HUATAO

Huatao Group-Aerogel Blanket

NEW MATERIAL CHANGING THE WORLD

改变世界的新材料

SiO_2 SILICA AEROGEL COMPOSITE

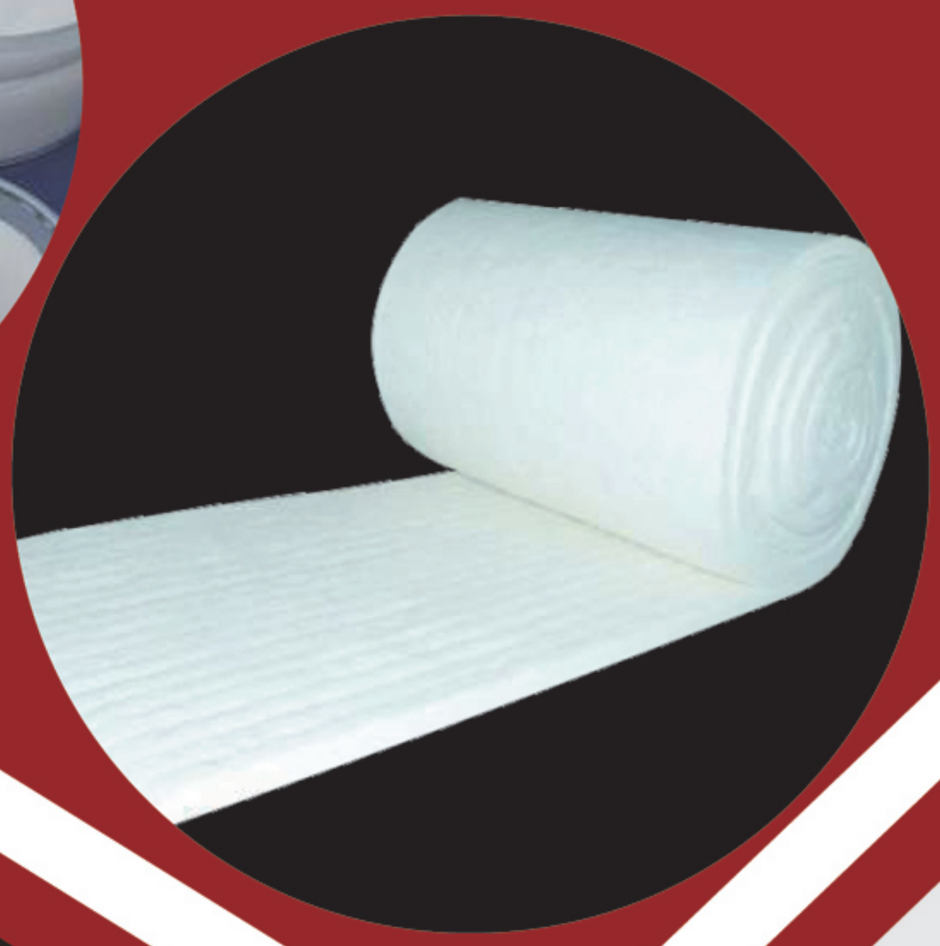
气凝胶复合材料

主营产品 MAIN PRODUCTS:

- SiO2 气凝胶玻璃纤维保温毡--SACB-0-X
  Silica Aerogel Fiberglass Blanket--SACB-0-X
- SiO2 气凝胶陶瓷纤维保温毡--SACT-X
  Silica Aerogel Ceramic Fiber Blanket--SACTT-X
- SiO2 气凝胶隔热纸(板)
  Silica Aerogel Paper(Carton)
- SiO2 气凝胶玻璃
  Silica Aerogel Glass
- SiO2 气凝胶粉体(颗粒)
  Silica Aerogel Powder (Particles)

