

DESIGN		THERMAL INSULATION STANDARD ENGINEERING SPECIFICATION	
MATERIAL SPECIFICATION SERIES 100 PREFORMED BLOCK AND PIPE		ISSUED OCT 1954	SN 100 M Page 1 of 5
		REVISED APRIL 1955	
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 mech. 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.			
* Bonds are supplied at extra cost. Order must state "without bonds" 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% Ehrer Mag. Mfg. Co., Inc.	Kaylo Owens-Illinois Glass Co.	Enduro Hi-Temp Ehrer Mag. Mfg. Co., Inc.
	85% Mag. Johns-Manville Sales Corp.	Caltherm Pabco Products, Inc.	1/4 Superex Johns-Manville Sales Corp.
		Thermobestos Johns-Manville Sales Corp.	High Temp. Keesby & Mattison Co.
	Featherweight Keesby & Mattison Co.	Kavtherm Keesby & Mattison Co.	
	85% Mag. Mundt Cork Corp.	Tricalite Mundt 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 instituting 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.				
CONFIDENTIAL	* Aircell - 4-ply	Asbestos Sponge Johns-Manville Sales Corp.		Preshrunk Asbestoscel Johns-Manville Sales Corp.
	Excel - 6-ply	Asbestos Sponge Philip Carey Mfg. Co.		Aircell * Philip Carey Mfg. Co.
	Cavocel - 8-ply	Sponge Felt The Rubenoid Co.		K & M - Aircell Keesby & Morrison Co.
		Sponge Felt Ehret Mfg. 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 instituting the use of this Specification.				
				
		DUP 0960621		

SN 100 M		MATERIAL SPECIFICATION - SERIES 100		OCTOBER 1954
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Code	110	111	112	
Material	Vegetable cork	Cellular glass	Glass fiber	
Material Description	Vegetable cork, granulated and compressed into cork-board or molded forms, from material of vegetable origin for low and medium temperature insulation.	Cellular glass foamed and fused into unicellular form.	Textile type fine glass fiber, bonded.	
Filler				
Binder	Natural resin in cork		Suitable	
Temperature Range	-200°F. to 100°F.	-200°F. to 100°F. -300°F. for dual temp.)	100°F. to 350°F.	
K Factor	100°F. - 0.29 max.	100°F. - 0.43 max.	100°F. - 0.21 to 0.26	
Density		10 - 11 lb. per cu. ft.	As specified	
Compressive Strength	15 lb. per sq. in. min.	35 lb. per sq. in. min.		
Manufacturing Process	Machine comp. or molded. Baked at moderate temp.		Machine molded	
Resistance to breakage in handling	Good		Very good	
Dimensions				
Other Qualifications	Pipe covering shall be coated on the outside with heavy mastic.		Bonded with a suitable binder.	
The following materials have proven satisfactory in field tests and proof has been furnished by the manufacturers that their product meets the above specifications.				
* Available with factory-applied glass cloth jacket, specify as PF-A1-1. Available with factory-applied vapor barrier finish, specify as "dual temp."	Cork Armstrong Cork Co.	Foamglas Pittsburgh Corning Corp.	Fiberglas Owens-Corning Corp.	
	Cork Mundet Cork Co.		Ultrafine "Snap-on" Gustin-Bacon Co.	
			Monocover Baldwin-Mill	
			Thermoglas Phillips Carey Mfg. Co.	
			Armoglas Armstrong Cork Co.	
CONFIDENTIAL				



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Code	113	114	115	
Material	Glass fiber - neoprene coated	Mineral wool (Black 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 in 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 Owens-Corning Co.	Super Temp. Eagle-Picher	Rock Cork Johns-Manville Sales Corp.	
		Mono-Black Baldwin Hill Co.	Mineral Wool Board Armstrong Cork Co.	
			Koldboard Baldwin Hill Co.	
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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