

# **PBM INSULATIONS**

Hitech Insulation Products





















PBM is the leading manufacturers & suppliers of glass wool products, with nearly two decades of experience in manufacturing of insulation products. Having started as a small manufacturing facility of glass wool products in 1993, PBM has crossed many milestones. Since then PBM has built a strong reputation in domestic as well as international markets as a premiere manufacturers of glass wool products. PBM is also among a handful of companies in this sector that is mindful of the environment and social costs of manufacturing.

PBM's commitment to high standards of quality, adherence to delivery timelines and customer service has helped it stand out.

Currently PBM is supplying to several companies located all over INDIA. Our products include glass wool products used as sound suppressors for generators & muffler assembly used in the automobile & genset industries, insulation for microwaves ovens, filtration etc

#### Research & Development

The R & D of PBM is committed to adapt, modify and develop the product to fulfil customer's requirements and needs in time. The R & D centre is thoroughly equipped with ovens, muffle furnace, thickness tester, desiccators, electronic weighing machine and other testing equipments. PBM's R & D many a times is known for developing innovative concept into modified upgraded products.

We are constantly on the lookout for new ideas to put forward the best which the industry has to offer. Our R & D department follows stringent Quality Control measures. We also ensure strict adherence to delivery schedules.

#### Manufacturing Facilities

With over 10,000 sqmt. of captive and distributed manufacturing space, we have a large capacity to meet our growing business needs. We use a combination of modern and legacy manufacturing techniques.

We have adequate captive power supply to ensure uninterrupted operations.

### **Process**

Our process to manufacture Glass Wool products used as Sound Suppressors for Generators & muffler assembly & insulators for Microwave & Filtration Purposes is under constant Quality Control Checks. The strict vigil at every stage of production has enabled the company to achieve a big name as a company is creating new standard of quality.

# Our Business Partners















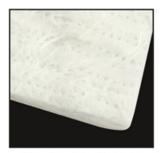








# E Fiber Glass Products



Fiberglass Needled Mat



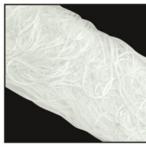
Laminated glass slabs



Tubes & Moulds



Other products



Long Threaded glass fiber



E Fiber glass products are comprised of high purity E-Glass fibers. Each strand is chopped into a  $2\sim3$  inch fraction by the fiber cutting machine and then puffed, carded and continuously needled by thousands special needles.

These products are comprised of inorganic E-Glass fibers. It mainly contains siliceous alumina and calcium oxide.

It is characterised by heat-resistance, tensile strength, tenacity, fire proofing, anti erosion, good electrical insulation and sound absorbency.

#### Specifications

Thickness: 3 MM to 75 MM

Density: 24 Kg/m³ to 300 Kg/m³

Heat Resisting: Below 800 °C

Thermal Conductivity: 0.300 kcal/m hr C

Specific heat: 0.19cal/9°C

High tensile strength: 350kg/mm²

- E fiberglass products was immerged into resin and in shape of board. Can be applied to heat and sound insulate of building, gaskets for air conditioning.
- E fiberglass products faced aluminium foil or plastic cloth and made in shape of belt. Has good performance on heat insulation and protection for heat & cold pipeline, underground pipeline.
- E fiberglass products have excellent performance on heat insulation efficiency, odurability, fireproofing, and no corrosiveness. It can be applied to automotive catalytic converter, Marine industrial, boiler, also suitable to home appliances. It can replace asbestos product.
- Acoustic performance of E-fiberglass products: These products have an excellent noise isolation capacity; absorbs noise and also vibration.



# Ceramic Fiber Products



Ceramic Blanket



Tubes & Moulds



Laminated ceramic slabs



Ceramic Paper



Bulk Fiber

Ceramic fiber blanket is made from high quality Gao-ling clay, high purity alumina and silica oxides by spun or blown process. It is asbestos free. No chemical binder is added. Double-size needling provides blanket with great tensile or handling strength for easy installation. Blankets are available in various classified temperature from  $1260^{\circ}$  C to  $1430^{\circ}$  C.

Ceramic fiber blanket is resistant to most chemicals attack except hydrofluoric Phosphoric acid and high pH alkali (Na2O or K2O). Its thermal and physical properties cannot be affected by oil, steam and water.

#### **Specifications**

- Thickness: 1MM, 3MM, 6 MM, 12 MM, 25 MM, 50 MM
- Density: 64 Kg/m³, 96 Kg/m³, 128 Kg/m³
- Heat Resisting: Below 1260°C
- Dimensions: As per requirements

- Petrochemical process heater refractory fiber lining.
- Heat treating furnace or intermittent (shuttle) kiln hot face lining.
- General furnace backup insulation.
- Heat seals for kiln car or furnace door.
- Electrical insulator.
- High temperature acoustic.
- Fire protection.



