

CONFIDENTIAL

DESIGN		THERMAL INSULATION STANDARD ENGINEERING SPECIFICATION	
MATERIAL SPECIFICATION SERIES 100 PREFORMED BLOCK AND PIPE		ISSUED OCT 1954	SN 100 M
		REVISED APRIL 1955	Page 1 of 5
Code	101*	102*	103
Material	85% Magnesia	Calcium silicate	Diatomaceous earth
Material Description	Hydrated basic magnesium carbonate 80% by weight minimum	Staple, cellular, calcined fire clay base	Diatomaceous earth, asbestos fiber, with bonding clay and cementing materials
Filler	Asbestos or glass fiber		
Binder	Clay or other cementing materials 5% by weight		
Temperature Range	100°F. to 500°F.	100°F. to 1200°F.	500°F. to 1800°F.
K Factor	500°F. - 0.55 max.	500°F. - 0.54 max.	500°F. - 0.77 max.
Density	11-14 lb. per cu. ft.	11 lb. per cu. ft.	24-27 lb. per cu. ft.
Compressive Strength			
Manufacturing Process	Machine molded or extru. Pipe mach. cut on diameter.	Machine extruded. Pipe mach. cut on diameter.	Machine molded. Pipe mach. cut on diameter.
Resistance to breakage in handling	Good	Good	Good
Dimensions	ASTM **	ASTM **	To Specification
Other Qualifications		Good mechanical strength with low shrinkage.	
The following materials have proven satisfactory in field tests and proof has been furnished by the manufacturers that their product meets the above specifications.			
* Bands are supplied at extra cost. Order must state "without bands" if not required. For 11" IPS and larger there is an additional charge for 2-oz. canvas cover. Material should be specified "without 2-oz. canvas" to avoid extra charge. ** New Simplified Dimensional System sponsored by ASTM	85% Mag. Philip Carey Mfg. Co.	Calcisite The Ruberoid Co.	High Temp. No. 10 Philip Carey Mfg. Co.
	Thermalite 85% Ehret Mag. Mfg. Co., Inc.	Kaylo Owens-Illinois Glass Co.	Enduro 116 Temp. Ehret Mag. Mfg. Co., Inc.
	85% Mag. Johns-Manville Sales Corp.	Caltherm Pabco Products, Inc.	11" Superex Johns-Manville Sales Corp.
		Thermobestos Johns-Manville Sales Corp.	High Temp. Keesby & Mattison Co.
	Featherweight Keesby & Mattison Co.	Kaytherm Keesby & Mattison Co.	
	85% Mag. Mundet Cork Corp.	Tricalite Mundet Cork Corp.	
	Precision-molded Pabco Products, Inc.		
Vendors and merchandise designations are given to describe materials and may not include all acceptable products. Substitutions are to be made only on approval of the authority initiating the use of this Specification.			



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SM 100 M		MATERIAL SPECIFICATION - SERIES 100		OCTOBER 1954
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Code				
Material		Diatomaceous silicas	Asbestos molded	Asbestos and diatomaceous earth molded
Material Description		Diatomaceous silicas and asbestos fibers	Compressed fluffy asbestos sprayed with sodium silicate	Compressed fluffy asbestos sprayed with sodium silicate and diatomaceous earth sprinkled on the asbestos mat
Filler				
Binder				
Temperature Range		500°F. to 1500°F.	100°F. to 700°F.	700°F. to 1000°F.
K Factor		1000°F. - 0.77 max.	500°F. - 0.56 max.	500°F. - 0.58 max.
Density		20-24 lb. per cu. ft.	14 lbs. per cu. ft.	14 lbs. per cu. ft.
Compressive Strength				
Manufacturing Process		Machine extruded, Pipe mach. cut on diameter.	Formed and comp. on mandril, Pipe mach. cut on diam.	Formed and comp. on mandril, Pipe mach. cut on diam.
Resistance to breakage in handling		Good	Good	Good
Dimensions		To Specification		
Other Qualifications			Formed on a mandril to a predetermined wt. Pressed to obtain the desired density, and baked.	Formed on a mandril to a predetermined wt. Pressed to obtain the desired density, and baked.
The following materials have proven satisfactory in field tests and proof has been furnished by the manufacturers that their product meets the above specification.				
CONFIDENTIAL	Tempcheck	Unibestos 750	Unibestos 1200	
	Philip Carey Mfg. Co.	Union Asbestos & Rubber Co.	Union Asbestos & Rubber Co.	
Vendors and merchandise designations are given to describe the materials and may not include all acceptable products; however, no substitutions are to be made without the written approval of the authority initiating the use of this Specification. 				

