PLAINTIFF'S EXHIBIT
CHV-570

PABCO

PRECISION MOLDED® INSULATION

GOVERNMENT AND INDUSTRY SPECIFICATION TABLES

Material	Military Specification Number	Federal Specification Number	Qualified Products List	U. S. Coast Guard Certificate	A.S.T.M. Specification Number
"Precision Molded" Caltemp Pipe Covering	MIL-I-2781D Amendment 1 11 Jan. 1965 Grade I, Class b Grade II, Class d Grade III, Class e, Type I	HH-I-00523b Type II 23 Sept. 1964	Caltemp EES-010078	164.009/76/0	C533
"Precision Molded" Caltemp Pipe Covering	MIL I-2781D Amendment 1 11 Jan. 1965 Grade III, Class e, Type II	HH-I-00523b Type II 23 Sept. 1964	Caltemp EES 610551	164.009/76/0	C533
"Precision Molded" Caltemp Blocks	MIL-I-2819D 9 August 1963 Classes 1 & 2	HH-I-00523b Type I 23 Sept. 1964	Caltemp EES-C-3636	164.009/76/0	C533
Super Caltemp "Precision Molded" Blocks	MIL-I-2819D 9 August 1963 Classes 1, 2 & 3	HH-I-00523b Type I 23 Sept. 1964	Super Caltemp EES 610551	164.009/77/0	C533
Alumi-Shield Pipe Insulation		HH-I-00523b Type II Class c 23 Sept. 1964			
Caltemp Cement	None	SS-C-160	None		None
F-1 Cement (Hydraulic Setting Finishing-Insulating 1 coat cement)	None	None	tions. In supplying various agencies of the U. S. Government with this cement we have qualified our quotations with the notation that our cement is "Best commercial quality"		None

PABCO INDUSTRIAL PRODUCTS DIVISION • FIBREBOARD CORPORATION

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PHYSICAL CHARACTERISTICS

PABCO "PRECISION MOLDED" CALTEMP®

PIPE AND BLOCK INSULATION

DESCRIPTION OF MATERIAL

Caltemp is a reacted hydrous calcium silicate material—basically uncalcined diatomaceous earth blended with extra long amosite asbestos fibers. It is manufactured under Pabco's unique patented PRECISION MOLDED process, and in simplified thickness standards.

USES

Used individually and also as an inner or outer layer (dependent on pipe, equipment and/or junction temperature) to form combination insulations.

TEMPERATURE RANGE

Caltemp Pipe and Block Insulations are recommended for temperatures from 200F to 1350F inclusive, in which range they are the most economical material manufactured today.

THERMAL CONDUCTIVITY

Mean Temperature F.	*"K"*
100	.288
200	.343
300	.400
400	.450
500	.505
600	.560
700	.615
800	.670
900	.724
1000	.778

WEIGHT 12 lbs. ± ½ lb. per cubic foot.

COMPRESSIVE STRENGTH At 5% deformation—100 p.s.i. average.
After water soaking 24 hours (while wet), approximately 50% of dry strength.

FLEXURAL STRENGTH 75 p.s.i. average.

LINEAR SHRINKAGE 24 hour heat soaking period at 1350F.—1 to 2%.

LOSS IN WEIGHT After heat soaking for 24 hours at 1350F., approximately 10%.

GOVERNMENT SPECIFICATIONS

	Military Specification Number	*Federal Specification Number*	*Qualified Products List*
Pipe	MIL-I-2781-D 13 June 1963 Amendment 1 11 January 1965 Grade I, Class b Grade II, Class d Grade III, Class e, Type I and II	HH-I-00523b 23 Sept. 1964	Caltemp EES 010078 Caltemp EES 610551
Block	MIL-I-2819D 9 Aug. 1963 Classes 1 & 2	HH-I-00523b 23 Sept. 1964	Caltemp EES-C-3636

If further information is desired, ask for our technical Pabco Heat Insulation Manual from Pabco Engineering Service Units anywhere or

SAN FRANCISCO
NEW YORK
CHICAGO
HOUSTON
SOUTH GATE, CALIF.
SEATTLE

PABCO

INDUSTRIAL PRODUCTS DIVISION
FIBREBOARD CORPORATION
475 BRANNAN STREET, SAN FRANCISCO

Manufacturers of heat insulations since 1920

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Printed in U.S.A.

