

ARCHCO 453HT™ AIRLESS

Single-Leg, Heat-Resistant Coating

Description

Archco 453HT Airless is a high-solids, fast-curing, technologically advanced epoxy-phenolic novolac lining. 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. Archco 453HT Airless resists immersion temperatures up to 325°F (163°C) for many applications and higher temperatures in non-immersion service.

Uses

- Petroleum bulk storage tanks
- Downhole tubular pipes
- Downhole casing exteriors
- Interior and exterior pipes
- Tank floors
- Tank pads
- Tank trenches
- Troughs
- Sumps
- Pits

Features

- Excellent adhesion
- High temperature stability
- Abrasion and impact resistance
- High temperature water resistances, oil & gas
- Thermal and mechanical shock resistance
- Excellent flexibility
- Resists wide range of chemicals, produced water, sea water
- Excellent resistance to H₂S gases

Surface Prep

All surfaces must be clean and dry, free of dust, dirt, oil or other foreign matter in accordance with SSPC SP-1. Steel surfaces shall be abrasive blasted to SSPC SP-10 near-white finish or equivalent with a minimum of 3-5 mil (76 - 127 microns) angular profile for best results. Concrete shall be abrasive blasted or etched with 10% muriatic acid. Rinse any acid-etched areas thoroughly with water and allow to dry before applying primer. Use of a primer is required for concrete to improve adhesion and minimize outgassing. See a Denso representative for additional information.



TECHNICAL DATA SHEET

Mixing

Archco 453HT Airless kits consist of a single Part A container and a single Part B container. Only mix and use complete kits. Thoroughly mix each part separately using a power agitator. Once each component has been mixed, empty the contents of the Part B container into the Part A container and continue mixing using a power agitator until material is uniform in color and consistency and contains no unmixed material. Once the kit has been mixed, it is ready for spraying by single-leg, airless spray equipment.

Application

Application by Single-leg Airless Equipment Recommended: A pump with 68:1 or greater power ratio is recommended. The fluid line should be ½" (12.7 mm) ID minimum (recommended). A reversible tip (0.029"-0.035" / 0.74-0.89 mm) is suggested. Archco "Spray Application Guidelines" are available upon request.

Heavily Pitted or Porous Steel: The spray-roll-spray technique is recommended. Spray-apply approximately 50% of the 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 up to 20% Archco 400E™ Thinner to facilitate in this type of application. Thinning reduces handling qualities of the lining and will slow curing. For airless spray equipment, add thinner while the resin and hardener are being thoroughly mixed. Pre-heating of the components or mixed system is not recommended as long as the materials have been stored as recommended in the Handling section above. Keep in mind that at elevated temperatures the gel time will be faster and the pot life will be reduced. It is important to understand that this is a single coat, continuous application procedure.

Consult Archco representative or Technical Services Department for more information.

Storage

Minimum 18 months when stored in original containers @ 65°F (18°C) to 85°F (30°C).

Cleaning

Clean equipment with MEK or equivalent solvent cleaner, such as Archco 400E Thinner.

Health & Safety

Wear protective clothing and ensure adequate ventilation. Avoid contact with skin and eyes. See Safety Data Sheet (SDS) for further information.

Packaging

5 gallon (19 liter) kit. Other kit sizes available upon request.

Dispensing guns and static mixing tips (50 ml or 375 ml) sold separately.

Archco 453HT™ Airless

TECHNICAL DATA

PROPERTIES	VALUE
Solids Content by Volume	86 - 90%
Minimum Dewpoint / Substrate Differential	Dewpoint +5°F (+3°C)
Minimum Substrate Temperature	60°F (16°C) - 140°F (60°C)
Minimum Ambient Temperature	60°F (16°C) - 140°F (60°C)
Mixing Ratio (A/B) by Volume	4:1
Recommended Thickness	12 - 45 mils DFT (0.31 mm - 1.14 mm DFT)
Theoretical Coverage	
@ 1 mil dry (0.02 mm)	1410 sq. ft. per gallon (34.6 sq. m. per liter)
@ 20 mil dry (0.50 mm)	70 sq. ft. per gallon (1.7 sq. m. per liter)
@ 40 mil dry (1.02 mm)	35 sq. ft. per gallon (0.86 sq. m. per liter)
Minimum Dry Time @ 77°F (25°C) & 50% Relative Humidity (ASTM D 1640)	
To Touch	2.5 - 3 Hour
To Handle	3.5 - 4 Hours
To Recoat	4 Hours
Maximum Recoat Time	8 Hours
Cure for Immersion (Shore D 75 - 80)	
@ 77°F (25°C)	16 hours
Flash Point	45°F (7°C)
Hardness	(Shore D min.): 80
Temperature Resistance*	
Dry Heat	400°F (204°C)
Short Term	700°F (371°C)
Pot Life @ 72°F (22.2°C)	90 mins.
Color	Tan
VOC	0.83 lbs/gal (100 g/l)

*Note: Continuous immersion temperature resistance is dependent on particular reagent exposure. Consult a Denso representative.



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