

1500-DTM Series

HiTemp 1500°F Pure Silicone DTM Coating



Highland 1500-DTM High Solids/Low V.O.C. Series Ultra High Temperature coating is based on pure silicone resins with special ceramic colorants and additives. These coatings cure by catalyzation, polymerization, and by subsequent fusion and complexing of the metallics and ceramics. May be used on steel, castings, and other metals capable of withstanding ultra high temperatures. 1500-DTM is also suitable for use on stainless steel surfaces. It is 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.

Tech Specs

Heat Resistance:	1500°F Constant
Vehicle Type:	100% Silicone
Reducer:	Highland Reducer
Mix Ratio:	Single Package
Pot Life:	N/A
Volume Solids:	45%
Theoretical Coverage:	722ft ² /gal. @ 1 mil DFT
VOC:	less than 3.5 lbs/gal (420 g/l)
Flash Point:	40°F (Lowest Flashing Component)
Dry Film Thickness:	2 – 3 mils DFT (in two coats)
Wet Film Thickness:	2.2 – 3.3 mils WFT Per Coat

Dry-time:	Normal
To Touch:	30 Minutes – 1½ Hours
To Handle:	24 hours
Cure Requirements:	1 hour @ 450°F
Hot Application:	N/A
Shelf Life:	2 Years Minimum
Finish:	Low Gloss
Color:	Black, Silver, Other colors available upon request
Packaging:	1, 5, & 55 gallon containers
Storage Temperature:	40°F - 100°F

Surface Preparation

All surfaces should be clean, dry and free of all foreign contaminants.

A SSPC-SP1 Solvent Cleaning with Highland 901 Cleaning Solvent is recommended before blasting or other cleaning method.

Carbon Steel:

Best: A SSPC-SP5 White Metal Blast to achieve a low blast profile of .5-1 mils is recommended

Good: A SSPC-SP10 Near White Metal Blast to achieve a low blast profile of .5-1 mils is recommended

Acceptable: A SSPC-SP6 Commercial Blast to achieve a low blast profile of .5-1 will provide good results in most situations.

Stainless Steel:

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.

Mixing & Application

Mixing: Highland 1500-DTM Series needs to be thoroughly mixed using mechanical agitation. It is ready to spray after proper mixing.

Reduction: Reduction is not required, if desired, reduce by 0% - 10% with Highland #1500 reducer.

Standard Airless Applications

Airless Gun: Titan 740 Impact or equivalent
Pump Pressure: 2700 PSI
Manifold Filter: 60 Mesh
Gun Filter: 60 Mesh

Hose: 1/4 inch ID
Gun: LX-8011 or equivalent
Tip Range: .015 - .019

Do not apply heavier film than specified, as the coating may blister when heat is applied.

Recommended Uses

Wherever the ultimate in heat resistance is desired. Can be used where temperatures are above the decomposition point of conventional silicone hi-temperature paints. The metal must be of a type that will withstand highly oxidative conditions developed at ultra high temperatures. Ordinary cold rolled steel may delaminate and fracture at high temperatures, decreasing the life expectancy of the surface. Can be used on crackers, furnaces, manifolds, turbines and jet engine components, etc. that will be subjected to service temperatures up to 1500°F

Performance

Highland 1500-DTM Series Ultra Hi-Temperature Coatings cure by [1] polymerization [2] fusion of ceramics and [3] by metal complexing. The coating must be heat cured a minimum of one hour at 450°F (232°C) before being subjected to high service temperatures.

Typical Systems

DTM Services: Apply 2 coats of 1500-DTM Series at 1 – 1.5 mils DFT per coat for a total dry film thickness of 2 – 3 mils DFT.

Safety Information

- Use normal precautions such as gloves, facemasks and barrier creams.
- Adequate ventilation must be maintained. In confined areas, applicators must wear constant flow airline respirators.
- If product comes into contact with skin, wash thoroughly with lukewarm water or diluted Boric Acid, and obtain immediate medical attention.
- This product contains **FLAMMABLE** materials. Keep away from sparks and open flames. Observe **NO SMOKING** regulations.
- All electrical equipment and installations should conform to NEC regulations. In areas where explosion hazards exist, applicators should be required to use nonferrous tools, and to wear conductive, non sparking shoes.
- Observe low flash regulations.
- Refer to Safety Data Sheet (SDS) for complete safety instruction

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