

376F-30 TANK AND PIPE LINING



DESCRIPTION

Enviroline® 376F-30 is a 100% solid, fast curing, technologically advanced hybrid epoxy novolac. Specifically designed to handle the harsh environments in the petroleum industry, including all petroleum crudes, **Enviroline** 376F-30 provides good flexibility and impact resistance for application on steel or concrete that experience thermal or mechanical expansion and contraction. **Enviroline** 376F-30 resists immersion temperatures up to 275° F for certain applications.

TYPICAL USE

Steel and concrete areas in the petroleum industry, including petroleum bulk storage tanks, downhole tubular pipes, downhole casing exteriors, interior and exterior pipes, floors, tank pads, trenches, troughs, sumps and pits.

BENEFITS

- Zero VOC's
- Excellent adhesion
- Superior abrasion resistance
- Impact resistance
- Cathodic disbondment resistance*
- Resists wide range of chemicals and solvents
- Thick-film, single coat application (20-40 mils)
- Fast curing (Immersion service in 14 hours)
- High temp stability- autoclave test 275° F*
 Thermal & mechanical shock resistance*
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LIMITATIONS OF USE

See Enviroline Chemical Immersion Resistance Guide or consult your Enviroline representative.

TECHNICAL DATA

 Weight (lbs/gal): 12.8
 Pot Life (@77° F): 35 minutes

 Volume Solids: 100%
 Pot Life (@100° F): 12 minutes

 Color(s): Green, Gray, Tan
 VOC (mixed lbs/gal): 0

 Flash Point: >200° F
 VOC (mixed g/l): 0

Hardness (Shore D min.): 75

Recommended Thickness: 20-40 mils DFT

Temperature Resistance:

Non-Immersion, Dry Heat: 300° F (149° C)

Continuous immersion resistance is dependent on particular temperature and chemical exposure. See Enviroline Chemical Immersion Resistance Guide or consult Enviroline representative.

COVERAGE

Theoretical Coverage*: 1604 sq. ft per gallon @ 1 mil dry

@ 20 mils: 80 sq. ft. per gallon **@ 40 mils:** 40 sq. ft. per gallon

*When ordering product, make allowances for any loss due to overspray, surface irregularities, etc. (approx. 15 – 20%).

DRY & CURE SCHEDULE

Drying schedule at temperatures indicated and 50% relative humidity:

	55°F	77°F	90°F
Touch Dry	7 hours	2 hours	1 hour
Dry Hard	12 hours	4 hours	2 hours
Minimum Recoat	12 hours	2.5 hours	2 hours
Maximum Recoat	20 hours	6 hours	3 hours
Cure	48 hours	14 hours	10 hours

Post Curing: Enviroline 376F-30 may be post cured to expedite curing or increase chemical resistance for extremely aggressive environments. Post cure for a minimum of 2 hours at 250° F or 6-8 hours at 150° F for maximum resistance. Consult Enviroline Technical Services Dept. for specific application information.

SURFACE PREPARATION

All surfaces must be clean, dry, and free of dust, dirt, oil or other foreign matter. Steel surfaces shall be abrasive blasted to SSPC SP-5/Nace No. 1 White Metal finish with a minimum 3 – 5 mil angular profile for best results. Concrete shall be abrasive blasted or etched with 10% muriatic acid. Enviroline 54 or 58 Primer recommended for concrete surfaces.

APPLICATION EQUIPMENT

Airless spray system (GRACO 45:1, 56:1 or higher recommended). Remove suction tube and place lower assembly in 5 gallon pail. Smaller areas may be trowel applied. Hoses should be 1/2" ID minimum (no longer than 150 ft.), ending with a 10 ft. 3/8" whip hose. A reversible tip (.031-.035) is suggested. Pressure at the pump should be 100 psi or maximum recommended by equipment manufacturer. Teflon type packings recommended and are available from the pump manufacturer. Keep in mind that airless spray application requires stopping periodically to flush the lines with methyl ethyl ketone (MEK) or methyl

^{*} Contact Enviroline for 3rd party test data

isobutyl ketone (MIBK). Once product temperature exceeds 125° F stop immediately and flush lines to avoid loss of the pump or other spray equipment.

