, and many more.

