

173

MATERIALS		THERMAL INSULATION STANDARD ENGINEERING SPECIFICATION	
MATERIAL SPECIFICATION SERIES 100 PREFORMED BLOCK AND PIPE		ISSUED	.SN 100 M Page 1 of 13
		OCT 1954	
		REVISED	OCT 1965
Code	102° ±	102.1°	
Material	Calcium silicate	Calcium silicate-inhibited	
Material Description	Reacted hydrous calcium silicate reinforced with mineral fibers	Reacted hydrous calcium silicate with inhibitor for chloride stress corrosion cracking and reinforced with mineral fibers	
Temperature Range	1200°F max	1200°F max	
K Factor	500°F - 0.60 max	500°F - 0.60 max	
Density	14 lb per cu ft max	14 lb per cu ft max	
Compressive Strength	60 lb per sq in. min at 5% deformation	60 lb per sq in. min at 5% deformation	
Manufacturing Process	Pen molded, precision molded, or filter press molded	Precision molded	
Resistance to Breakage in Handling	Block must average 2" or greater in drop test per ASTM C 487.		
Dimensions	See SN30	See SN30	
Other Qualifications		Stressed Type 304 stainless steel U-bend specimens at 100°C, when in contact with this insulating material in the Du Pont wick test with 1500 ppm chloride as NaCl in the test water, shall show no cracking at the end of 144 hours exposure	
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-in canvas cover. Material should be specified "without 2-in canvas" to avoid extra charge. † Codes 18d and 18e are acceptable alternatives unless noted on the Project Specifications. ‡ Expanded Perlite insulation. Molded rectangular fitting covers are available in tapered, welded, and sweet types.	Calaflex The Rubberoid Co	Thermalit™ Baldwin-Ehren-Hill, Inc	
	Kaylo Quincy-Corning Corp		
	Thermobestos Johns-Manville Sales Corp		
	Caltemp Fiberboard Paper Products Corp		
	Caroytemp ? Philo Caroy Mfg Co		
	Thermalit™ Baldwin-Ehren-Hill, Inc		DUP 0990071
** Thermalit is a gray material with longitudinal expansion marks on block and pipe covering. The ends and no more than one edge of block and the edges and ends of pipe covering will show curving marks. This material is acceptable in Baldwin-Ehren-Hill printed catalogs, not in catalogs over labeled with a Baldwin-Ehren-Hill sticker. Armstrong "L-K" catalogs with a "S" in the lower left-hand corner of the label will contain acceptable material.			
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 sponsoring the use of this specification.			

848896

DU 045890

Page 2		MATERIAL SPECIFICATION - SERIES 100		UN-10000-1734 Rev Jan 1963
Code	104	106		
Material	Inorganic silicates	Asbestos fiber and sodium silicate		
Material Description	Inorganic silica and asbestos fibers	Compressed fluffy amosite asbestos fiber sprayed with sodium silicate to form a mat containing a minimum of 20% sodium silicate by weight. Asbestos mat is then sprinkled with diatomaceous earth to provide an integral refractory casing		
Temperature Range	100°F to 1800°F	1200°F max		
K Factor	Block - 500°F - 0.58 max	400°F - 0.54 max 600°F - 0.65 max		
Density	Block - 14 lb per cu ft	20 lb per cu ft max		
Compressive Strength	65 lb per sq in. min at 5% deformation	27 lb per sq in. at 10% deformation - dry		
Manufacturing Process		Formed and cased on mandrel. Pipe mesh cut on die		
Resistance to Breakage in Handling	Block must average 3" or greater in drop test per ASTM C 487, tentative method of test for resistance to dropping of preformed block thermal insulation.			
Other Qualifications	Good mechanical strength. Shrinkage less than 2% at 1800°F	Formed on a mandrel to a predetermined weight. Pressed to obtain the desired density, and baked. Stressed Type 304 stainless steel U-bend specimens at 100°C, when in contact with this insulating material in the Du Pont wick test with 1500 ppm chloride as NaCl in the test water, shall show no cracking at the end of 144 hours exposure		
The following materials have proven satisfactory in field tests and proof has been furnished by the manufacturers that their product meets the above specifications:				
* Minimum thickness available 1 1/2", also available in pipe covering on special order † Pipe covering only	Kevlar 30 [®]	Carbosteel		
	Owens-Corning Corp	Pittsburgh Corning Corp		
DUP 0990072				

045897

DU 045891