# C Glass Fiber Products



C Glass fiber blanket



Tubes & moulds



Other products

Chemical glass fiber is made from E-glass and C-glass micro-fiber with diameter from 0.3um to 6um in yellow and with low wet ability, incombustibility, and resistance to high temperature and corrosion, even-distributed of filaments, low shot content, high tensile strength, specific surface area and electric isolation. It is an ideal material for absorption, filtration and thermal insulation.

#### **Specifications**

Thickness: 12 MM, 25 MM, 50 MM

Density: 24Kg/m³, 32 Kg/m³ and 48 Kg/m³

Heat Resisting: Below 500 °C

Heat Conductivity: 0.038

- Microwave ovens
- Muffler assembly
- Refineries and petrochemicals
- Thermal power plants
- Process equipment manufacturers
- Chemical and fertilizer plants
- Sugar, textile, food preservation and canning industry
- Hotel and building industry
- Dairy equipment
- Mobile transport
- Air conditioning and ventilation systems
- Underground piping



Felt pads are used as an insulators and sound absorption. These felts are made from 100% virgin cotton offs cuts and do not contain any chemicals in it. These are fire retardant as well. Special characteristics are:

- Impeccable quality
- Composed entirely of fibers interlocked physically
- It can be thin, soft or hard, white or colored
- Composed either wholly of wool or in combination with other synthetic fibers

### **Specifications**

- Density: 800 GSM to 1600 GSM
- Thickness: 5MM to 20 MM

- Anti-vibration & sound Absorption
- Sealing
- Filtration



PBM's knitted wire mesh is manufactured from an endless wire that is formed into loops and subsequently Networked, providing elasticity and resilience not found with woven wire or powdered metal products.

The diversity and versatility of wire mesh enables PBM to knitted wire mesh produce products for a wide variety of applications, including:

- Vibration & Shock Absorption
- Air & Liquid Filtration
- Noise Suppression
- Gaskat & Sealing
- EMI/RFI Shielding
- Mist Elimination & Process Separation
- Flame Capture Device
- Engine Catalysts



# Silica Fiber Needled Met



Silica fiber mat has been developed an a high temperature type product based on material with more than 90% of Silica (Sio<sub>2</sub>) components. It has good effect of sound absorption and heat insulation. Use glass fiber yarn as raw material, cut into fixed length, after card and layer, then send into the needled loom, punched into mat.

Silica fiberglass materials with low thermal conductivity and high heat resistance are excellent high temperature insulators, They can be used over long periods without losing the properties and without melting and vaporising at temperatures of up to  $1000^{\circ}$ C and for a short period at temperatures fo up to  $1300^{\circ}$ C

#### **Properties**

Low heat conductivity, high electrical insulation properties at elevated temperature.

Silica mats maintain their excellent properties after long exposure to temperature as high as  $1000^{\circ}$ C, and short-time exposure up to  $1300^{\circ}$ C

#### **Application**

High Temperature Insulators







#### FLEXIBLE INDUSTRIAL INSULATION FOR HIGH-TEMPERATURE APPLICATIONS

Pyrogel XT-E is a high-temperature insulation blanket that is formed of silica aerogel-which possesses the lowest thermal conductivity of any known solid - and reinforced with a non-woven, glass - fiber batting

Pyrogel XT-E is our easiest product ever to handle, store, and install. It offers same industry-leading thermal performance as Pyrogel XT, with standard roll sizes and a product form that dramatically reduces handling duct and installation and claean-up.

Ideal for insulation piping, vessels, tanks, and equipment, Pyrogel XT-E is an essential material for those seeking the ultimate in thermal efficiency.

#### Advantages

- Superior Thermal Performance
- Reduced Thickness and Profile
- Less Time and Labor to Install
- Physically Robust
- Shipping and Warehousing Savings
- Simplified Inventory
- Hydrophobic Yet Breathable
- Environmentally Safe

#### Physical Properties

- Thicknesses 5 mm & 10mm
- Max. Use Temp.- 1200°F (650°C)
- Color-Maroon
- Density 12.5lb/ft3(0.20 g/cc)
- Hydrophobic Yes



# Stainless Steel Wool and Product



PBM's Stainless Steel wool AISI 434 is used by the most important car and motorcycle silencer manufacturers for its acoustic insulating properties and resistance to high temperatures. Stainless steel wool should be used when corrosion has to be avoided. It also withstands to high temperatures (up to 850°C) common in industrial processes and it is resistant to abrasion. Stainless Steel wool is not inflammable.

