

Insulbatte/ Tempmat Properties

The general transition from asbestos to glass fibers has resulted in an increasingly wide range of applications for Insulbatte/Tempmat – a mechanically (rather than organically) bonded glass fiber insulating blanket. A 100% "E" fiberglass mat, Insulbatte/Tempmat fabric is manufactured in web form and mechanically needled together to form thicknesses of 1/4", 1/2" and 1". Long textile fibers have been accurately chopped to provide maximum density, high insulation and strong physical properties in temperatures up to 1200°F.

Insulbatte/Tempmat fabric is noncorrosive, non-combustible, nonalkaline and chemically stable. Its excellent heat resistance, flexibility and low thermal conductivity make Insulbatte/Tempmat products effective, low-cost replacements for asbestos mats, millboard refractory paper and other similar products.

Insulbatte/Tempmat products are being used to solve increasingly complex applications in oil refineries, steam and gas turbines, exhaust systems on diesel tugs, tankers, Coast Guard and Navy vessels, and pleasure yachts. They are used to relieve stress at welding points and on valve flange covers. In addition, Insulbatte/Tempmat blankets act as insulators over automotive thermactor switches, for floor pans over catalytic converters and in luggage compartments.



In nuclear power plants, these blankets reduce labor costs during removal for inspection and service, and cut re-insulation costs associated with poor-fitting rigid block.

Insulbatte/Tempmat fabric meets the requirements of commercial and government specifications:

- NRC 1.36
- MIL-I-24244
- MIL-I-16411, Type II
- All pertinent automotive specifications
- Compliance with government specifications; US Coast Guard incombustible materials, USCG 164-009

Insulbatte/Tempmat Bonded Glass Fiber Mat

	Style #1006	Style #1050	Style #1031
Thickness (in)	1/4*	1/2	1
Weight (oz/ft ²)	4	6	15
Width (in)	60	60	60
Roll Length (ft)	150	75	45
Area (ft ² /roll)	750	375	225
Approx Roll Weight (net lb)	180	140	221

* Actual thickness ranges between .36" and .48". The minimum thickness is .25".

Note: Width and roll length can be made-to-order. All values above are nominal values.

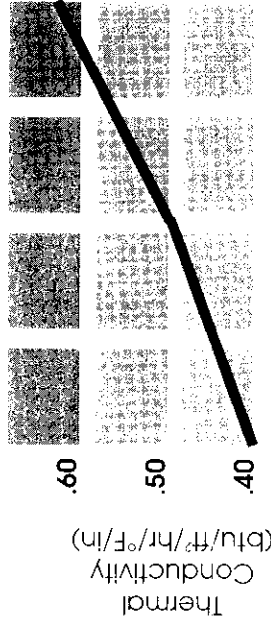
PHYSICAL PROPERTIES

Service TemperatureUp to 1200°F
 Fire ResistanceIncombustible
 Density (Approximate)9 lb/ft³
 Loss in Weight at 1200°FUp to 2%
 Moisture AbsorptionNegligible

THERMAL CONDUCTIVITY

"K" value at 9.1 lb/ft³

Mean Temperature	"K" - btu/ft ² /hr/°F/in
300°F	0.40
500°F	0.50
700°F	0.65



PROPERTIES OF FIBERGLASS "E" GLASS

Physical/Mechanical Properties of Glass Fibers

Specific Gravity2.60 g/cm³
 Density0.094 lb/in³
 Tensile Strength (PSI x 10³ @ 70°F)500 lb

Modulus of Elasticity (PSI x 10 ⁶ @ 72°F)	10.5 lb
After Heating (PSI x 10 ⁶ @ 1000°F)	11.8 lb
Elongation @ 72°F	4.8%

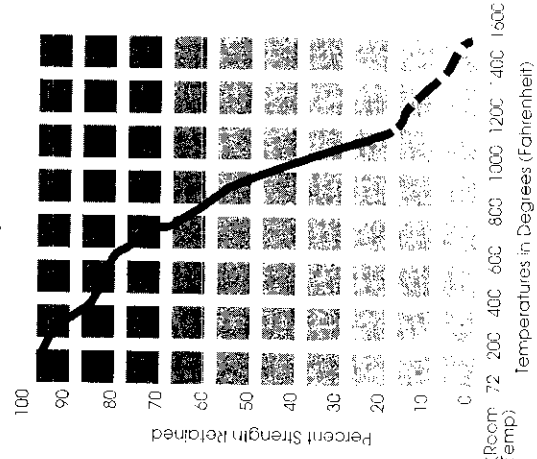
Thermal Properties of Bulk Glass

Softening Point	1500°F
Strain Point	1100°F
Annealing Point	1200°F

Electrical Properties of Bulk Glass

Dielectric Constant	
1 MHz @ 72°F	6.33
10 KHz @ 72°F	6.13
Power Factor	
1 MHz @ 72°F	0.001
10 KHz @ 72°F	0.0039

GLASS FILAMENT TENSILES at various temperatures



Note: The physical and performance properties cited in this literature have been derived from tests conducted by various fiber companies and JPS. Tests have been conducted on both fiber and fabrics woven with bulked glass fiber.

Reference to US Government specification values as well as information provided on certain end uses which currently use bulked glass are presented for the information of potential customers in determining the potential suitability of Insulbatte/Tempmat products for their own applications. No claims are made as to the accuracy or applicability of the test methods employed or the results derived therefrom.

IMPORTANT CAUTIONARY NOTE: Items of protective equipment manufactured from Insulbatte/Tempmat fabrics, such as aprons, gloves, mittens, etc., should be labeled to show the maximum short-term and continuous-exposure temperature limits established in accordance with the standard specifications applicable to the item of equipment being offered. JPS Glass Fabrics, by being only the manufacturer of the fabric, cannot be responsible for the failure to attach such labels to the finished products or for information thereon contained.