PRODUCT INFORMATION BULLETIN

405HT HEAT RESISTANT COATING

enviroline
THICK-FILM EPOXY COATINGS AND LININGS

DESCRIPTION

Enviroline® 405HT is a high solids, fast curing, technologically advanced novolac epoxy. It is specifically designed to handle the harsh environments in the petroleum industry, including all petroleum crudes. It is an excellent internal lining to use in Free Water Knockouts, Treaters, Separators, and tanks with high operating temperatures. It combines excellent heat resistance with outstanding corrosion protection. **Enviroline 405HT** resists immersion temperatures up to 275° F for certain applications. (Speak to an Enviroline technical representative for temperatures over 200° F.)

TYPICAL USE

Steel and concrete areas of any size 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

- Excellent adhesion
- Resists wide range of chemicals
- High temperature stability
- Abrasion and impact resistance
- High temperature water resistance, oil & gas, produced water, sea water
- Thermal and mechanical shock resistance
- Excellent flexibility

LIMITATIONS OF USE

Consult your Enviroline representative.

TECHNICAL DATA

Weight (lbs/gal): 13.0
Volume Solids: 94%
Color(s): Red
Flash Point: > 200° F
Hardness (Shore D min.): 75

Pot Life (@ 77° F): 45 minutes
Pot Life (@ 100° F): 25 minutes
VOC (mixed lbs/gal): 0.38
VOC (mixed g/l): 46
Recommended Thickness: 20-40 mils DFT

Temperature Resistance:
Non-Immersion, Dry Heat: 350° F (177° C)
Continuous immersion temperature resistance is dependant on particular reagent exposure. Consult Enviroline representative.

COVERAGE

Theoretical Coverage*: 1507 ft per gallon @ 1 mil dry
@ 20 mils: 75 sq. ft. per gallon
@ 40 mils: 37 sq. ft. per gallon
**When ordering product, make allowances for any loss due to overspray, surface irregularities, etc. (approx. 15 – 20%).*

MINIMUM DRY TIME

77ºF and 50% relative humidity, ASTM D 1640:
To Touch: 2 hours
To Handle: 3.5-4 hours
To Recoat: 4 hours

Maximum Recoat Time: 6 hours

CURE SCHEDULE

Shore D 75-80 @ 77° F and 50% relative humidity:
For Immersion Service: 14 hours

Post Curing: It is not necessary for most applications, but **Enviroline 405HT** may be post cured to expedite curing or increase chemical resistance for extremely aggressive environments. Post cure for a minimum of 2 hours at 250º F or 6-8 hours at 150° F for maximum resistance. Consult Enviroline Technical Services Department for specific application information.

SURFACE PREPARATION

All surfaces must be clean and dry, free of dust, dirt, oil or other foreign matter. Steel surfaces shall be abrasive blasted to SSPC SP-5/Nace No. 1 or Swedish Standard Sa3, 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. Primer may be required for concrete. See Enviroline Technical Services Department for additional information.

APPLICATION EQUIPMENT

Airless spray system (GRACO 45:1, 56:1 or higher recommended). Remove suction tube and place lower assembly in 5 gal. 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 (.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. Plural component equipment is also recommended, but not required. Keep in mind that plural component application requires volumetric check of the mix 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 Enviroline for more information.

MIX RATIO

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.

	Coating	Substrate	Ambient	Humidity
Preferred	95-105° F	70-100° F	70-100° F	N/A
Minimum	55° F	55° F	55° F	5° above dew point

HANDLING

Store at moderate temperatures (65-85º F) prior to application for ease of handling and mixing.

THINNING

Thinning is not normally required or desired. However, at lower temperatures, a small amount (2% or less) of Enviroline 76T Thinner may be added. Thinning reduces hanging qualities of the lining and will slow curing. Add only after the resin and hardener have been thoroughly mixed. Consult Enviroline technical representative before adding more than recommended amount.

PRE-HEATING

For airless application, heat each component to 95-105º F prior to mixing. Consult Enviroline Technical Department if using plural component equipment.

MIXING

Mechanically pre-mix each component one minute; then mix combined compound with mechanical mixer at 400-600 rpm until homogeneous. Induct for five minutes, box or remix and apply.

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

SHELF LIFE

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

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.

10/04*

**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.*

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