SILICA AEROGEL COMPOSITE

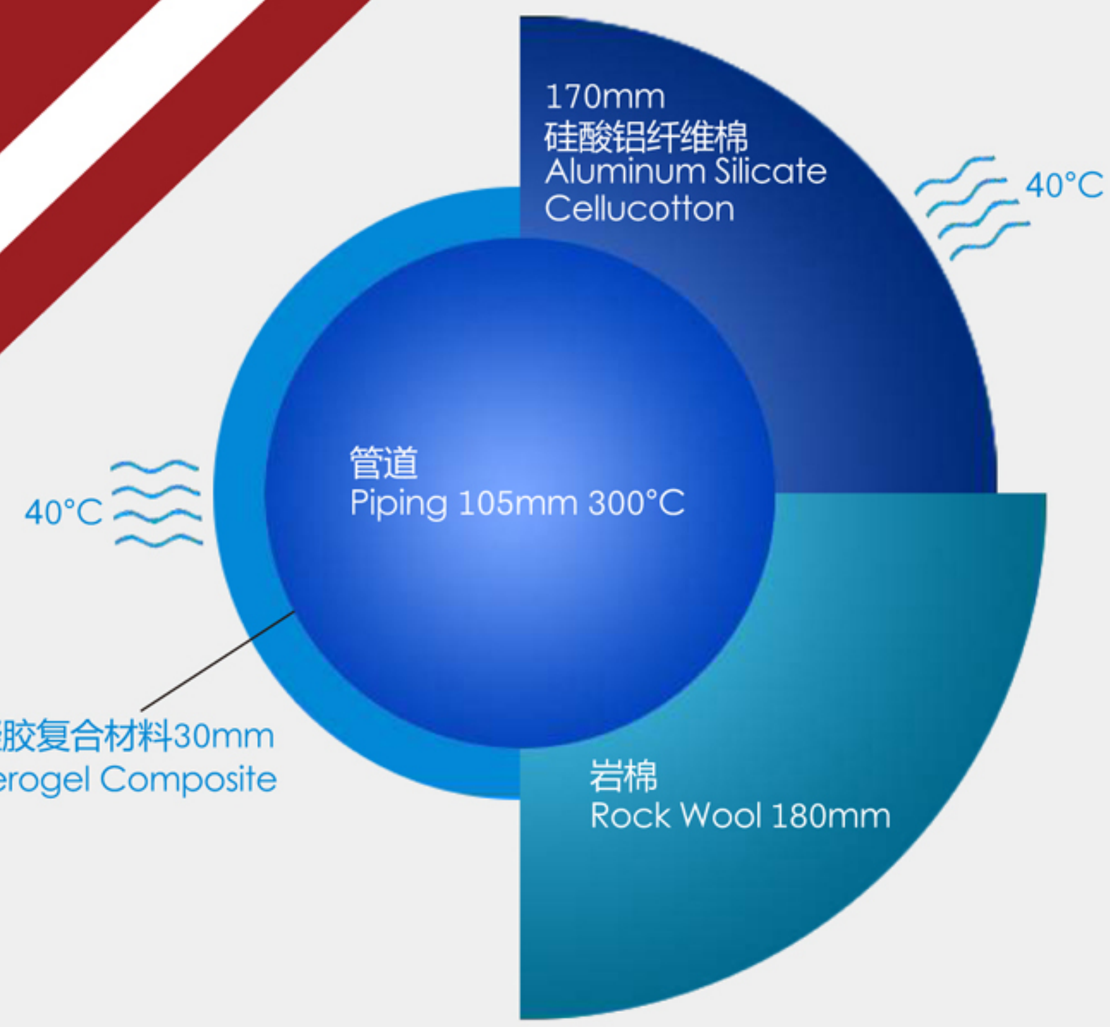
SiO_2气凝胶复合材料



产品描述 Descriptions:

SiO_2 气凝胶复合材料是由非晶体型硅胶和基材复合并在超临界二氧化碳流体中干燥而得到的。它有效地降低了气凝胶本身的高脆性，增强了与基材之间的价键结构，可广泛应用于建筑、石化、管道、精密仪器等保温领域。

The SiO_2 aerogel composite is made of noncrystal silica gel and substrate, it was dried in supercritical fluid CO_2. It can effectively reduce the high brittleness of aerogel and enhance the structure between aerogel and substrate. It is widely used in a variety of fields, such as construction, petrochemistry, pipelines, precision instrument etc.