# <u>Applications</u>

- Exhaustion systems for combustion engines.
- Insulation application (temperature and sound), effective replacement for asbestos.
- Filtering techniques (Liquids and gases).
- Rolls and mats for conveyer and transport systems during glass manufacturing processes.
- Special clearing processes with chemicals.
- Common renovation, Clearing and polishing activities where corrosion must be avoided.





CV mat is an intumescent mat designed for increased erosion resistance and reduced peak holding forces. CV mat has an overall reduced bulk density and reduced peak holding force for thin wall substrates.

#### <u>Features</u>

- Reduced peak holding forces
- High erosion resistance
- Low bulk density

#### **Specifications**

Density: 0.68 1.10 g/cm3

• Thickness: 5 MM to 10 MM

#### **Application:**

- High aspect ratio monolith configurations
- Thin-wall monoliths
- Close-coupled converters
- Manifold-mounted converters

#### Composition

- LOI weight % Range 6.0 13.0
- Vermiculite Weight % Range 30.0-45.0
- Ceramic Fiber Weight % Range 45.0-60.0

#### Thermal Mechanical Analyzer

• Expansion properties under 0.345 N/mm2 (50psi) Pressure:

| T1/T0 Expansion Ratio           | ≥ 0.85       |
|---------------------------------|--------------|
| T2/T0 Expansion Ratio           | ≥1.25        |
| Expansion Temperature(oC)       | <u>≤</u> 460 |
| T50/T0 50 Cycle Expansion Ratio | ≥1.20        |



#### Stitched Combo Mat

E-Glass Stitch Combo Fabric consists of two or more layers of fiberglass rovings which are stitch-bonded. One layer of rovings consists of parallel aligned roving and different layers of rovings can be oriented differently and have different linear density. The rovings specification, rovings orientation, number of rovings layers, mat width and roll diameter can be tailor-made according to customers' requirements.



# Texturized Yarn Woven Sleeve

It is round sleeve made of texturized yarn. This type of sleeve is weaved through special machines. The diameter and length are customized according to the requirement of the customer. The working temperature for this sleeve is 800oC. This type of sleeve is used for covering the pipe of exhaust assemblies/silencer used in automobile and genset industries. This is used to get rid of the heat coming out of the silencer.





# <u>Texturized Fiberglass Tape</u>



Texturized fiberglass self adhesive tape used for insulation purposes.

#### **Specifications**

Thickness: 0.8-3.0 MMWidth: 20-300 MMHeat resistance: 550'C.

- Insulation for wrapping hot pipes increasing the stability, cut resistance protection against fraying.
- Protecting cables from heat and fire insulation for wrapping hot pipe vertical strip furnace curtains.
- Specially used in flange jointing with bolts.







The alkali-proof fiberglass mesh uses the machine-woven material of central-alkali and or non-alkali as material and treats with alkali-proof coating. The strength, bonding, smoothness and fixing of the product are very well. It is widely used for reinforcement of walls, keeping warm exterior walls and water-proof of building roofs, other than are the wall reinforcement of cement, plastic asphalt, marble, mosaic and so on. It is an ideal material for construction.

The fiberglass mesh has a very important function in keeping warm system, which is prevent from crack. Because of its perfect resistance of chemical corrosion, such as acid and alkali, and the high strength of longitude and latitude, it can distribute the stress on the insulation system of external walls, avoid deformation of the insulation system caused by external impact and pressure, and improve the impacting capability of the insulation layer. Besides, with easy in application and simple quality control, it functions as the "soft rebar" in the insulation system.



#### E Fiber Glass Fabric



The outstanding properties of thermal resistance, high strength, rot and mildew resistance make fiberglass woven fabrics be valuable over a wide range of marine and industrial applications. It is the replacement of asbestos. But compared with silica fabric, it is much cheaper.

They can be produced by different weaving-plain, twill, and satin. The products can be treated in different ways in order to meet specific purpose.

#### <u>Features</u>

- Woven from best quality texturized glass fiber yarn.
- High quality, warm keeping thermal insulator.
- Dimensional stability
- High strength
- High heat resistance
- Good chemical resistance
- Durability
- Forms around complex surface shapes
- Does not harm for health

- Marine and Industrial applications
- Thermal insulation, sound and heat protection
- PCB Board for computer
- · Basic cloth for coatings and laminations
- High temperature, electrical insulation
- Used for anticorrosion, corrosion resistance and insulation of pipes and storage tank in power stations, oil fields, chemical plant, paper mill and environment protection where highly corrosive mediums are present.





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