



HPC®-HT Coating

Application Instructions (6/16/17)

HPC®-HT Coating is a two-part water borne coating mixed on job site before application. It is a high-temperature insulation coating designed to block heat transfer for temperatures up to 1112°F (600°C) and is used as a base coat for HPC® Coating on any surface over 400°F/200°C to give better adhesion and long-term sustainability in a high temperature, demanding environment.

It is lightweight and lightly textured in appearance after mixing. HPC®-HT Coating is a hybrid system with specific ceramic compounds to provide a non-conductive block against heat transfer. HPC®-HT Coating offers a non-flammable/non-toxic formula for hot surface applications over standard steam pipe or oven wall construction, and heat exchangers. The coating was designed to create a monolithic insulation system that can be sprayed over extreme temperature surfaces. It can be applied over metal, and most other hot substrates. It can cover all configurations.

NOTE: Part A (larger pail) is a ceramic powder mix and Part B (smaller pail) is all resin. These must be mixed together inside a closed room or tent that blocks all wind.

SURFACE PREPARATION

Surface must be clean from oil, tar, rust, grease, salts, and films.

- 1) Clean **ambient surfaces** using TSP (tri-sodium-phosphate) or a citrus cleaner to release dirt and degreaser residue and pressure-wash if possible @ 3500 psi. and allow to dry
- 2) Salt contamination on a surface can come as a result of salt water, fertilizers, and car exhaust. Use Chlor*Rid or equivalent to decontaminate surface if salts are present. Acceptable levels: Nitrates: 5-10 mcg/cm², Sulfates: 5-10 mcg/cm², Chlorides: 3-5 mcg/cm²
- 3) Clean **hot surfaces** by removing pack rust, loose dirt and rust using a metal brush or mechanical tool. Remove mill-scale by grit blast, power tool or hammer gun.

NOTE: The temperature of a pipe, valve, or tank cannot be determined using an IR-gun by taking the exterior surface temperature where heat is released into the atmosphere. Surface temperatures will rise to match the temperature of the fluid or gas contained once the surface is coated and the heat is held back.

MIXING

NOTE: While mixing and applying HPC®-HT, you should wear a paint respirator at all times.

- 1) Mix with SPI's 6" diameter dispersion blade at a low to medium speed until you achieve a smooth texture.
- 2) Gradually mix small amounts of Part A powder into Part B liquid pail, stirring slowly so as not to have powder floating about. Continue to add gradually until pail B is full.
- 3) Using small amounts at a time, stir pail B back into pail A, until pail B is incorporated completely into pail A.
- 4) There is an induction/rest time of 15 minutes to allow the coating to thicken before the application begins.

NOTE: For start & stop (lunch), clean equipment with soap and water anytime a stop time of 1 hour or more will take place

APPLICATION

HPC®-HT Coating must be applied by spray.

- 1) Use a hopper gun for small applications.
- 2) Use a Graco GTX 2000EX with the flex head gun or hopper gun using a 6-8 mm nozzle. See the SPI Application Equipment sheet to reference suggested machines. For specialty applications, contact SPI.
- 3) For operating temperature below 200°C (400°F), use standard HPC® Coating.
- 4) Applied HPC®-HT Coating should never be over coated with any coating until moisture content is 5% or less.
- 5) **Hot Surface Applications.** Apply a thin priming coat of HPC®-HT Coating at 30 mils wet (0.75mm) and allow coating to cure down and moisture to steam off (approx. 5 minutes). Once steaming has stopped, apply second coat of HPC®-HT Coating at 1mm wet per coat. **Allow coating to completely steam off between coats before applying additional product.** With each coat of HPC®-HT the thickness of each coat can increase until proper thickness is achieved. Allow HPC®-HT to fully dry and cure before top coating.
- 6) Top-coat cured HPC®-HT Coating with regular HPC®+ to continue building the insulation ability. **Follow HPC® application instructions for remainder of coating system.**
- 7) If not spraying for more than 30 minutes, do a hand-stir to get any water separated on bottom back into mix. If not, the initial spray will seem very wet before the HPC®-HT is in motion.
- 8) If bubbles appear after one pass, wait until the surface dries to touch and pat the bubbles down flat before next pass.

NOTE: Many thin coats may be required to reach the total thickness. These coats are done very quickly back to back as the applicator moves along the substrate being coated. A stop and start is not required between coats, unless application area is very small.

NOTE: Most applications of HPC®-HT Coating will be used in a system with HPC® Coating. After HPC®-HT has been applied to manufacturer's recommended thickness, HPC® Coating will be used to continue the application thickness and reach the desired insulation goals.

NOTE: For application over hot, flat steel surfaces, see manufacturer for instructions.

NOTE: If initial coat or additional coats are applied too thick, bubbles will appear and begin to rise. Bubbles can be punctured to release trapped air and pressed down to allow bubble to adhere.

NOTE: The calculated thickness of HPC®-HT should be applied in multi-coats, and all completed in same time frame; start and finish an area.

SAFETY NOTE: (PPE) Respirator with carbon filter must be used when spraying by anyone in the area.

CLEAN-UP EQUIPMENT

During breaks, spray systems should be flushed with soap and water, and waste product disposed of properly.

Storage of Product: Store HPC®-HT Coating between 40°F (5°C) and 120°F (49°C).