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TEMPMAT

Technical Data:

The general transition from asbestos to glass fibers has resulted in an increasingly wide range of application for Tempmat, rather than organically bonded glass fiber insulating blanket. A 100% “E” fiberglass mat, Tempmat is manufactured in web form and mechanically needled together to form thicknesses of ¼”, ½” and 1”. There are no binders in Tempmat. Instead, long textile fibers have been accurately chopped to provide maximum density, high insulation and strong physical properties in temperatures up to 1200°F.

Tempmat is non-corrosive, non-combustible, non-alkaline and chemically stable. Its excellent heat resistance, flexibility and low thermal conductivity make Tempmat an effective low-cost replacement for asbestos mats, millboard refractory paper and other similar products.

Tempmat is being used to solve increasingly complex applications in oil refineries, steam and gas turbines, exhaust systems on diesel tug, tankers, Coast Guard and Navy vessels, and pleasure yachts. It is used to relieve stress at welding points and on valve flange covers. In addition, Tempmat acts as an insulator 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 reinsulation costs associated with poor fitting rigid block.

Tempmat meets the requirements of commercial and government specifications.

NRC 1.36
MIL-1-24244
MIL-1-16411, Type

All Pertinent automotive specifications
Compliance with government specifications;
U.S. Coast Guard incombustible materials,
USCG 164-009

	<u>Thickness</u> In.	<u>Weight</u> Oz/sq ft	<u>Width</u> In.	<u>Roll Length</u> Ft.	<u>Area sq</u> <u>ft/roll</u>	<u>Approx. Roll Weight</u> Net lbs.
Style #1006	1/4	3	60	150	750	140
Style #1050	1/2	6	60	75	375	140
Style #1031	1	15	60	45	225	221

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

Physical Properties

Service Temperature.....up to 1200°F
 Fire Resistance.....Incombustible
 Density (Approximate).....9 lbs/cu ft
 Moisture Absorption.....Negligible



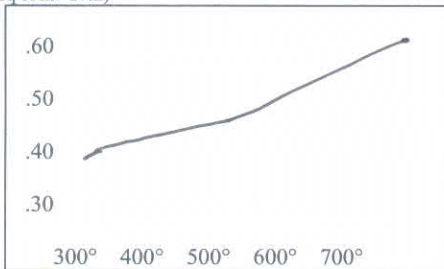
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Thermal Conductivity

“K” value at 9.1 lbs/cu ft

Mean Temperature “K”—btu/sq ft/hr/°F/in	
300°F	0.40
500°F	0.50
700°F	0.65

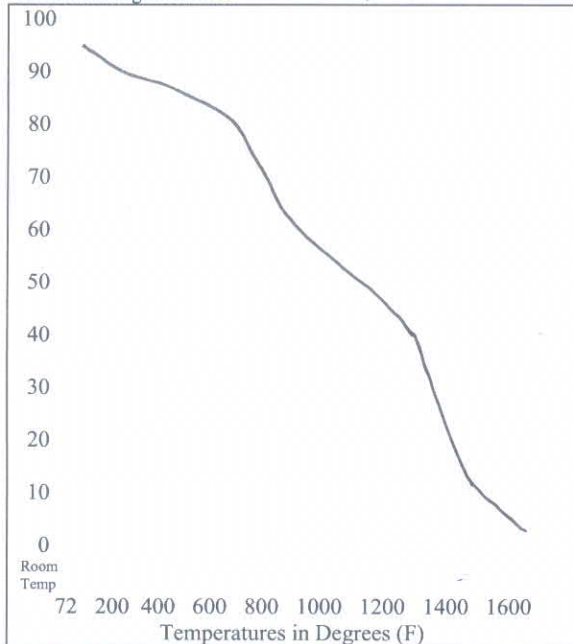
Thermal Conductivity
 (btu/sq ft/hr/°F/in)



Glass Filament Tensiles

At various temperatures

Percent Strength Retained



Properties of Fiberglass “E” Glass

Physical/Mechanical Properties of Glass Fibers

Specific Gravity:	2.60 grams/cc
Density:	0.094 lbs/cu/in
Tensile Strength: (PSI x 10 ³ @ 70°F)	500 lbs
Modulus of Elasticity: (PSI x 10 @ 72°F)	10.5 lbs
After Heating (PSI x 10 @ 1000°F)	11.8 lbs
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
10KHz @ 72°F	6.13
Power Factor	
1MHz @ 72°F	0.001
10KHz @ 72°F	0.0039

Note: The physical and performance properties cited in this literature have been derived in tests conducted by various fiber companies.

Tests have been conducted on both fiber and fabrics woven with bulked glass fiber.

Reference to U.S. 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 these 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 fiberglass 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.