



The Original and Proven Thermal Insulation Multi-Ceramics Closed Film Coating

Since 2005 we've provided maximum energy efficiency with a high temperature coating designed to insulate any surface. HPC® Coating provides a "true insulation benefit" by holding the heat inside of the coated vessel and increasing the internal temperature/pressure to reduce energy usage.

HPC® Coating Product Line is a combination of three formulas ranging in performance.



HPC® Coating

Ambient to 400°F / 204°C

It is water-borne and extremely lightweight in appearance. HPC® Coating uses a special acrylic resin blend with specific ceramic compounds added to provide a non-conductive block against heat transfer.

*Maximum high temperature coating designed to insulate
Replaces wraps and jacketing:*

- Eliminates CUI • Easy to repair • Easy to maintain
- Reduce energy usage • Water-based and safe application
- Protects personnel • No shut down required



HPC®-INT Coating

**400°F up to 800°F
204°C up to 426°C**

HPC®-INT Coating is designed to control heat transfer on surface. It's water-borne and extremely lightweight in appearance. HPC®-INT Coating uses a special acrylic/silicone resin blend with specific ceramic compounds added to provide a non-conductive block against heat transfer.

Proven Energy Savings

HPC®-HT Coating

**800°F up to 1200°F
426°C up to 650°C**

HPC®-HT Coating is a two-part hybrid silicone/solvent resin (Part B is flammable) and (Part A is water-based resins) using specific ceramic compound loads for application directly over surface temps of 426°C (800°F) and up to 650°C (1200°F). It is designed to block and hold the interior temperature on the surface and reduce conductive heat transfer loss.



CASE STUDY



Award Winning: HPC® Coating

Georgia-Pacific Received an EPA ENERGY STAR New Technology Award for Sustainability with HPC® Coating giving 13-18 month ROI established to Save Koch (GP) Industries millions, received at the Energy Engineers Conference.

Koch Industries and one of their subsidiaries (Georgia Pacific) did a over two year insulation effectiveness test using a new technology saving hundreds of thousands of dollars on one unit in one year.

Look at a couple of paragraphs from their engineering report submitted to EPA ENERGY STAR award group which did win. This is identifying the new technology they used to win the energy saving award and only some of the results.

"The fully insulated digester reduced heat loss by 49% and saved Naheola paper mill an estimated \$332,000 in energy costs annually. It also improved the quality of the cooking process by allowing the digester to better maintain its internal temperature. The HPC also protected the digester from corrosion. The Naheola digester had already begun to experience corrosion, a common issue for digesters of its age. The HPC hermetically sealed the digester to keep out any new moisture, so when some of the HPC was removed in 2022 to allow for repairs to the digester, there was no evidence of new corrosion.

Georgia Pacific is already using HPC at other mills following the results of this experiment. In addition to the energy savings, HPC® Coating's ability to protect manufacturing assets from corrosion could save Georgia Pacific and FHR millions of dollars in equipment replacement costs."

NOTE: This is one unit in one plant saving \$332,000 in one year. In five years the savings would be \$1,460,000 for one unit in only one plant.

NOTE: Provides employee burn protection as a side benefit.

NOTE: Completely stopped CUI corrosion.

Georgia Pacific has around 30 plants with each having several digester units described in this engineering report including hot piping. If one unit saved \$332,000 after the unit was potentially losing money, times all the digesters in all 30 plants plus additional pipes and tanks, what would that savings be... \$20 million dollars plus potentially.

Take the protection from developing corrosion costing millions per year on repair, removal and replacement each year, could that be twice the savings cost in lost energy?

Could a couple of million spent on applying a true insulation coating save \$40 plus million. **The ROI is amazing when you take a couple of seconds to calculate to realize how effective HPC® Coating performs ★**



SPI Coating Products Safe-to-Touch Temperatures, DFT's and Time of Contact with Coated Surface Time of Contact by OSHA: 5 Seconds with No Burn

Maximum Temperature		DFT of HPC® Coating		HPC® Coating Safe-to-Touch Temperature		Time of Hand Contact on the HPC® Coating Surface
°F	°C	mils	mm	°F	°C	
400	204	100	2.5	209	98.3	30 seconds +
450	232	100	2.5	231	110.6	15 seconds +
450	232	200	5.0	210	98.9	30 seconds +
482	250	200	5.0	220	104.4	20 seconds +
482	250	400	10.0	171	77.2	60 seconds +
482	250	680	17.0	139	59.4	60 seconds ++

HPC®-INT Coating						
°F	°C	mils	mm	°F	°C	
500	204	1280	32	126	52.2	60 seconds +
550	232	1280	32	145	62.8	60 seconds ++
600	232	1280	32	162	72.2	up to 60 seconds
650	250	1280	32	174	78.9	up to 45 seconds
700	250	1280	32	185	85.0	up to 30 seconds
750	250	1280	32	194	90.0	up to 30 seconds
800	427	1800	45	152	66.7	60 seconds +

HPC®-HT Coating						
°F	°C	mils	mm	°F	°C	
800	427	2000	50	126	52.2	60 seconds ++
900	482	2280	57	146	63.3	60 seconds ++
1000	538	2280	57	165	73.9	up to 60 seconds
1100	593	2280	57	185	85.0	up to 60 seconds
1200	649	2280	57	196	91.1	up to 60 seconds
1220	660	2400	60	192	88.9	up to 60 seconds

*Summary of the tests conducted in the SPI Coatings Laboratory from 1 August 2018 to 30 September 2018
**Ambient temperature during the tests from 65°F / 18°C to 82°F / 27°C, moderate air movement

