



# Tank Linings

## Plasite®

Type

ACIDS										ALKALIS			SOLVENTS			MISCELLANEOUS									
Acetic Acid, conc.	10% Acetic Acid	Phosphoric Acid 76% 150 F	25% Citric Acid	Fatty Acid	Phosphoric acid 10%	Sulfuric acid, conc.	Sulfuric acid 10%	Hydrochloric acid 20%	Hydrochloric acid 10%	Ammonia 28%	Ammonia 10%	Sodium Hydroxide 50%	Sodium Hydroxide 10%	Ethanol	Toluene or Xylene	Gasoline, Unleaded	Ketone solvents	Ethylene Glycol	Crude, Sour	Urea solution	Oil, hydraulic / vegetable	Brine	Sewage, Brown Water	Water	DI Water, 50°C (122°F)

Plasite 4110	Vinyl Ester			✓	✓			✓	✓	✓								✓	✓	✓	✓	✓	✓	✓	
Plasite 4310	Vinyl Ester	✓	✓	✓	✓		✓	✓	✓			✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Plasite 4500 S	Solvent free Epoxy			✓	✓						✓	✓						✓	✓	✓	✓	✓	✓	✓	✓
Plasite 4500	Solvent free Epoxy Plural Spray			✓	✓						✓	✓			✓			✓	✓	✓	✓	✓	✓	✓	✓
Plasite 4500 FS	Solvent free Epoxy Plural Spray			✓	✓						✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Plasite 4540	Solvent free Epoxy Plural Spray			✓	✓						✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓●
Plasite 4550 S	Solvent free Epoxy Novolac				✓	✓	✓	✓	✓◆	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Plasite 4550	Solvent free Epoxy Novolac Plural Spray			✓	✓	✓		✓	✓◆	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Plasite 7159	Epoxy Polyamine													✓	✓	✓			✓	✓	✓	✓	✓	✓	✓
Plasite 9060	Modified Epoxy Amine Adduct			✓	✓			✓	✓◆			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## Phenoline®

Phenoline 353	Epoxy Novolac				✓				✓			✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Phenoline 385	Cycloaliphatic Epoxy			✓								✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Phenoline 1205	Glass flake Epoxy Novolac													✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Phenoline Tank Shield	Solvent free Epoxy Plural Spray			✓	✓						✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓●
Phenoline Tank Shield Plus	Solvent free Epoxy Plural Spray								✓◆			✓			✓			✓	✓		✓	✓	✓	✓	✓

Oct-16

✓ - Resistance to constant immersion, splash, spillage and secondary containment.

✓● - Suitable up to 203°F (95°C)

✓◆ - Suitable up to 75°F (24°C)

Notes:

All Products acceptable up to 100°F or (30°C) except where noted. Many products are acceptable at higher temperatures please contact Carboline Technical Service Department to get a final tank lining recommendation

All data and recommendations made herein are based upon information that we believe to be reliable, but are made without any representation or guarantee or warranty of accuracy.

Please contact Carboline Technical Service Department for your SPECIFIC tank lining recommendation.

