

# 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

- Substrates for steel & concrete
- Petrolatum bulk storage tanks
- Downhole tubular pipes
- Downhole casing exteriors
- Interior & exterior pipes
- Tank floors
- Tank pads
- Trenches
- 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 H<sub>2</sub>S 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

## Application

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. Mix each container thoroughly with power agitator prior to transfer of material into hoppers. Heated tanks and heated lines up to 140°F (60°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.

## Storage

Minimum 12 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 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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## TECHNICAL DATA

### PROPERTIES

### VALUE

<b>Solids Content by Volume</b>	98 - 100%
<b>Minimum Dewpoint / Substrate Differential</b>	Dewpoint +5°F (+3°C)
<b>Minimum Substrate Temperature</b>	60°F (16°C)
<b>Minimum Ambient Temperature</b>	60°F (16°C)
<b>Mixing Ratio (A/B) by Volume</b>	4:1
<b>Recommended Thickness</b>	12 - 60 mils DFT (305 - 1,524 microns DFT)
<b>Maximum Thickness</b>	60 mils DFT (1524 microns DFT)
<b>Theoretical Coverage</b>	
@ 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)
<b>Minimum Dry Time @ 77°F (25°C) &amp; 50% Relative Humidity (ASTM D 1640)</b>	
To Touch	1 Hour
To Handle	2 - 3 Hours
To Recoat	3 Hours
Maximum Recoat Time	24 Hours
<b>Cure for Immersion (Shore D 75 - 80)</b>	
@ 77°F (25°C)	12 hours
<b>Flash Point</b>	>200°F (93°C)
<b>Hardness</b>	(Shore D min.): 80
<b>Temperature Resistance*</b>	
Dry Heat	400°F (204°C)
Short Term	700°F (371°C)
<b>Pot Life @ 72°F (22.2°C)</b>	30 mins.
<b>Color</b>	Tan
<b>VOC</b>	0.12 lbs/gal (14 g/l)

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



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