SPI COATINGS
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INSULATION AND CORROSION SPECIALISTS

HPC® HT Primer

Technical Data Sheet (01/30/20)

HPC®-HT PRIMER is a single-component resin, water-based coating using specific ceramic fiber loads for application directly over surfaces 200°C (392°F) and up to 600°C (1112°F). It was designed to provide the initial adhesion over extremely hot surfaces before the heavier-loaded HT is applied.

HPC®-HT PRIMER offers a 'green', nonflammable, non-toxic formula for high-heat surface priming. HPC®-HT is easily applied, and can be applied direct to metal, and other high-temperature surfaces.

NOTE: Can be applied over ambient but takes a day to dry.

TYPICAL USES

- As the high-temp primer coat for surfaces greater than 250°C, over hot pipes, tanks, and valves
- Applied when a hot system cannot be shut down.

NOTE: A respirator should be worn while mixing and applying the HPC®-HT PRIMER.

APPLICATION METHOD

The application is applied using a hopper gun or a Texspray 2000, using the smallest tip. For specific instructions on surface preparation, mixing and application, please refer to the HPC®-HT Primer Application Instruction Sheet.

HPC®-HT PRIMER will dry immediately upon contact and be ready for the regular HPC HT application.

NOTES:

1. According to tip size (use smallest tip size), overspray with a hopper gun can be 15-20% loss, and must be factored in.
2. HPC®-HT PRIMER is applied to 1/8-inch (3mm) thickness.
3. Open and stir; will have a textured look.

MINIMUM SPREAD RATES (mil thickness)

22 sq.ft./gal. = 30 mils dry (2.0 sq.mtr. = 0.75mm).
Apply in two coats with each coat @ 40 mils (1mm) wet.
Wait 5 minutes between 1st and 2nd coat.

PHYSICAL DATA

- Solids: By Weight: 43.3% / By Volume: 41.1%
- Dry Time: If between 400-1112°F.; @ 10 seconds per coat, or until steaming action has finished.
- Lead and chromate free
- Water-borne
- Cures by evaporation on hot surfaces
- Weight: 12.00 lbs. per gallon (5.44-kilos)
- Vehicle Type: Silicate hybrid blend
- Shelf Life: Up to 2 years if unopened under appropriate storage conditions (See SDS)
- VOC Level: 200 grams/liter, 1.67 lbs./gal.
- pH: 11.0
- Maximum Surface Temperature when applying: 1112°F (600°C)
- Minimum Surface Temperature when applying: 390°F (200°C); less than 200°C, use regular HPC®
- Maximum Surface Temperature "after curing": 1112°F (600°C)

IMPORTANT

Do not take internally. Avoid contact with eyes. If solution does come in contact with eyes, flush immediately with water and contact a physician for medical advice. Avoid prolonged contact with skin or breathing of spray mist. **KEEP OUT OF REACH OF CHILDREN**.

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Application Instructions (01/29/20)

HPC®-HT Primer is a single-component hybrid resin, water-based coating mixed on job site before application. It is a high-temperature primer designed to provide an initial adhesion layer for better HPC HT adhesion that is highly loaded with ceramic fibers.

It is dense and lightly textured in appearance after mixing. HPC®-HT Primer is a hybrid system with specific ceramic fiber compounds to provide an adhesion layer. HPC®-HT Primer 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 primer 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. Can be applied at ambient but requires a day to dry.

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 saltwater, fertilizers, and car exhaust. If surface is over 300°C, no need to treat. 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 mil-scale by grit blast, power tool or hammer gun. (Never use needle guns)

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 PRIMER, 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.

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 Primer must be applied by spray.

1) Place a drop cloth under the pipe or unit being sprayed to catch any drips.
2) Use a hopper gun for all applications (use smallest tip).
3) The application is applied using a hopper gun. HPC®-HT PRIMER will dry immediately upon contact and be ready for the regular HPC-HT application.

NOTES:

1) According to tip size, overspray with a hopper gun can be 15-20% loss, and must be factored in.
2) HPC®-HT PRIMER is applied to 30 mils (0.75mm) thickness.
3) Open and stir; will have a textured look.
4) For operating temperature below 200°C (400°F), use standard HPC® Coating without Primer to achieve insulation.
5) Regular HPC HT can be applied over the Primer as soon as possible. Allow Primer to completely steam off between coats before applying additional product.
6) If not spraying for more than 30 minutes, do a hand-stir to achieve consistency.

NOTE: The steam release from the water-blended resins has a slight odor and is initially irritating to the eyes. Set up a fan or exhaust to draw any fumes or steam out of the area.

NOTE: Spray in blasts while quickly moving down the surface. The HT Primer is only 38.7% solids and you cannot hold in one place too long.

MINIMUM SPREAD RATES (mil thickness)

22 sq.ft./gal. = 30 mils dry (2.0 sq.mtr. = 0.75mm). Apply ini two coats with each coat @ 40 mils (1mm) wet. Wait 5 minutes between 1st and 2nd coat.

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 Primer between 40°F (5°C) and 120°F (49°C).

SAFETY DATA SHEET (E/S/10/02)

SECTION I - IDENTIFICATION OF PRODUCT AND COMPANY:

PRODUCT IDENTIFIER: HPC HT-PRIMER
GHS PRODUCT IDENTIFIED: Global Harmonized System #3209.10.0000
CHEMICAL TYPE: Water-based
MANUFACTURER: SUPERIOR PRODUCTS INT'L II, INC.
ADDRESS: 10835 W. 78th St., Shawnee, KS 66214
PRODUCT USE: To prime on metal, prior to application of HPC HT-System
EMERGENCY TELEPHONE NUMBER: 800/424-9300; 202/483-7616

SECTION II - HAZARD IDENTIFICATION:

This product is water-based and not classified as dangerous for supply or conveyance. The ingredients are water-reduceable. This product has been analyzed for use in and around food manufacturing and found to be safe for use on non-contact surfaces. No toxics or toxic off-gassing is present.

