

HOT PIPE COATING

THE HIGH \ LOW TEMPERATURE INSULATION COATING PROVEN TO SAVE BETTER THAN 35% OF FUEL CONSUMPTION INSULATING HIGH TEMPERATURE OVER STEAM PIPES



[PROJECT PICTURES](#)

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PRODUCT DESCRIPTION:

HOT PIPE COATING is a unique combination of high performance specially designed high-temperature resins in a waterborne formula. This coating will dry slowly by evaporation and can be aided in the dry down by adding high heat to the environment. The product remains flexible when dried. **HOT PIPE COATING** was built to be used as the initial primer coating and high build coating applied over hot pipes or other high temperature surfaces to achieve immediate adhesion while calming down the hot surface. Using this coating as the primer and base coat, we can achieve adhesion over the hot surface and create a surface that is insulated to stop heat flow. It is waterborne to offer a nonflammable, non toxic formula for high heat situations.

ROCKWOOL/FIBERGLASS WRAP VS. HPC FOR HOT PIPES :

Rockwool/Fiberglass with Metal Jacket	Hot Pipe Coating
Installation	
Must shut down operation to install	HPC is coated without a shut-down
Insulation Effectiveness	
Deteriorates rapidly and loses insulating value when moisture is present plus elbows & valves can not be wrapped effectively so heat losses are significant in these areas	Non Deteriorating and does not lose insulating value when moisture is present plus can be sprayed on elbows and valves reducing the significant heat losses through these areas
Crack Detection	
When a pipe cracks, the entire Jacket and RockWool or FiberGlass must be removed and repaired that requires downtime	When a pipe cracks, it can be inspected directly on the spot without removal and easily repaired by spraying or trowel application
Condensation	
High due to the air trapping characteristics of	No condensation due to complete

RockWool/Fiberglass	surface bond
Corrosion Under Insulation (CUI)	
High due to condensation problem	No condensation thus no corrosion
Repair	
Must shut down operation to repair	No repair is necessary for HPC
Maintenance Costs	
High due to frequent maintenance required for condensation & corrosion control plus high down time, labour and material costs	Low as HPC is directly sprayed without plant shut down plus the labour and material cost are much lower
Life Span	
Lasts about 6 months	Several years

Note : The cost comparison between Rockwool/Fiberglass vs. HPC coating for hot pipes should be made with respect to the total costs. The total costs include material costs, installation costs, repair costs, frequency of downtime, maintenance costs, labour costs and life span. When all these costs are combined, HPC coating is much superior to Rockwool/Fiberglass insulation as evident in the above comparison.

Insulation Chart



**Waste of Fuel Per Year by Heat Loss From 1 Foot of Pipe
(Steam at 100 PSI / Ambient Temp. 60° F.)**

Pipe Size	BTUs/Hr. Loss	Working Hours	Equivalent Pounds of Fuel			
			Coal		Oil	
			Uninsulated	Insulated	Uninsulated	Insulated
1"	326	2000	80	20	40	10
		6000	240	60	120	30
		8400	340	85	170	43
1½"	447	2000	112	28	56	14
		6000	336	84	178	42
		8400	470	117	235	59
2"	550	2000	136	34	68	17
		6000	408	102	204	51
		8400	508	127	254	64
3"	778	2000	200	50	100	25
		6000	600	150	300	75
		8400	840	210	420	105
4"	978	2000	220	55	110	28
		6000	660	165	330	88
		8400	1020	255	510	128

TECHNOLOGY USED IN THIS PRODUCT:

This formula offers a loose set that is required for quick adhesion while at the same time offering a thick body of ceramics to immediately calm the heat conduction from the surface of the pipe to give better adhesion to the refractory or metal surfaces.

Superior Products International has been experimenting with and developing the uses of "insulation and fire protection" ceramics for over 15 years. This category of ceramic functionality is new to the engineering fields. Only in recent years has the idea of insulation been associated with this new breed of ceramics.

Superior Products International began in the late 1980's to set up an extensive R&D procedure to gather ceramic compounds from all areas of the world for testing. Superior Products International knew that this area had not been thoroughly explored before, nor had any extensive documentation been presented for this application. In contrast, many articles and studies have been devoted to the abrasion resistant ceramic compounds and how they can be used in manufacturing and industrial markets.

Insulative ceramics are completely different and separate from those used for abrasion resistance. As noted in this category, no extensive studies have been performed to determine which ceramic compounds, either natural or manmade would be best suited for eliminating heat transfer. Some studies have acknowledge the "reflection" of heat by mere radiation of sunlight, but since very limited study has been performed, it was thought that reflection was all that this new category of ceramic could provide.

Superior Products International initially worked in the early 1990's with the aid of the **ceramic engineers** at the Marshall Space Center Laboratories, and it was discovered that no real research had been performed across the broad spectrum of possible ceramic compounds in order to determine the scope of ceramics stopping or slowing "heat conduction" rather than merely radiant heat reflection. It was also decided that Superior Products International would continue the R&D work over the next several years to discover the possibilities of this new design of ceramics. An extensive search was organized and begun to locate all possible types of ceramics compounds in the world market for trial-and-error testing. A system was designed to take each compound through a series of heat conduction tests to find its ability to stop heat conduction. More than 1,500 compounds were received and tested. From this R&D period, eight different compounds were identified as having the ability not only to catch and throw heat away from their surfaces in a manner similar to reflection but also to control heat transfer *via* conduction.

Superior Products International chose three of these ceramic compounds to develop its insulation coating called **SUPER THERM**. This is a thin film coating that will protect against heat migration equal to six inches of fiberglass batt insulation when applied over surfaces facing the heat source. Eight of the ceramic compounds were also chosen to work in combination with one another to capture surface heat (**HOT PIPE COATING**).

LIMITED WARRANTY :

Unless Superior Products provides a written warranty of fitness for a particular use, Superior Product's sole warranty is that the product, as supplied, will meet the current sales specifications and is specific only to return of product found to be defective upon opening of container within one year. Customer's exclusive remedy and Superior's sole liability for breach of warranty is limited to refund of the purchase price or replacement of any product shown to be other than as warranted and Superior Products expressly disclaims any liability for incidental or consequential damages.