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Code	107	108	109	
Material	Asbestos sponge		Corrugated asbestos preshrunk	
Material Description	Asbestos sheets separated by finely ground sponged material bonded with adhesive strips.		Alternate layers of plain and corrugated asbestos sheets. Outer covering asbestos felt.	
Filler				
Binder				
Temperature Range	100°F. to 700°F.		100°F. to 400°F.	
K Factor	500°F. - 0.60 max.		200°F. - 0.58 max.	
Density	30 lb. max.			
Compressive Strength				
Manufacturing Process	Laminated - 38 to 42 layers per in. of thick.		3-ply laminate	
Resistance to breakage in handling	Very good		Good	
Dimensions	To Specification			
Other Qualifications	Must be a flexible product		Preshrunk	
The following materials have proven satisfactory in field tests and proof has been furnished by the manufacturers that their product meets the above specifications.				
* Aircell - 4-ply Excel - 6-ply Cavocel - 8-ply	Asbestos Sponge Johns-Manville Sales Corp.		Preshrunk Asbestocel Johns-Manville Sales Corp.	
	Asbestos Sponge Philip Carey Mfg. Co.		Aircell * Philip Carey Mfg. Co.	
	Sponge Felt The Rubensoid Co.		K & M - Aircell Keesby & Mattison Co.	
	Sponge Felt Elvet Mfg. Co., Inc.		B-H Aircell Baldwin Hill Co.	
	Sponge Felt Std. Asbestos Mfg. Co.			
Vendors and merchandise designations are given to describe the materials and may not include all acceptable products; however, no substitutions are to be made without the written approval of the authority initiating the use of this Specification.				
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Vendors and merchandise designations are given to describe materials and may not include all acceptable products. Substitutions are to be made only on approval of the authority initiating the use of this Specification.



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Code	113	114	115
Material	Glass fiber - neoprene coated	Mineral wool (Block only)	Mineral wool - asphalt impregnated
Material Description	Glass fiber coated with factory-applied neoprene finish.	Mineral slag wool	Mineral wool fibers homogeneously impregnated with an asphalt binder.
Filler			
Binder	Phenolic resin	High temp. binder	Asphalt
Temperature Range	40°F. to 175°F.	500°F. to 1700°F.	-200°F. to 100°F.
K Factor	75°F. - .24	500°F. - 0.45 max.	100°F. - 0.34 max.
Density	6 lbs.	19.2 lb. per cu. ft.	
Compressive Strength		12 lb. per sq. in.	
Manufacturing Process	Machine molded	Machine molded	Machine molded
Resistance to breakage to handling	Very good	Good	Good
Dimensions	Std. 2 ft. x 4 ft.		
Other Qualifications			

The following materials have proven satisfactory in field tests and proof has been furnished by the manufacturers that their product meets the above specifications.

CONFIDENTIAL	Fiberglas	Super Temp.	Rock Cork
	Owens-Corning Co.	Eagle-Picher	Johns-Manville Sales Corp.
		Mono-Block	Mineral Wool Board
		Baldwin Hill Co.	Armstrong Cork Co.
			Koleboard
			Baldwin Hill Co.

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