1、使用寿命最长， 同建筑使用同期
Longest service life,
Same as the building's service life

2、导热系数最低
Lowest thermal conductivity coefficient

3、薄而轻
Thinnest and lightest thermal insulating material

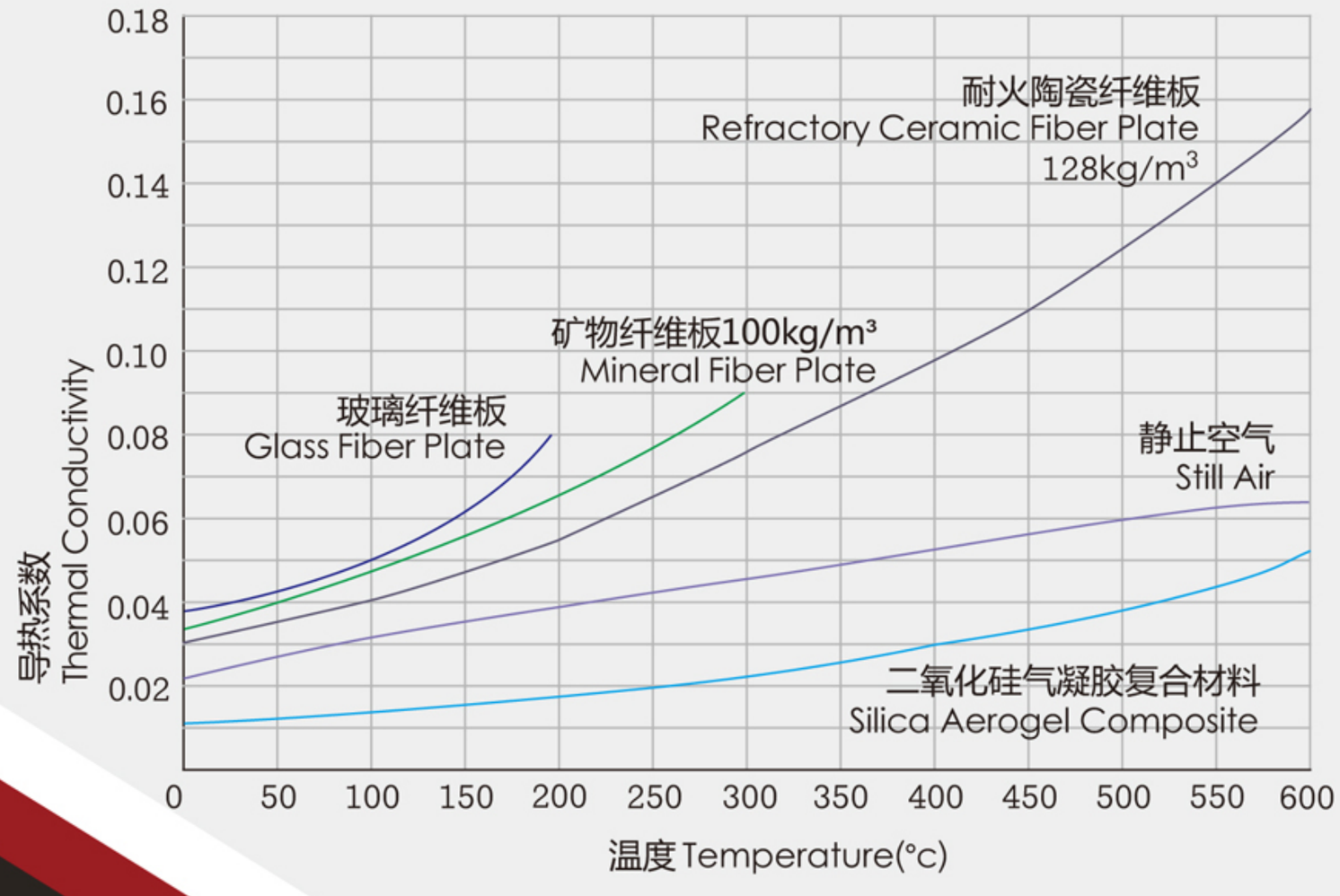
4、防水防潮，易于仓储
Water-proof and moisture-proof, easy to storage

