



HT Mastic 500NF/CorrFX 600

Application Procedure for 120 mil (3 mm) Wet Film Thickness (WFT)

1.0 General:

HT Mastic 500NF is a water/asphalt emulsification. Unlike traditional solvent based asphalts, uniform thickness application has a direct relationship to product performance. To allow internal moisture to evaporate, it is highly recommended that the product be sprayed (total of 120 WFT) in two coats of 60 mil (1.5mm) applications with a 24-hour cure between coats.

For spray application of HT Mastic 500NF on small projects (100-1000 SF) consider using a textured wall sprayer with hopper, such as a *Kobalt 3-foot Gravity Hopper Gun*. Whenever possible, the use of roller, brush, mop or trowel application should be limited to repair and field joints only.

NOTE: Never store or install HT Mastic 500NF in direct sunlight.

2.0 Preparation of HT Mastic 500NF for all application methods:

HT Mastic 500NF should be thoroughly mixed prior to all applications. A thin layer of water may appear in the surface of opened drums or buckets. Do not discard. Re-blend the liquid back into the sub-straight with a Jiffy paint mixer (5-gallon pail) or drum mixer (53-gallon pails). After storage, HT Mastic 500NF will congeal like a consistency of yogurt. Mixing breaks this static viscosity and with blend the HT Mastic 500NF into a thinner-creamy texture. The longer the product mixes the thinner the thixotropic material becomes.

NOTE: Never thin HT Mastic 500NF with water or solvents prior to spray application.

3.0 Metal Surface Preparation:

All metal surfaces to be sprayed with HT Mastic 500NF should be cleaned according to SSPC SP6 (NACE #3). Field joints and repair work should be cleaned, at a minimum, according to SSPC SP2. Special attention should be given to welds and tight areas such as corners.

Any area that require welding after coating is applied should be masked off approximately 4" (100 mm) away from area to be welded. Remove masking just prior to welding.

4.0 Spray Application:

Set up equipment according to **1.0 General**, **2.0 Preparation of HT Mastic 500NF for all application methods**, and **Application Equipment Guidelines**.



Apply HT Mastic 500NF onto surfaces cleaned according to **3.0 Metal Surface Preparation** instructions. During initial application of 60 mil (1.5mm) thickness, check the wet film thicknesses of the HT Mastic 500NF with a Wet Film Gauge to monitor if proper thickness has been applied.

Areas measured that exceed 60 mil thickness on the vertical will sag creating runs on the surface. If material more than the full recommended WFT exceeds 80 mil is identified, remove HT Mastic 500NF from the steel surface using a scraper or other device and immediately re-apply HT Mastic 500NF at the proper thickness (*NOTE: Excessive single coat application of this product can propagate surface crazing and mud-puddle cracking when the coating is fully cured*).

Upon satisfactory installation of initial 60 mil of HT Mastic 500NF, allow to cure in well ventilated area out of direct sunlight. The curing process will be enhanced through the introduction of air movement from fans placed in proximity of the curing coating. The curing of the first 60 mil coat of HT Mastic 500NF requires a minimum of 12 hours with 24 hours being the standard.

After the first 60 mil coat of HT Mastic 500NF has been cured, apply a second coat according to the same procedure discussed above. Upon completion of the second application of HT Mastic 500NF, follow the same curing process.

Due to the extended length of time required for full cure, HT Mastic 500 **should not** be wrapped in a manner that prevents air circulation over the product surface for a minimum of two weeks. Neglecting to respect the products propensity to retain moisture may promote biological contamination on the surface of the finished coating. In addition, uncured mastic surfaces can allow blast medium from adjacent project to adhere to the surface. Note that the appearance of rust or other contaminants on the HT Mastic 500NF surface is a superficial anomaly and can be rendered with a light power wash using tap water.

NOTE: The full 120 mil WFT, depending on atmospheric conditions, may take upwards to a 1-2 weeks to fully cure. Installation of refractory materials onto the coated surface can commence after the second 12-24-hour curing step.

5.0 Application of HT Mastic 500NF to Field Weld Joints:

Remove all masking prior to welding. Due to weld porosity, field weld joints are exceptionally vulnerable to dew-point corrosion. Care should be taken to avoid excessive application thickness onto these locations.



Before application of mastic (See product selection and preparation below), examine the condition of the steel under that masking. If rust or other deleterious materials appear, clean the surface to a minimum for SPCE SP2.

HT Mastic 500NF should be applied (60 mil / 1.5mm WFT) to these areas with a 4" (100mm overlap) onto existing cured coating using a paint brush, roller or trowel. This process should be repeated with a second 60mil application of HT Mastic 500NF within 12-14 hours.

If the field welding is scheduled over 2 months after the original lining was installed, use of a solvent based (Naphtha) mastic such as HT Mastic 500 should be used for this purpose.

In the event HT Mastic 500 is not available, the surface to be coated (overlap) should be disturbed by hand with a 150-grit sand paper to enhance surface area. Once sanded, HT Mastic 500NF can be applied.

6.0 Field Joint (No-Weld):

HT Mastic 500NF also serves as sealant preventing atmospheric change within vessel confinement during production. In this application, the joint does not have to be masked as described in the weld joint procedure.

Steel surface preparation should be performed according to a minimum of SSPC SP2

HT Mastic 500NF can be applied in one coat of approximately 120 mil (3.0mm) prior to panel assembly.

7.0 Repair of Damaged Coating:

When a previously installed asphalt coating is thought to be compromise, adhesion testing according to ASTM D-3359-9 (A) needs to be performed throughout to qualify and quantify the area in question. This recommended test method is only destructive to damaged areas.

Depending on the original formulation of mastic installed, HT Mastic 500 and HT Mastic 500NF are both most receptive to repair by using the opposing material (Repair HT Mastic 500NF with HT Mastic 500. Likewise, Repair HT Mastic 500 with HT Mastic 500NF).

To make this determination, investigate the original and subsequent specifications for mastic coatings. Most older units will contain an asphalt mastic that was formulated with an organic solvent such as naphtha or mineral spirit derivative. These products are like HT Mastic 500.



Likewise, newer emulsified asphalt mastics are thinned with water. These products are like HT Mastic 500NF.

When repairing a damaged lining, determination of the original mastic's solvent constituents may not be possible, or the dissimilar material may not be available at the time needed. In this situation, it is imperative that pre-existing overlap surfaces to be coated have their surface roughed with an abrasive to remove surface oxidation and increase surface area. ASTM D-3359-9 (A) can be performed on the 4" after the mastic has fully cured.

Identify the pass/fail boundaries of the area to be repaired using ASTM D-3359-9 (A) methodology. Use a hand scraper to confirm the damaged boundary. Mark an outer perimeter that extends a minimum of 4" past the compromised lining. This 4-inch overlap will be the minimum boundary for new mastic to be applied.

Regardless if dissimilar materials are selected for repair (see above), the 4" overlap surface of the old coating shall be roughed by hand using a 150-Grit abrasive sandpaper. After sanding, wipe the roughed surface clean with a damp cloth and allow to dry. Examine the surface a second time to confirm that all the existing coating is adhered to the steel surface.

For repairs more than about 500 SF, surface preparation may be more effective and economical if cleaned according to SSPC SP6 (NACE #6). Small areas should follow, at a minimum, guidelines for SSPC SP2. In either case all damaged coating, corrosion on, and deleterious material shall be removed.

Apply HT Mastic 500NF according to **4.0 Spray Application**

8.0 References

ASTM D3359-9

SSPC