



TemperKote® 1000HSA HOT SURFACE APPLIED

INDUSTRIAL HI-HEAT® RESISTANT COATING

* Maximum Service Temperature 1200°F (649°C)

* Maximum Surface Temperature for Application 500°F (260°C)

Product Description:

TemperKote 1000HSA Industrial Hi-Heat Coatings are based on 100% silicone resin. The coating is specially formulated for application to Hot Surfaces. TemperKote 1000HSA can be applied to metal exhibiting temperatures in the range of 250°F - 500°F (121°C - 260°C). This unique feature allows for the coating of hot equipment without complete shutdown, resulting in a fast turnaround time to resume normal operating temperatures. It should be noted that when applied at ambient temperatures the coating will remain in a tacky state until a minimum temperature of 250°F is reached. Special pigments are utilized to achieve maximum heat resistant properties and color stability.

Characteristics:

Colors	Black, Silver, White, Off White, Dark Gray, Medium Gray, Light Gray, Blue, Beige, Light Beige, Dark Green, Light Green, Safety Blue, Safety Green, Safety Yellow, Safety Orange, Safety Red		
Finish	Flat	Resin Type	Silicone
Thermal Stability	1200°F (649°C)	VOC	Less Than 3.5 lbs. /gal (420 g/L)
Color Stability (*)	1000°F (538°C)	Flash Point	40°F (4.4°C) (PMCC)
Type of Cure	Resin cross-linking	Reducer/Cleaner	TemperKote Reducer HSA
Application Temperature	250°F (121°C) to 500°F (260°C)	Packaging	1, 5 & 55 gal. containers
Solids By Volume	Primer	45% ± 2%	Shelf Life 2 year (unopened)
	Silver	43% ± 2%	
	All Other Colors	53% ± 2%	
Weight Per Gallon	Primer	13.8 lbs. (6.5 kg)	Solids By Weight
	Silver	10.2 lbs. (3.9 kg)	
	All Other Colors	12.0 lbs. (5.8 kg)	
Spreading Rate per Coat	1000HSA	240 – 364 sq. ft./gal (5.9 – 8.9 m ² /L)	
	Silver	4.4 – 6.7 mils wet, 2.0 – 3.0 mils dry 276 – 457 sq. ft./gal (6.75 – 11.2 m ² /L) 3.5 – 5.8 mils wet, 1.5 – 2.5 mils dry	
	All Other Colors	340 – 571 sq. ft./gal (8.34 – 14.0 m ² /L) 2.8 – 4.7 mils wet, 1.5 – 2.5 mils dry	
Drying Time @ 250°F (121°C) & 50% R.H.	To touch		
(*) Higher surface temperatures will speed dry times	15 – 30 minutes		
Curing Temperature and Time	Minimum Curing Temperature	Minimum Curing Time	
	250°F (121°C)	1 hour	

Recommended Uses:

Wherever the need for coating hot in-service equipment arises. Can be used on heaters, stacks, boilers, breeches, mufflers, radiators, storage tanks, pipelines, steam lines, etc., where operating temperature will not exceed 1200°F (649°C). **Not recommended** for use on the **inside** of ovens, stacks, etc.

Performance Information:

This 100% silicone based coating, is able to withstand severe thermal cycling to 1200°F and can be used over TemperKote 1000HSA Gray Primer, or applied directly to clean steel. It has the unique ability to be applied to metal displaying temperature ranges from 250°F -500°F (121°C-260°C). It has exceptional color stability to 1000°F (538°C), Black and Silver to 1200°F (649°C), excellent heat resistant properties, excellent weathering characteristics and good corrosion protection.

Test Data:

Test Type	Reference	Specification Details	Typical Result
Salt Fog	ASTM B117	168 hrs	ASTM D714 – 10 ASTM D1654 – 10 ASTM D610 – 9-G
Adhesion	ASTM D 3359		5B
Impact, Direct/Reverse, inch/lbs	ASTM D 2794		160/160
Flexibility, Mandrel	ASTM D522		1/8" Pass
Pencil Hardness	ASTM D 3363		2H



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Surface Preparation:

General:

For best results surfaces should be free from oil, grease, dirt, mill scale, rust, corrosion products, oxides, paint and foreign matter. All surfaces should be solvent cleaned per SSPC-SP1 and meet SSPC-SP3 minimums with surface profile of 1.0 - 1.5 mils.