Plural component equipment is highly recommended for application. Utilize a pump with a 2:1 mix ratio and GRACO 45:1 or greater power ratio. Also needed are two 9½" long x 3/8" inside diameter x 12 element static mixers which are available from Graco. Heated tanks and heated lines up to 150° F may be necessary. The resin fluid line should be 1/2" ID minimum, the hardener fluid line should be 3/8" ID minimum, and the high pressure solvent fluid line should be 1/4" ID minimum. A reversible tip (.029 - .035) is suggested. Keep in mind that plural component application requires volumetric check of the mix ratio (utilizing a ratio monitoring system) before and during the application process. Any variation in product color during application will indicate the plural pump is off ratio.

For heavily pitted or porous steel, the spray-roll-spray technique is recommended. Spray apply approximately 50% of required film thickness followed immediately with a short nap roller or squeegee to work material into bottom of pitted areas. Follow the rolled or squeegee application with a spray application of the product to the remainder of the required film thickness. We recommend thinning the material with 2% Enviroline® 76T Thinner to facilitate in this type of application. It is important to understand that this is a single coat, continuous application procedure.

Consult your Enviroline Representative or Enviroline Technical Services Dept. for more information.

MIXRATIO

2:1 by volume.

APPLICATION CONDITIONS

Apply at 5° F (3° C) above dew point. Use the following chart for preferred temperature and humidity conditions. These conditions plus adequate ventilation must be maintained throughout the curing cycle.

	Substrate	Ambient	Humidity
Preferred	70-120° F	70-100° F	N/A
Minimum	55° F	55° F	5° above dew point

HANDLING

Store at moderate temperatures (65-85° F) prior to application for ease of handling and mixing. Additional heating may be required and is recommended for spray application.

THINNING

Up to 2% Enviroline 76T Thinner may be added, but is not normally required. Thinning reduces hanging qualities of the lining and will slow curing. For airless spray equipment, add thinner while the resin and hardener are being thoroughly mixed. For plural equipment, proportion thinner between resin and hardener according to 2:1 mix ratio. Consult an Enviroline Technical Representative before adding more than the recommended amount.

PRF-HFATING

For airless application, heat each component to 95-105° F prior to mixing. For plural application, viscosity of the resin and hardener varies. For best results, heat resin side to max of 140° F and heat hardener side to max of 105° F.

MIXING

For airless spray application, mechanically pre-mix each component one minute; then mix combined compound with mechanical mixer at 400-600 rpm for 3 to 4 minutes. Enviroline custom designed mixing blade is recommended. For plural component application, pre-mix each component one minute; then use two 9¼" long x 3/8" inside diameter x 12 element static mixers during the application process.

CLEAN UP

Clean immediately with methyl ethyl ketone (MEK) or methyl isobutyl ketone (MIBK).

PACKAGING

One unit forms approximately 4 gallons consisting of two components: **Resin**: 5 Gallon Pail **Hardener**: 2 Gallon Pail

Also available in 55 gallon drums. Consult Technical Services Department for additional information.

2 years when stored at 75° F (24° C) unopened.

SHELF LIFE SHIPPING

F.O.B. Pompano Beach, Florida for domestic shipments, Ex-Works Pompano Beach for international shipments.

SAFETY

This product is for industrial use only and should be installed by qualified coating and lining specialists.

Consult Material Safety Data Sheets for important health and safety information prior to use.

08/05*



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^{*}Enviroline continuously strives to improve its data sheets for the benefit of all users. The owner/applicator is responsible for obtaining the most recent Product Information Bulletin prior to the purchase or application of material.