



TEMPERKOTE® 850

(Formerly Flame Control 850 Series)

AIR DRIES, NO HEAT CURING REQUIRED

HIGH PERFORMANCE INDUSTRIAL HEAT RESISTANT COATING

*Maximum Service Temperature 850°F (454°C)

DESCRIPTION:

TemperKote No. 850 Series High Performance Industrial Heat Resistant Coatings are based on a specially modified silicone alkyd resin. The coating **air dries** to a tough, hard, weather and heat resistant finish. Special pigments are utilized to achieve maximum heat resistant properties. The curing mechanism is a unique combination of solvent evaporation and resin cross-linking. They do not require any complex heat curing schedule to obtain their heat and weather resistant properties.

No. 850 Series coatings are also suitable for use on stainless steel surfaces, they are formulated with special ingredients to minimize contamination from chlorides, other halides, sulfides, nitrates and metals which are known to induce external stress corrosion cracking. They contain no free metallic zinc and, therefore, will not contribute to embrittlement of stainless steel welds.

RECOMMENDED USES:

Wherever maximum resistance to heat, humidity, and weather is required. Can be used on heaters, stacks, boilers, breeches, mufflers, radiators, storage tanks, pipelines, steam lines, etc., where operating temperature will not exceed 850°F (454°C). **Not recommended** for use on the **inside** of ovens, stacks, etc. **DO NOT USE OVER GALVANIZED METAL OR ZINC RICH COATINGS.**

PERFORMANCE INFORMATION:

This very unique coating performs as well as many pure silicone based paints, but has the distinct advantage of being curable at room or ambient temperature, and can be used over No. 850 Primer, or applied directly to clean steel. It has exceptional heat resistant properties, excellent weathering characteristics and good corrosion protection.

CHARACTERISTICS:

Finish (*) Gloss

Resin Type . . Modified silicone-alkyd

Type of Cure . . Solvent evaporation/
resin cross-linking

Drying Time @ 77°F (25°C) & 50% R.H.

(:) To touch ½ hour
(:) To recoat ½ - 1 ½ hours
If recoating cannot be done within that time, allow to cure for 7 days before recoating.

Curing Temperature & Time
Minimum curing
temperature 50°F (10°C)
Minimum curing time N/A
(See drying time above)

Application Temperature
50°F (10°C) to (:) 180°F (82°C)

Spreading Rate Per Coat
No.2 Silver 500 sq.ft./gal. (12.3 m²/L)
3.2 mils wet, 0.9 mils dry
All other colors
535 sq.ft./gal. (13.1m²/L)
3 mils wet, 1.2 mils dry

Solids by Weight . . . Varies with color

Solids by Volume
No. 2 Silver 30% ± 2%
All other colors . . . 39% ± 2%

Weight Per Gallon . Varies with color

**Flash Point
of Liquid Coating**80°F (26.6°C)
(closed cup)

Reducer/CleanerXylol (Xylene)

Shelf Life 2 year (unopened)

Packaging . . . 1, 5 & 55 gal. containers

Shipping Weight . . . 4 gals. - 45 lbs.
5 gals. - 54 lbs.
55 gals. - 600 lbs.

Application Brush, roller,
conventional and airless spray

(*) Gloss diminishes at higher temperatures.

(:) Varies with drying conditions; also, due to the thermoplasticity of the coating, when applied to hot surfaces [100° to 180°F (38° to 82°C)], it is important to note that the drying times will be greatly increased, as the coating stays soft and tacky for longer periods and full cure (hardness) may not be obtained for 7 days.