优势 Advantages

5、防火性能最高，安全级别为A1级
Superior fire proof performance with safety class of Gr.A1

6、抗压性强，能承受野蛮施工
Resistant to high pressure

7、绿色环保，无毒无腐蚀
Environmentally friendly,
Non-toxic and non-corrosive



SiO_2 气凝胶玻璃纤维保温毡--SACB-0-X
Silica Aerogel Fiberglass Blanket--SACB-0-X

SiO_2气凝胶玻璃纤维保温毡是我公司的主打产品之一。它是选用针刺玻璃纤维毡为基材，将气凝胶复合到基材里制备而成的。具有优异的隔热性能和表面疏水性以及阻燃性能。其常温导热系数在0.016W/(m·k)左右，比静止空气的还低；该产品的疏水性极高，常温下的憎水率可达99%以上;阻燃性能优异，防火等级达到国家A1级标准。且该产品的使用温度范围广，可根据不同要求在-200~650°C范围内使用，安装简单快捷，便于施工。可广泛应用于650°C以下需绝热的管道和罐体、炉体、建筑等。

Silca aerogel fiberglass blanket is one featured product of our company. It's produced by compounding Silica aerogel and fiberglass blanket together. It has excellent thermal insulation property, surface hydrophobicity and flame retardant property. Its thermal conductivity coefficient is about 0.016W/m.k at room temperature, which is lower than still air. And its hydrophobic rate can reach 99% under the room temperature. Also its flame retardant performance is excellent, the fire rating can reach national A1 standard level. And its working temperature range is wide, which is between -200~650°C according to different requirements. The installation is simple, quick and convenient for construction, which is widely used on pipes, tanks, and buildings furnace etc. under 650°C.

SiO_2 气凝胶陶瓷纤维保温毡--SACT-X
Silica Aerogel Ceramic Fiber Blanket--SACTT-X

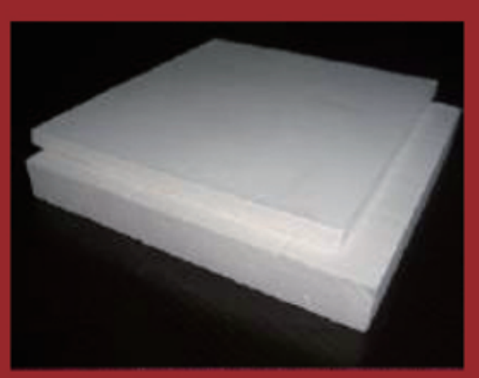
SiO_2气凝胶陶纤复合材料，是以陶瓷纤维为基材，将气凝胶与其复合制备而成的。该产品在常温下的导热系数不大于0.020W/(m·k)。该产品能够在较高温度下使用，可满足高温条件下的保温要求，广泛应用于600℃以上需绝热的管道和罐体、炉体等。

Silica aerogel ceramic fiber blanket is produced by compounding Silica aerogel and ceramic fiber blanket. It's thermal conductivity coefficient is less than 0.02W/m.k at room temperature. This product can be used under high temperature which can meet the different heat insulation requirements. So it's widely used on pipes, tanks and furnace etc. above 600°C.

