

PRODUCT DATA SHEET

ARCHCO 453HT PLURAL

Heat Resistant Coating - Plural

Description

Archco 453 HT is an ultra-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 453 HT resists immersion temperatures up to 325°F (163°C) for many applications and higher temperatures in non-immersion service.

Uses

Steel or concrete 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.

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

Application

All surfaces must be clean and dry, free of dust, dirt, oil or other foreign matter. Steel surfaces shall be abrasive blasted to SSPC 10 near white finish 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. Use of a primer is required for concrete to improve adhesion and minimize outgassing. See a Denso representative for additional information.

Plural component equipment is recommended for application. Under controlled conditions, single-leg airless equipment may be used. For plural spray application, utilize a pump with a 4:1 mix ratio (GRACO 68:1 or greater power ratio is recommended). Also needed are (2) 3/8" (0.009 mm) inside diameter x 12" (305 mm) long elemental static mixers which are available from Graco. Heated tanks and heated lines up to 150°F (66°C) may be necessary. The resin fluid line should be 1/2" (0.13 mm) ID minimum (recommended), the hardener fluid line should be 3/8" (9.5 mm) ID minimum (recommended), and the high pressure solvent fluid line should be 1/4" (6.3 mm) minimum (recommended). A reversible tip (0.029"-0.035" / 0.74 - 0.89 mm) 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. Archco "Spray Application Guidelines" are available upon request.

For 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 with 2% Archco 400E Thinner to facilitate in this type of application. Thinning reduces handing qualities of the lining and will slow curing. For plural equipment, proportion thinner between resin and hardener according to 4:1 mix ratio. For plural application, viscosity of the resin and hardener varies with temperature. For best results, heat the resin side to a maximum of 140°F (60°C) and heat the hardener side to a maximum of 110°F (43°C). Keep in mind that at elevated temperatures the gel time will be faster. It is important to understand that this is a single coat, continuous application procedure.

Consult Denso representative for more information.



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TECHNICAL DATA

PROPERTIES	VALUE
Solids Content by Volume	98 - 100%
Minimum Dewpoint / Substrate Differential	Dewpoint +5°F (+3°C)
Minimum Substrate Temperature	60°F (16°C)
Minimum Ambient Temperature	60°F (16°C)
Mixing Ratio (A/B) by Volume	4:1
Recommended Thickness	20 - 40 mils DFT (508 - 1016 microns DFT)
Maximum Thickness	60 mils DFT (1524 microns DFT)
Theoretical Coverage	
@ 1 mil (0.02 mm) dry	1604 sq. ft. per gallon (39.4 sq. m. per liter)
@ 20 mil (0.50 mm) dry	80 sq. ft. per gallon (2.0 sq. m. per liter)
@ 40 mil (1.02 mm) dry	40 sq. ft. per gallon (1.0 sq. m. per liter)
Minimum Dry Time @ 77°F (25°C) & 50% Relative Humidity (ASTM D 1640)	
To Touch	1 Hour
To Handle	2 - 3 Hours
To Recoat	3 Hours
Maximum Recoat Time	6 Hours
Cure for Immersion (Shore D 75 - 80) @ 77°F (25°C)	12 hours
Flash Point	>200°F (93°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)	30 mins.
Color	Tan
VOC	0.12 lbs/gal (14 g/l)

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

STORAGE: Minimum 24 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 AND SAFETY: Wear protective clothing and ensure adequate ventilation. Avoid contact with skin and eyes. See material safety data sheet for further information.

PACKAGING: 25 gallon (95 liters) kit. Other kit sizes available upon request.

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



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