

INSULJACKET

○ PRODUCT DESCRIPTION

In the field of oil, chemical and petrochemical industry, equipment and pipe fittings are often irregular parts, the maintenance of such parts needs to be repeatedly remove and install insulation covers, which costs a lot of manpower and material resources. In view of this phenomenon, our company has developed a new product which can be customized according to the needs of users and the specifications of the equipment, fittings or any other irregular parts, named "INSULJACKET" (removable insulation jacket)

It has the performance of anti-freezing, anti-corrosion, moisture-proof, non-combustibility and so on. It also has the advantages of no-itchy friendly to the environment, lightweight, simple and convenient construction, and can be designed to be fully fit with the irregular parts, easy to remove and install, repeatedly use. At the same time, our design increases the connection strength by 70% and avoids the possible fracture except the extreme cases.

INSULJACKET is widely used for the ship, chemical industry, metallurgy, thermal power, building in areas such as pipeline, equipment and small special equipment insulation structure, especially suitable for small heterotypic structure such as elbow, flange, valve equipment heat preservation.



INSULJACKET



INSULJACKET can protect industrial equipment and systems from damage and degradation resulting from the following:

- **Weather:** The elements can severely affect system components. For example, snow and ice can add weight that stresses parts, while rain and condensation can cause corrosion. INSULJACKET can reduce (although not eliminate) environmental threats from coming into contact with sensitive system areas.
- **Extreme operating temperatures:** Exposure to extremely high or extremely low temperatures causes metal to expand or contract, respectively. These imperceptible changes can compromise the integrity of the material over time, resulting in premature component failure. INSULJACKET prevents this problem by absorbing and retaining heat to maintain moderate operating temperatures.
- **Condensation:** Pipes are prone to sweating when there is a difference between internal and ambient temperature. The resulting condensation can lead to rust, mold, electrical damage, and water damage in nearby equipment. INSULJACKET reduce the temperature differential between the equipment and its surroundings, so condensation doesn't have the chance to form.

By performing the above functions, INSULJACKET helps extend the service life of machinery, which translates to lower long-term operating and maintenance costs.

INSULJACKET

| | INSULJACKET-01 | INSULJACKET02 | INSULJACKET03 |
|---------------------|--|---------------------------|---------------------------|
| Outer fabric | Fiberglass Silicone Cloth | Fiberglass Silicone Cloth | Fiberglass Silicone Cloth |
| Insulation blanket | E-glass 2mm/50mm | Ceramic fiber 25mm/50mm | Ceramic fiber 25mm/50mm |
| Inner Fabric | Fiberglass Silicone Cloth | Ceramic Fiber Cloth | Hi-temp Silicone Cloth |
| Service Temperature | 200°C | 500°C | 800°C |
| Remark | customized type or temperature above 800°C, please contact our sales | | |

● ENRRGY EFFICIENT

The absence of insulation jackets in thermal systems—even those with some insulation material—increases the likelihood that heat will leak into the surrounding environment. This heat loss decreases the energy efficiency of a system as well as increases the ambient temperature of the surrounding environment. Insulation jackets prevent heat from escaping a system, which can translate to better energy efficiency for the system and comfort levels for operators.

● COST SAVINGS

Thermal efficiency is directly related to operational costs. If heat is being lost somewhere in a system, the company is paying to compensate for that loss in the form of additional power consumption. Insulation jackets are a simple way of avoiding heat loss and, consequently, lowering energy costs. Some government efficiency programs even offer rebates to offset the cost of insulation jackets, providing additional cost savings. Inefficient thermal management may also lead to damage to heat-sensitive components. Over time, the damage can result in premature equipment failure. Investing in preventative measures—including installing and maintaining insulation jackets—can help avoid these costly consequences.

● BETTER EMPLOYEE SAFETY

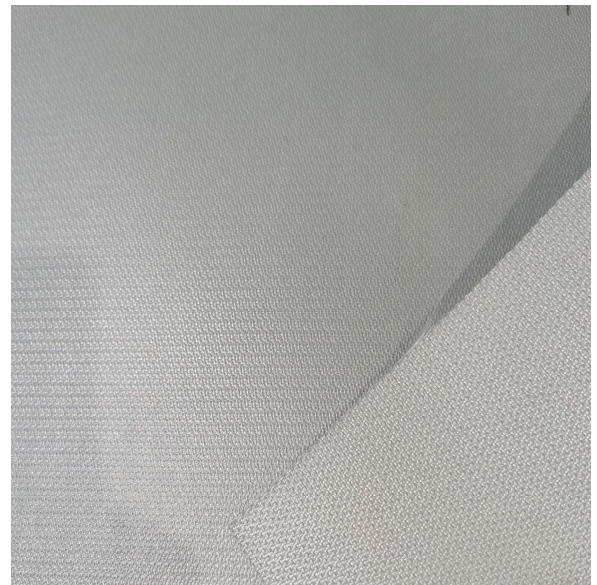
Industrial equipment, such as engines and exhaust systems, regularly attain high temperatures. If left unchecked, these elevated levels can cause mild to severe issues. By using insulation jackets, facility managers and owners can reduce the risk of employees suffering from burns (stemming from incidental contact with heated surfaces and hot steam), fatigue (stemming from elevated work environment temperatures), slips (stemming from increased condensation levels), and smoke inhalation (stemming from equipment fires).