SiO_2 气凝胶隔热纸(板)
Silica Aerogel Paper(Carton)

外形尺寸 Size	长宽≤1m,厚度5mm~30mm Length≤1m,Thinkness 5mm~30mm
热导率 Thermal	≤0.02w/mk
密度 Density	≤300Kg/m^3

注释：SiO_2气凝胶隔热纸（板）技术参数
Remarks : Silica Aerogel paper (carton) technical parameters

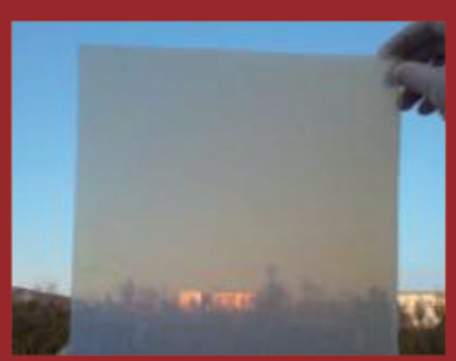


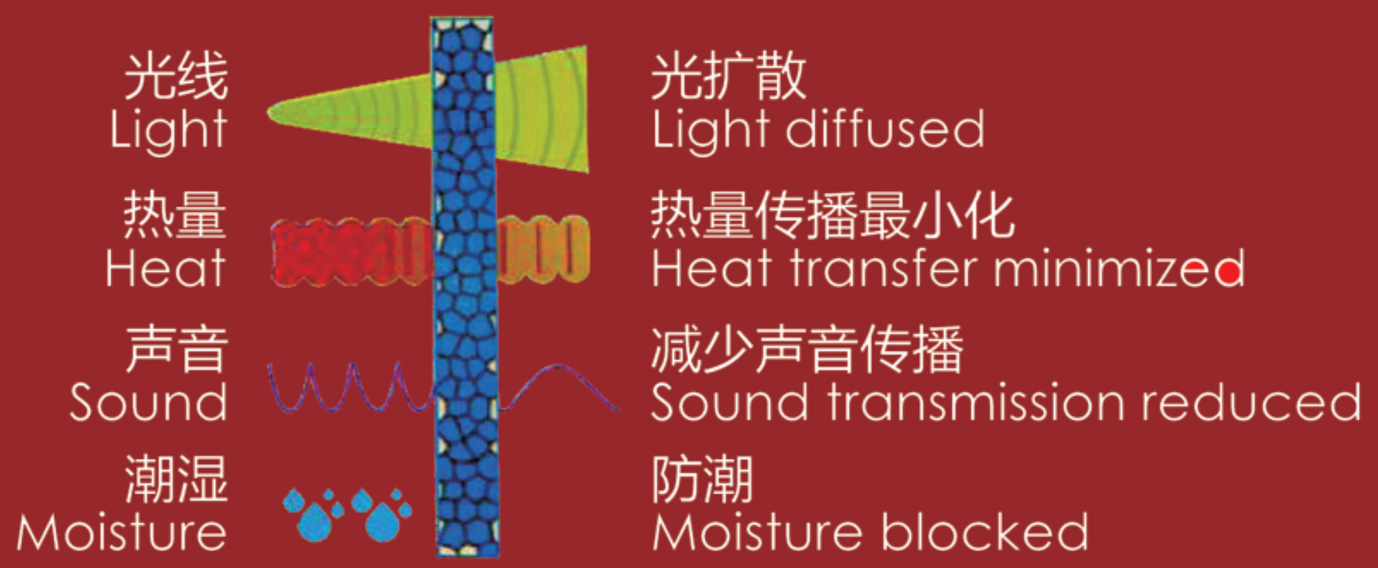
主要技术参数 Technical Parameters：

产品型号 Model		SACB-0-3	SACB-0-6	SACB-0-10
厚度 Thickness(mm)		3	6	10
宽幅 Width(mm)		1400/1500(customizable)		
颜色 Color		白色 White		
使用温度 Permitted useful temperature range(°C)		-200~650	-200~650	Fiberglass composite: -200~650 Ceramic fiber composite: 600~1000
密度 Density(kg/m³)		200±20	200±20	200±20
线膨胀率 Linear expansivity		4.2×10^{-6}		
尺寸稳定性 Dimensional stability(max)		1%		测试方法 Test method GB/T 8811-2008
压缩性能 Compressive property	(min),kpa,@10%	60		测试方法 Test method GB/T 13480-2014
	(min),kpa,@25%	120		