RECOMMENDED THICKNESSES—[illegible] PIPE INSULATION

	Nominal Pipe Size, Inches	TEMPERATURE OF PIPE, F: 100 to 199	200 to 299	300 to 399	400 to 499	500 to 599	600 to 699*	700 to 799*	800 to 899*	900 to 999*	1000 to 1099*	1100 to 1149*	1200 to 1350*
		Nominal Thickness, Inches											
UTILITY—STEAM GENERATION	1½ & less	1	1	1½	2	2	2½	2½	2½	3	3	3	3½
	2	1	1	1½	2	2	2½	2½	3	3	3	3½	4
	2½	1	1	1½	2	2	2½	2½	3	3	3½	3½	4
	3	1	1	1½	2	2	2½	3	3	3	3½	3½	4
	3½	1	1	1½	2	2½	2½	3	3	3½	3½	3½	4
	4	1	1	1½	2	2½	2½	3	3	3½	3½	4	4½
	4½	1	1	1½	2	2½	2½	3	3	3½	4	4	4½
	5	1	1½	1½	2	2½	2½	3	3½	3½	4	4	4½
	6	1	1½	2	2	2½	3	3	3½	3½	4	4	4½
	7	1½	1½	2	2	2½	3	3	3½	3½	4	4	4½
	8	1½	1½	2	2	2½	3	3½	3½	4	4	4½	5
	9	1½	1½	2	2½	2½	3	3½	3½	4	4	4½	5
	10	1½	1½	2	2½	2½	3	3½	3½	4	4	4½	5
	11	1½	1½	2	2½	2½	3	3½	3½	4	4½	4½	5
	12	1½	1½	2	2½	3	3	3½	4	4	4½	4½	5
	14 & up	1½	1½	2	2½	3	3	3½	4	4	4½	4½	5
PROCESS	1½ & less	1	1	1	1	1	1	1½	1½	1½	2	2	2½
	2	1	1	1	1	1	1½	1½	1½	2	2	2	2½
	2½	1	1	1	1	1	1½	1½	1½	2	2	2	2½
	3	1	1	1	1	1	1½	1½	2	2	2	2½	3
	3½	1	1	1	1	1	1½	1½	2	2	2	2½	3
	4	1	1	1	1	1	1½	1½	2	2	2	2½	3
	4½	1	1	1	1	1½	1½	1½	2	2	2½	2½	3
	5	1	1	1	1	1½	1½	1½	2	2	2½	2½	3
	6	1	1	1	1	1½	1½	2	2	2	2½	2½	3
	7	1½	1½	1½	1½	1½	1½	2	2	2	2½	2½	3
	8	1½	1½	1½	1½	1½	1½	2	2	2½	2½	2½	3
	9	1½	1½	1½	1½	1½	1½	2	2	2½	2½	2½	3
	10	1½	1½	1½	1½	1½	1½	2	2	2½	2½	2½	3
	11	1½	1½	1½	1½	1½	1½	2	2	2½	2½	3	3½
	12	1½	1½	1½	1½	1½	1½	2	2	2½	2½	3	3½
	14 & up	1½	1½	1½	1½	1½	2	2	2	2½	2½	3	3½
COMMERCIAL—CONTINUOUS OPERATION	1½ & less	1	1½	2	2½	3							
	2	1	1½	2	2½	3							
	2½	1	2	2½	3	3							
	3	1	2	2½	3	3½							
	3½	1	2	2½	3	3½							
	4	1	2	2½	3	3½							
	4½	1	2	2½	3	3½							
	5	1	2	2½	3	3½							
	6	1	2	3	3½	4							
	7	1½	2	3	3½	4							
	8	1½	2	3	3½	4							
	9	1½	2½	3	3½	4							
	10	1½	2½	3	3½	4							
	11	1½	2½	3	3½	4							
	12	1½	2½	3	3½	4							
	14 & up	1½	2½	3½	4	4½							
COMMERCIAL—NONCONTINUOUS OPERATION	1½ & less	1	1	1	1½	1½							
	2	1	1	1	1½	1½							
	2½	1	1	1	1½	2							
	3	1	1	1½	1½	2							
	3½	1	1	1½	1½	2							
	4	1	1	1½	1½	2							
	4½	1	1	1½	1½	2							
	5	1	1	1½	1½	2							
	6	1	1	1½	2	2							
	7	1½	1½	1½	2	2							
	8	1½	1½	1½	2	2							
	9	1½	1½	1½	2	2							
	10	1½	1½	1½	2	2½							
	11	1½	1½	1½	2	2½							
	12	1½	1½	1½	2	2½							
	14 & up	1½	1½	1½	2	2½							

*For temperatures above 600F—double layer with staggered joints is recommended.

150° Safety Factor:

Over and above usual competitive calcium silicates

Caltemp takes temperatures to 1350F!

CALTEMP BLOCK INSULATION

RECOMMENDED THICKNESSES†

TEMPERATURE OF SURFACE, F	100 to 199	200 to 299	300 to 399	400 to 499	500 to 599	600 to 699	700 to 799	800 to 899	900 to 999	1000 to 1099	1100 to 1199	1200 to 1350	1350* to 1500
	Nominal Thickness Inches												
UTILITY—STEAM GENERATION	1½	1½	2	2½	3	3	3½	4	4	4½	4½	5	5½
PROCESS	1½	1½	1½	1½	1½	2	2	2	2½	2½	3	3½	4
COMMERCIAL—CONTINUOUS OPERATION	1½	2½	3½	4	4½	—	—	—	—	—	—	—	—
COMMERCIAL—NONCONTINUOUS OPERATION	1	1	1½	2	2½	—	—	—	—	—	—	—	—

†Tabulated thicknesses are optimum thicknesses calculated on an economic basis for heat conservation under average operating conditions and assure adequate temperature control. Unusual conditions may warrant the use of other thicknesses.
*Super-Caltemp blocks.

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