Highland International, Inc.

Engineered Paint Systems

Chem-Temp 67-HF Series
Hybrid Epoxy Novolac DTM Liner Coating

Chem-Temp 67-HF Series is a thin film 2-K Hybrid Epoxy Novolac Liner Coating that offers exceptional temperature and chemical protection up 250°F. Specifically formulated for tank linings, vessels, and pipelines, 67-HF Series provides superior barrier properties for a wide array of cargos in a 1 – 2 coat application.

Vehicle Type:	Hybrid Epoxy Novolac
Pigmentation:	Lead Free
Reducer:	Not necessary, if desired: #670S (slow) also reduces surface tension, #670M (medium), or #670F (fast) reducer
Mix Ratio:	4:1 w/67-AHF-100
Pot Life:	3 Hours @ 77˚F (Decreases at higher temperatures)
Volume Solids:	70%
Theoretical Coverage:	1120 ft^2/gal. @ 1mil DFT
VOC:	2.06 lbs/gal. (247 g/L)
Flash Point:	24˚F (lowest flashing component)
Recommended TDFT:	
Light Service:	6-10 mils TDFT (applied in 1-2 coats)
Standard Service:	8-16 mils TDFT (applied in 2 coats)
Dry-time:	
Recoat:	3-36 Hours
To Touch:	4 hours
To Handle:	12 Hours
Put in Service:	24 Hours after final coat when force cured (force cure schedule available upon request)
Cure Time:	7 Days @ 72˚F
Shelf Life:	1 Year from DOM
Finish:	Eggshell
Color:	Off White, Light Blue

Advantages of 67 Series Chem-Temp

- Next generation polymer technology specifically engineered for heat stability and chemical resistance
- Dry heat stability up to 350°F, immersion up to 250°
- Superior resistance to a wide variety of chemicals and solvents
- Superior abrasion resistance
- Superior adhesion even over marginally prepared surfaces
- Excellent corrosion resistance
- Ease of application
- Specially engineered inert filler package provides superior barrier properties
- Superior substrate wetting provides excellent adhesion and corrosion protection
- Ultra-high crosslink density provides a tough durable film with long lasting protection

Performance Data

Adhesion (ASTM D 4541) – Commercial Blast	**> 1800 psi**
Abrasion Resistance (ASTM D 4060**) 1000** Cycles, 1000g load	**Excellent - 124 mg loss**
Humidity Resistance (ASTM 4585) 3000 hours	**Excellent – No blistering or other defects observed**
Salt Spray Resistance (ASTM B 117) 3000 hours	**Excellent - <1 mm creep from scribe, no blistering**
Chemical Resistance (ASTM D 1308)	**Excellent – MEK – No defects observed** **25% H_2SO_4 – Slight discoloration, no other defects observed** **25% NaOH – slight loss of gloss, no other defects observed**
Pencil Hardness (ASTM D 3363)	**6H**
Elongation (ASTM D 522)	**5%**

Typical Systems

Direct to Metal
67-HF Series (6-16 mils TDFT @ 6-8 mils DFT per coat)

Surface Preparation

1) For immersion, SSPC-SP5 White Metal Blast Cleaning is preferred; however, minimum acceptable surface preparation should be in accordance with SSPC-SP10 Near White Metal Blast Cleaning, with a 2-3 mil jagged profile. All Surfaces to be painted should be dry and free of all foreign contaminants.

2) For non-immersion service, surface preparation should be in accordance with SSPC-SP10 Near White Metal Blast Cleaning. When Near White Metal Blast is not an option, SSPC-SP6 Commercial Blast Cleaning may be acceptable – Consult a Highland Representative. All surfaces to be painted should be clean, dry and free of all foreign contaminants.

Mixing and Application Requirements

1) Mix 1 Part "A" Activator with 4 parts "B" Base by volume. Mix full kits only.
2) Mixed material is ready for use after a 30 minute induction period.
3) Reduction is not necessary, but if desired, you may reduce up to 10% with Highland #670 Series Reducers.

4) Apply 1- 2 coats @ 6-8 mils DFT per coat to achieve recommended TDFT.
5) Apply at a rate of 65-112 square feet per gallon to obtain the recommended total dry film thickness (TDFT).
6) Allow one week @ 77˚F before being put into service for immersion.
7) The second coat/topcoat must be applied within 36 hours @ 77˚F or the surface will need to be scuffed.

Method of Application

Conventional Gun:	DeVilbiss MBC-510
Fluid Tip:	E
Air Cap:	704
Atomizing Pressure:	70 psi
Pot Pressure:	15-20 psi
Hose:	½ inch ID
Airless Gun:	Graco 205-591
Pump:	30:1/45:1/60:1, Gas pump acceptable
Tip Range:	3.013 – 4.017
Pump Pressure:	1800 psi minimum
Hose:	3/8 inch ID
Brush or Roller:	Natural or synthetic bristle
Clean Up:	Clean all equipment with MEK

Safety Precautions

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