STEEL:

Remove all flux, splatter and slag left from welding. Grind all welds until smooth. Remove rust, mill scale, oil grease, and other contamination by solvent cleaning per SSPC-SP1.

For Typical Industrial Environments a low profile, near-white metal blast, SSPC-SP10, is preferred as it will give best results, especially where higher service temperatures are anticipated. Blast profile should be 1.0 - 1.5 mils. Remove all remaining abrasive from surface by air blasting. Coat the freshly blasted surface as soon as possible. Do not allow surface to become wet. Do not wash freshly blasted surface with solvents. For small difficult to reach areas, SSPC-SP11 power tool cleaning to bare metal is acceptable.

For Severe Environments blast surface to commercial blast profile per SSPC- SP5.

NEW GALVANIZED SURFACES:

Remove all oil, grease and flux by solvent cleaning per SSPC-SP1.

WEATHERED GALVANIZED SURFACES:

Remove all dirt, oil and grease by solvent cleaning per SSPC-SP1. Remove rust or foreign deposits by wire brushing per SSPC-SP2 or power tool cleaning per SSPC-SP3.

STAINLESS STEEL SURFACES:

Surface must be clean and dry. Remove all oil, grease, soil, drawing and cutting compounds and other foreign matter by solvent cleaning per SSPC-SP1.

DO NOT USE CHLORINATED SOLVENTS ON STAINLESS STEEL SURFACES.

For large areas steam clean with an alkaline detergent followed by steam or fresh water wash to remove residue.

Application:

Mix thoroughly by boxing or stirring. Spray application is required. **Do not apply heavier film than specified, as the coating may blister when heat is applied.**

HOT STEEL:

IMPORTANT! It is critical to make multiple quick passes to achieve proper coverage rates. These thin passes will allow the solvent to evaporate at a controlled rate insuring no pinholes.

WARNING: Use only Reducer HSA for thinning of any TemperKote HSA series coatings. The use of any other solvent could create a fire hazard and would likely result in poor film characteristics and 'dry spray'.

Where maximum corrosion resistance is desired, apply one coat of TemperKote 1000HSA Primer at approximately 4.4 – 6.7 mils wet film thickness, (240 - 364 sq. ft. /gal.). After primer is dry, apply one coat of TemperKote 1000HSA Series Hi-Heat Coating at the specified coverage rate (refer to characteristics section).

Where maximum corrosion resistance is not required, one coat of the TemperKote 1000HSA Series Hi-Heat Coating can be applied directly to the metal at 1.5 – 2.5 mils dry film thickness per coat (340 - 571 sq. ft. /gal.-all colors and 276 - 457 sq.ft./gal.-silver).

NOTE: Application to hot surfaces increases the possibility of dry spray, maintain a reasonable distance from the surface being coated, avoid reaching and angles greater than 30 degrees.

Application Equipment:

AIRLESS SPRAY:

Titan 740 Impact (or Equivalent)

Fluid pressure 2700 - 3100 psi
Manifold Filter 60 Mesh
Gun Filter 60 Mesh
Hose ¼" diameter
Gun LX-8011
Tip015 - .021

FOR INDUSTRIAL USE ONLY

Read MSDS before opening containers

KEEP OUT OF THE REACH OF CHILDREN

Precautions:

DANGER! FLAMMABLE LIQUID & VAPOR: CONTAINS TOLUENE & PETROLEUM DISTILLATES. VAPOR HARMFUL. MAY AFFECT THE BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. CAUSES EYE, SKIN, NOSE AND THROAT IRRITATION. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Keep away from heat, sparks and flame. VAPORS MAY CAUSE FLASH FIRE. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

USE ONLY WITH ADEQUATE VENTILATION. Do not breathe vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. Close container after each use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

FIRST AID: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, get medical attention immediately. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent container and unused contents in accordance with local, state and federal regulations.

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