*Product Descriptions*

<i>Phenoline Tank Shield</i>	Solvent free, edge retentive, blush resistant epoxy lining designed as for chemical or other commodity storage with extremely fast cure times. It can be applied by standard airless (batch mixing) or plural component spray equipment, at film thicknesses of 20-40 mils in a single coat. It is particularly suited for petroleum based cargoes. It has excellent ethanol and hot water resistance (DI water up to 150°F/65°C). Can be applied as prime coat then immediately back-rolled after spraying producing a second coat using the same product for a “two-coat” yet monolithic application.
<i>Phenoline Tank Shield Plus</i>	This product is a solvent free, flake-reinforced, high performance epoxy coating designed as an internal tank, valve and pipe lining for chemical or other commodity storage or transportation. It is cross-linked using a blend of aliphatic and aromatic amine adducts making it ideal to handle exposures typically seen in the oil and gas industries; crude oils, fuels, and ethanol. It has fast cure times and is applied using plural component equipment.
<i>Phenoline 353</i>	Highly cross-linked epoxy lining with extraordinary overall chemical resistance and versatility. A unique blend of resins make it highly resistant to a variety of aggressive cargos such as gasoline, jet fuels, biodiesel, fuel oils, and others. It can be used in both acidic and high temperature caustic exposures. A low temperature cure (35°F/2°C) version (353 LT) is also available.
<i>Phenoline 385</i>	High performance, high solids, epoxy lining recommended for a variety of petroleum storage products including 180°F (82°C) crude oil, demineralized water up to 200°F (93°C), fuel oil, jet fuel, biodiesel, and gasoline. It is also an excellent choice for wastewater and water exposures. Product is self-priming and is normally applied in two coats. The lining system complies with FDA 21 CFR 175.300 criteria for aqueous and dry food contact.
<i>Phenoline 1205</i>	Glass flake filled reinforced amine cured novolac epoxy having excellent overall chemical resistance to a variety of chemicals, chemical fumes and splash and spillage. The glass flake filler provides superior internal reinforcement and thermal shock resistance.
<i>Plasite 4110</i>	Vinyl ester coating combined with inert flaked fillers that provides excellent resistance to a wide range of chemicals including acids and food products. Specially pigmented to provide high abrasion resistance properties. It is NSF certified for potable water storage and meets FDA requirements for direct food contact. Recommended for services such as carbon filters, process and storage vessels, bag houses, stacks, absorbers and ductwork in flue gas desulfurization units. Dry temperature resistant to 380°F (193°C) continuous.
<i>Plasite 4310</i>	Vinyl ester coating combined with inert flaked fillers that provides excellent resistance to a wide range of chemicals including acids and solvents. Specially pigmented to provide high abrasion resistance properties. Recommended as a tank lining for process and storage vessels, bag houses, stacks, absorbers and ductwork in flue gas desulfurization units. Dry temperature resistant to 380°F (193°C) continuous.
<i>Plasite 4500 S</i>	Solvent free, flake-filled, premium epoxy coating designed for internal steel and concrete tanks and pipe lining. Applied as a single coat with standard airless spray to an average 30-40 mils (.75-1 mm).
<i>Plasite 4500</i>	Solvent free, flake-filled premium epoxy applied by plural equipment up to 40 mils (1 mm) in a single coat. Broad range chemical resistance, low temperature cure to 35°F (2°C), and extreme toughness.
<i>Plasite 4500 FS</i>	Solvent free, thick film 20-60 mils (.5-1.5 mm) dft, fast set non-blushing epoxy tank lining formulated for quick-cure for quick turn-around projects. The primary use is a tank lining in the Petroleum/Oil and Gas industries. It is uniquely suited for crude oil, gasoline, jet fuel and other fuel oils. It will cure at temperatures down to 20°F (-7°C).
<i>Plasite 4540</i>	Solvent free, edge retentive, blush resistant epoxy lining designed as for chemical or other commodity storage with extremely fast cure times. It is applied by plural component spray equipment, at film thicknesses of 20-50 mils in a single coat. It is particularly suited for petroleum based cargoes. It has excellent ethanol (up to 122°F) and hot water resistance (DI water up to 203°F/95°C). Can be applied as prime coat then immediately back-rolled after spraying producing a second coat using the same product for a “two-coat” yet monolithic application.
<i>Plasite 4550 S</i>	Solvent free, flake-filled premium epoxy novolac similar in performance to Plasite 4550. It can be applied by standard spray equipment with a short, but workable potlife. Has resistance to concentrated sulfuric acid. Will discolor acids, not recommended where acid purity is a concern.
<i>Plasite 4550</i>	Solvent free, flake-filled premium epoxy novolac applied by plural equipment up to 40 mils (1 mm) in a single coat. Very broad range of resistance to aggressive chemicals, low temperature cure to 35°F (2°C), and extreme toughness. Has resistance to concentrated sulfuric acid. Will discolor acids, not recommended where acid purity is a concern.
<i>Plasite 7159</i>	High solids amine cured epoxy coating specially formulated to have excellent resistance to high temperature, high purity water at high service pressures. Recommended in the power industry for demineralized water tanks operating up to 212°F (100°C). Also recommended in the petroleum industry for pressurized process vessels such as oil-gas-water separators.
<i>Plasite 9060</i>	High solids phenolic modified epoxy, Bis-A free. Material has a low temperature cure 35°F (2°C) while achieving unmatched chemical resistance in caustic, acid and solvent services. The user friendliness of the lining material assures an excellent application, smooth finish and minimum repairs after final inspection.