* Heat Resistance of Standard Colors:

No. 1 Black	Up to 850°F (454°C)
No. 2 Silver	Up to 850°F (454°C)
*No. 3 Lagoon	Up to 250°F (121°C)
*No. 4 Topaz	Up to 250°F (121°C)
*No. 5 Horizon	Up to 250°F (121°C)
*No. 6 Newport	Up to 300°F (149°C)
*No. 7 Mauve	Up to 250°F (121°C)
No. 8 Walnut	Up to 850°F (454°C)
*No. 9 Fawn	Up to 250°F (121°C)
*No.10 Russet	Up to 450°F (232°C)
*No.11 Quarry	Up to 250°F (121°C)
*No.12 Camouflage	Up to 400°F (204°C)
*No. 13 Dusty	Up to 250°F (121°C)
*No. 14 Golden	Up to 400°F (204°C)
No. 15 Charcoal	Up to 850°F (454°C)
*No. 16 Steel	Up to 250°F (121°C)
*No. 17 Pewter	Up to 250°F (121°C)
*No. 18 White	Up to 250°F (121°C)
*No. 19 Safety Blue	Up to 250°F (121°C)
*No. 20 Safety Orange	Up to 250°F (121°C)
*No. 21 Safety Green	Up to 250°F (121°C)
*No. 22 Safety Yellow	Up to 250°F (121°C)
*No. 23 Safety Red	Up to 250°F (121°C)
Primer	Up to 250°F (121°C)

NOTE: All standard colors will withstand dry service temperatures up to 850°F (454°C). However, during initial heating cycle, there will be a significant darkening of the asterisk () colors, as the temperature range from up to 250°F (121°C) to Up to 650°F (343°C). As the temperature increases above up to 650°F (343°C), the color will lighten to more closely resemble the original color, and will not appreciably change on cooling and reheating. Should the surface temperature not exceed up to 650°F (343°C), the color will remain considerably off color.



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SURFACE PREPARATION:

STEEL: Surfaces should be sandblasted or mechanically wire brushed to remove rust, mill scale, oil, grease, and other contamination. A low profile white metal blast is preferred as it will give best results, especially where higher service temperatures are anticipated.

AGED MASONRY: Scrape, wire brush, or sandblast to remove loose particles of concrete and foreign matter. All oil, grease, and form release compounds must be removed prior to painting.

APPLICATION:

Mix thoroughly by boxing or stirring. Can be applied by brush, roller or spray. Spray application is desired, as a more uniform film is generally obtained. **Do not apply heavier film than specified, as the coating may blister.**

STEEL: Where maximum corrosion resistance is desired, apply one coat of TemperKote 850 Series Heat Resistant Primer at approximately 1.1 mils dry film thickness, (535 sq.ft./gal.). After primer is dry, apply one coat of No. 850 series Heat Resistant Coating at the specified coverage rate (refer to characteristics section).

Note: TemperKote 850 Series **No. 2 SILVER** Heat Resistant Coating should be applied direct to metal, without primer. Two coats are recommended for best results.

Where maximum corrosion resistance is not required, two coats of the No. 850 Series Heat Resistant Coating can be applied directly to the metal at 1.2 mil dry film thickness per coat (535 sq.ft./gal./coat). For temperatures exceeding 700°F (371°C) total thickness of dry paint film should not exceed 1.8 mils.

AGED MASONRY:

No priming required. Apply two uniform coats at the specified wet film thickness (refer to characteristics section).

Note: No. 850 Series Heat Resistant Coatings air cures and, unlike other heat resistant paints, they do not require a complex heat-curing schedule to obtain the indicated heat resistance.

For best performance, it is essential that the temperature be taken up slowly, over a period of hours, to the normal operating temperature.

APPLICATION EQUIPMENT:

Conventional Spray

Air Supply 12 CFM,
50 psi at nozzle, fluid 15-20 psi
Gun . . . Graco 217-800 to 217-816
Type External mix
Reduction Up to 7%

Airless Spray

Titan 740 Impact (or Equivalent)
Pump
Fluid Pressure 2700-3100 psi
Manifold Filter 60 Mesh
Gun Filter 60 Mesh
Fluid Hose ¼" diameter
Gun LX-80 II
Tip015 - .021

PRECAUTIONS:

WARNING! FLAMMABLE LIQUID & VAPOR: CONTAINS XYLENE & 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.

FOR INDUSTRIAL USE ONLY

Read MSDS before opening containers.

KEEP OUT OF THE REACH OF CHILDREN

As we cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used, we accept no responsibility for results obtained by the application of this information or the safety or suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes. We sell the products without warranty or guarantee, and buyers and users assume all responsibility and liability for loss or damage from the handling and use of our products, whether used alone or in combination with other products.