MHD-205

DETRICK THINSULINER CEMENTS

Thinsuliner Cements are semi-refractory products used as an internal lining material in ducts, breechings and stacks carrying heated air. These cements contain hydraulic setting binders to develop the strengths required for such applications. Furnished in dry form, Thinsuliner Cements are ready to be mixed with water at the job site.

TWO TYPES

For various operating conditions and installation techniques, two formulations of Thinsuliner are available. Regular Thinsuliner Cement is stronger, heavier and has higher resistance to abrasion. In contrast, Thinsuliner "SL" has better thermal value and greater resiliency. Comparative properties of the two types are given in the table below.

APPLICATION

Regular Thinsuliner Cement generally is troweled 3/4" to 1" thick, over Detrick GRIPTEX Blocks previously attached to the internal surface of the breeching or stack. (Note: Using special Meehanite studs and castings to attach the block insulation in place, this is identified as "Detrick Thinsuliner Construction", and is designed individually by Detrick's Arch and Wall Division.)

Thinsuliner "SL" has proved adaptable to steel stack lining applications made on the ground, i.e., before the stack is hoisted into position as a unit. Reinforcing steel mesh is first attached to the inside of the stack, spacing it away from the steel surface approximately one-half the total thickness of the lining. Thinsuliner "SL" is mixed with water to a stiff consistency, then slap-troweled through the reinforcing mesh and built up to total thickness. After Thinsuliner "SL" has set, the stack is rotated on the ground and successive quadrants are lined in the same manner.

PHYSICAL PROPERTIES
(Trowel Application)

	THINSULINER	THINSULINER "SL"
Temperature Limit	1800 F	1800 F
Fusion Temperature	2150 F	2250 F
Water Ratio	4 gals./50 lb. bag	5-1/2 gals./50 lb. bag
Setting Time	4-6 hours	4-6 hours
Coverage (Applied and Dried)	25 bd. ft./100 lbs.	33 bd. ft./100 lbs.
Material Requirements	4 lbs./bd. ft.	3.3 lbs./bd. ft.
Density (Applied and Dried)	50 lbs./cu. ft.	41 lbs./cu. ft.
Shrinkage (Wet to Dry, By Vol.)	Less than 2%	Less than 2%
Compressive Strength (Air Cured)	850 psi	260 psi
Density (Fired at 1500 F)	46 lbs./cu. ft.	38 lbs./cu. ft.
Shrinkage (Fired at 1500 F)	2% (Linear)	2.3% (Linear)
Compressive Strength (Fired at 1500 F)	325 psi	90 psi
Thermal Conductivity (k) @ 500 F Mean Temperature	1.4 Btu	0.95 Btu
Shipping Container (Sewn Closure)	50 lb. paper bag	50 lb. paper bag

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STORAGE - Store in a cool, dry location until ready to use.

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