燃烧等级 Burning behavior		A级(A1)		测试方法 Test method GB/T 20285-2006
烟雾等级 The smoke performance level		SR-2		
滴落物等级 Drip content level		ST-2		
烟雾毒性FED值 Smoke toxicity of the FED's value,(max)		0.1		
耐腐蚀性 Corrosion resistance		通过 pass		测试方法 Test method GB/T 3810.1-2006
憎水率 Hydrophobicity,(%)		>99.8		测试方法 Test method GB/T 10299-2011
拉伸强度 Tensile strength(min),(kpa)		Fiberglass composite: 100 Ceramic fiber composite: 80		测试方法 Test method GB/T 17911-2011

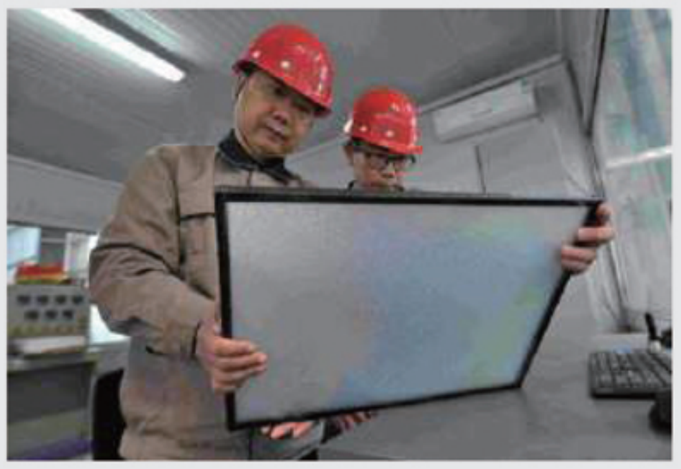
注释：SiO_2气凝胶玻璃纤维保温毡和气凝胶陶瓷纤维保温毡技术参数
Remarks : Silica aerogel fiberglass and ceramic fiber technical parameters

SiO_2 气凝胶玻璃
Silica Aerogel Glass



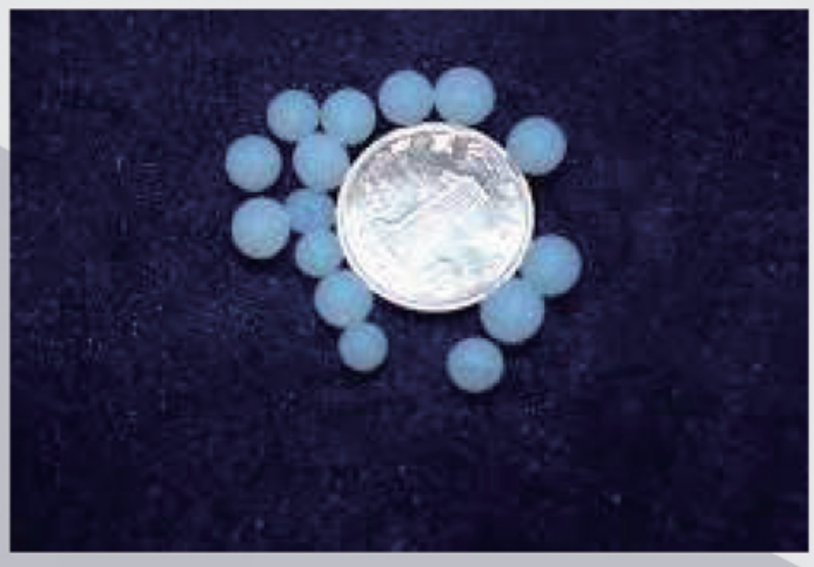


外形尺寸 Size	长宽≤1m,厚度5mm~30mm Length≤1m,Thinkness 5mm~30mm
孔隙率 Porosity	80~99.8%
可见光透过率 Visible Light Transmittance	≥60%
热导率 Thermal Conductivity	≤0.02w/mk
密度 Density	≤300Kg/m^3
降噪系数NRC Noise Reduction Coefficient	0.45