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● Fiberglass Silicone Cloth

Fiberglass fabric impregnated with a specially formulated silicone is designed to meet the requirements for advanced applications e.g. nuclear reactors linings. This special high temperature, flame retardant silicone also provides longer shelf life and improved resistance to abrasion, flexing, tearing and puncture. The extra silicone coating also prevents loose ambient fibers, thus creating a safer, healthier environment.

| | |
|---------------------|--|
| Color | Silver Grey |
| Service Temperature | 260°C for Contacting temperature ; 300°C for brief periods and down to -52°C |
| Thickness | 0.45mm ± 0.004mm |
| Gram Weight | 560g/m ² ± 10% |
| Coarint | Double side silicone coating |
| Width | 1.0m or 1.5m |
| Waeve type | Satin |



● E-glass

E-Type E glass fiber needled felt is made from uniformed length continuous fibers with opening by air forming and made by mechanical bonding method any binder. The characteristics are excellent for vibration, dispersion resistance and very smoke.

| | |
|-------------------------------|----------------------|
| Color | White |
| Service Temperature | 550°C |
| Density | 100kg/m ³ |
| Thickness | 25mm/30mm/50mm |
| Thermal Conductivity | at 24°C, 0.036W/M.k |
| Combustibility | Non-combustible A1 |
| Shot Content | 0.002% |
| Tensile strength | 0.712N/mm |
| Longitudinal Tensile strength | 1.944N/mm |
| Fiber diameter | 0.09um |
| Strength of Extension | 350kg/m ² |
| Linear expansion | 4.8x10 ⁶ |



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● Ceramic Fiber

Ceramic fiber blanket is made of aluminum silicate filaments through a special double-sided needle punching process. After the double-sided needle punching process, the fiber interlacing degree, anti-delamination performance, tensile strength and surface flatness are greatly improved. The fiber blanket does not contain any organic binder to ensure that the ceramic fiber blanket has good manufacturability and stability under high and low temperature conditions.

| | |
|----------------------|-----------------------|
| Color | white |
| Service Temperature | 1260°C |
| Density | 100kg/m ³ |
| Thickness | 25-50mm |
| Thermal Conductivity | at 200°C, 0.068W/m.k |
| Combustibility | Non-combustibility A1 |
| Shot Content | 11% |
| Tensile strength | 30 Kpa |
| Fiber diameter | 2um |
| Link Shrinkage | 1000°Cx24h≤2.5% |



● Ceramic Fiber Cloth

Ceramic fiber cloth is made of high-strength ceramic fiber, spun and woven. According to different use temperatures and conditions, glass fiber heat-resistant alloy wire and other reinforcing materials are added. The continuous use temperature is 1000°C and the test temperature is 1200°C. It has good acid and alkali corrosion resistance and resistance to aluminum, zinc, molten metal erosion, good high temperature strength and thermal insulation performance.

| | |
|---------------------|-------------------------|
| Color | white |
| Service Temperature | 1000°C |
| Density | 500-600g/m ² |
| Thickness | 2-5mm |
| Combustibility | Non-combustibility A1 |
| Organic Content | 12% |



INSULJACKET

- Hi-temp Silicone Cloth

This product is a high temperature resistant inorganic fiber with a silica (SiO₂) content higher than 96% and a softening point close to 1700°C. It can be used for a long time in a 1000°C environment, work for 10 minutes at 1450°C, and work for 15 seconds at 1600°C and still remain in good condition. The product is widely used in aerospace, metallurgy, chemical industry, building materials, fire protection and other industrial fields.

| | |
|---------------------|-------------------------|
| Color | Light yellow |
| Thickness | 0.7±0.05mm |
| Service Temperature | 1000°C |
| Density | 600g/m ² ±30 |
| Silica Content | 97% |
| Linear Shrinkage | 8% |
| MD BRK STRN | 938N/inch |
| CD BRK STRN | 625N/inch |
| Coating | 0.9% |