SECTION III - HAZARDOUS INGREDIENTS:

HAZARDOUS INGREDIENTS	%	CAS/PIN	TLV	PEL
Silicate of Soda	37.5	1344-09-8		
Water	62.5	7732-18-5		

SECTION IV - FIRST AID MEASURES:

EYES: Flush with water for at least 15 minutes; consult physician if irritation continues.
INGESTION: Do not induce vomiting. Drink 1-2 glasses milk/water. Seek medical attention according to amount of product ingested.
SKIN: Wash with mild soap and water.
INHALATION: Remove to fresh air.

SECTION V - FIREFIGHTING MEASURES:

CONDITIONS OF FLAMMABILITY: Not flammable, water-based product
HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, methacrylate and other noxious gases
AUTOIGNITION TEMP.: OR=NA MINIMUM IGNITION ENERGY: NAV
FLAMMABLE LIMITS: (Lower) NAP (Upper) NAP FIRE POINT: NAP
FLASH POINT & METHOD: NAP SENSITIVITY TO MECHANICAL IMPACT? NAP
SENSITIVITY TO STATIC DISCHARGE? No
SPECIAL PROCEDURES: Firefighters should wear full-body protection & SCBA
MEANS OF EXTINCTION: Water, water fog, dry chemical, foam or C02

SECTION VI - ACCIDENTAL RELEASE MEASURES:

Use kitty litter, sand or other to control spread and absorb liquid.

SECTION VII - HANDLING AND STORAGE:

STORAGE REQUIREMENTS: Keep from freezing. Store below 50C. degrees. Keep container closed tightly to prevent drying out.
HANDLING PROCEDURES/EQUIPMENT: Treat as paint product. Use ventilation and protective equipment to suit conditions of use. Use soap and water for clean-up.

SECTION VIII - EXPOSURE CONTROLS AND PERSONAL PROTECTION:

PERSONAL PROTECTIVE EQUIPMENT: Avoid inhalation of liquid when applying. Use particulate respirator.
ENGINEERING CONTROLS: Use mechanical ventilationto control aerosol or mist if prouct is sprayed.

NAP = Not Applicable NAV = Not Available

SECTION VIII - EXPOSURE CONTROLS AND PERSONAL PROTECTION:

Personal Protective Equipment: Half-face respirator w/organic vapor filter, safety glasses w/shields, PVA or nitrile chemical-resistant gloves, skin protection. Avoid prolonged breathing of vapors.

Engineering Controls: Mechanical exhaust fans; use NIOSH explosion-proof equipment.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE AND ODOR: Yellowish liquid, no odor
SOLUBILITY IN WATER: Complete **VOLATILES**: NAP
FREEZING POINT: 32F **BOILING POINT**: >212F. deg. **pH**: NAP
SPECIFIC GRAVITY: 1.3-1.5 **ODOR THRESHOLD**: NAV
COEFF. WATER/OIL: NAV **EVAPORATION RATE**: NAP
VAPOUR DENSITY (Air = 1): NAV **VAPOUR PRESSURE**: NAV

SECTION X - STABILITY AND REACTIVITY DATA:

CONDITIONS OF REACTIVITY: No reactivity
CHEMICAL INCOMPATIBILITY: ND
CONDITIONS OF INSTABILITY: Stable, under normal conditions
HAZARDOUS DECOMPOSITION PRODUCTS: If stored properly, none known
CORROSIVE BEHAVIOR? NO

SECTION XI - TOXICOLOGICAL PROPERTIES:

ROUTES OF ENTRY:SKIN CONTACT _**X**_ EYE CONTACT _**X**_ INHALATION _**X**_
SYNERGISTIC PRODUCTS **NAV** **EXPOSURE LIMITS**: NAV
EFFECTS OF ACUTE EXPOSURE: Burning sensation on mucous membranes & respiratory tract. Flu-like symptoms (fever and chills); skin irritation
EFFECTS OF CHRONIC EXPOSURE: Chemical asthma - chest tightness, wheezing, coughing, shortness of breath. Can cause lung damage.
MUTAGENICITY: NAV **CARCINOGENICITY**: NAV
IRRITANCY: Burning sensation to skin (high pH) **TERATOGENICITY**: NAV
REPRODUCTIVE TOXICITY: NAV
SENSITIZATION: Can cause future reaction to lesser amounts

SECTION XII - ENVIRONMENTAL INFORMATION:

Air -this product is environmentally-friendly and poses no threat to the air.
Water -the resins will be diluted and dissipate when flushed with water.
Soil -the resin contents are biogradeable in ground acids over a period of time. No ecological hazards are known to exist.

SECTION XIII - WASTE DISPOSAL:

Product spill should be contained by previously described absorption methods, and dried product disposed of as normal industrial waste according to all federal, state or governmental regulations.

SECTION XIV - TRANSPORT INFORMATION:

The only restriction to carriage is for protection against freezing. Contents are water-based.

SECTION XV - REGULATORY INFORMATION:

Regulatory agency controls and restrictions are minimal regarding conveyance or use of water-based products other than what has been specifically addressed.

SECTION XVI - OTHER INFORMATION:

NAP