注释：SiO_2气凝胶玻璃技术参数
Remarks : Silica aerogel glass technical parameters

SiO_2 气凝胶粉体(颗粒)
Silica Aerogel Powder (Particles)



项目 Items	气凝胶粉体 Silica Aerogel Powder	气凝胶颗粒 Silica Aerogel Particles
体积密度 Density	40~120Kg/m^3	60~120Kg/m^3
粒度 Particle Size	0.5~1mm	1~5mm
比表面积 Specific Surface Area	800~960m^2/g	600~800m^2/g
孔隙率 Porosity	>90%	>90%
孔径 Aperture	20~60nm	40~60nm
表面性能 Surface Property	疏水/亲水 Hydrophobic / Hydrophilic	疏水/亲水 Hydrophobic / Hydrophilic

注释：SiO_2气凝胶粉体(颗粒)技术参数
Remarks : Silica aerogel Powder(Particles) technical parameters

SiO_2 气凝胶碳纤维保温毡--SACT-0-X
Silica Aerogel Carbon Fiber Blanket--SACT-0-X

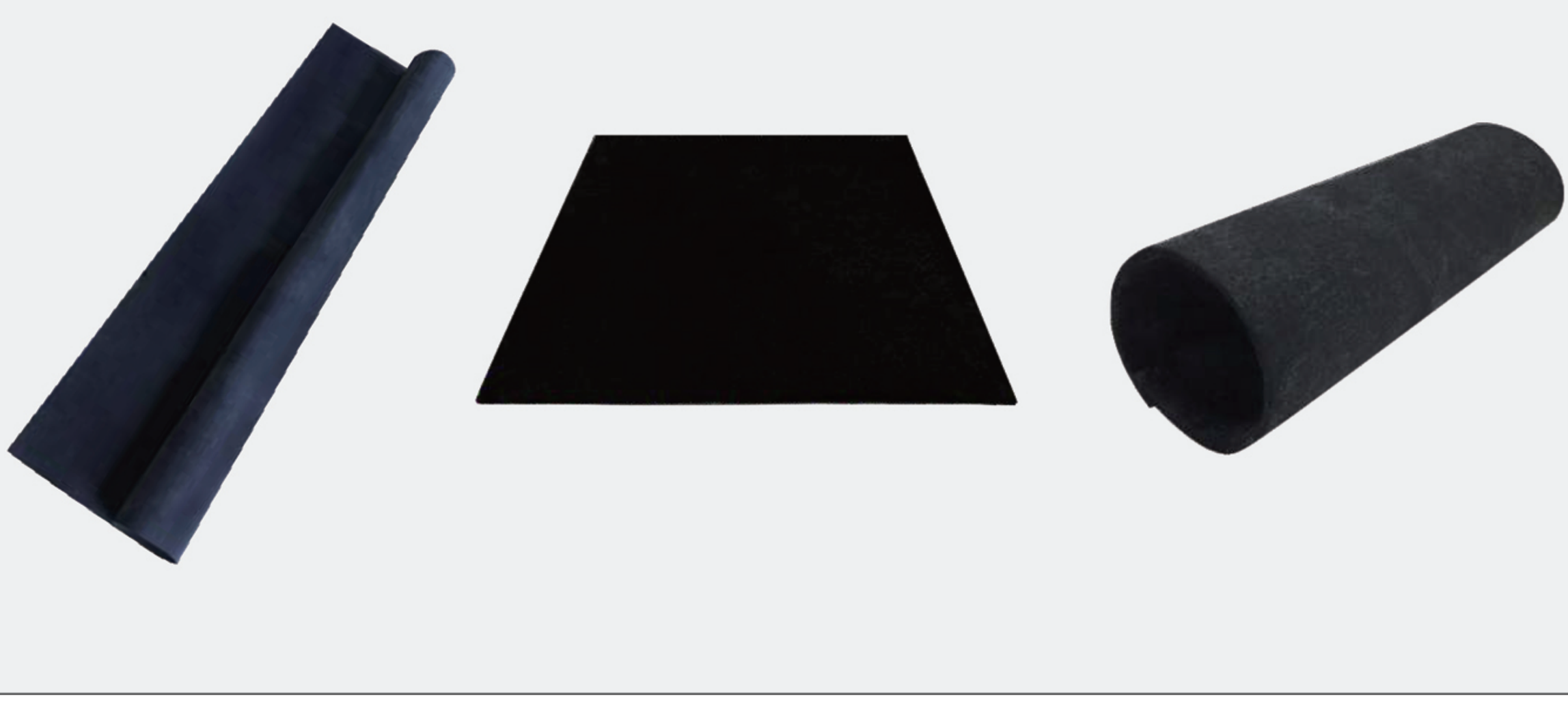
碳纤维二氧化硅气凝胶保温毡/纸以碳纤维为基材，以纳米二氧化硅气凝胶为填充物，通过特殊工艺复合而成，具有导热系数低、密度小、柔韧性好、防火、疏水等优异性能。作为一种理想的保温隔热材料，使用温度范围在-60~450°C之间，可用于发动机、精密仪器、管道、罐体等方面。

The carbon fiber aerogel blanket is compounded by carbon fiber and silica aerogel. It has low thermal conductivity, low density, good flexibility, fire resistance, and excellent hydrophobic properties, etc. As an ideal thermal insulation material, the working temperature range is between –60 and 450°C, and it can be used on engines, precision instruments, pipes, tanks and other aspects.

产品型号 Model	SACT-0-2	备注 Remarks
厚度 Thickness, mm	2	
宽度 Width, mm	1400	
颜色 Color	黑色 Black	
密度 Density, kg/m3	270±20	
使用温度 Applied Temperature Range, °C	-60~450	
热导率 Thermal Conductivity (25°C),w/m·k	≤0.02	
燃烧等级 Burning Behavior	A1	Test Standard GB/T 20285-2006
耐腐蚀性 Corrosion Resistance	Pass	Test Standard GB/T 3810.1-2006
憎水率 Hydrophobility, %	>99.8%	Test Standard GB/T 10299-2011

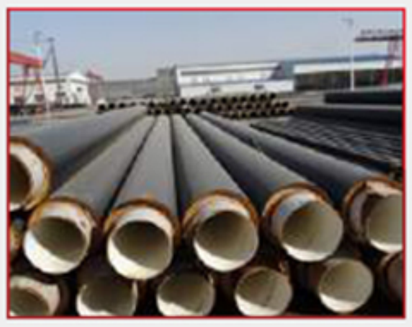
注释：SiO_2气凝胶碳纤维保温毡技术参数

Remarks : Silica aerogel carbon fiber technical parameters



应用领域 Application Fields：

管道保温
Pipeline

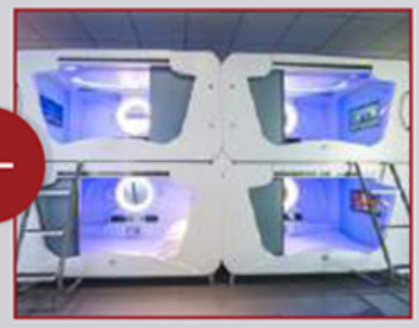


罐体保温
Tank

家电保温/保冷
Household appliance/Cold

建筑保温
Building

交通运输
Transportation

化工设备
Chemical Equipment

军事航天
Military aerospace