



NSF/AWWA/API

STORAGE TANK COATINGS SYSTEMS

Compliance



Tank Coatings Recommended Systems

System Reference	Surface Area and Conditions	Coating System	Surface Preparation	N° of Coats	Dry Film Thickness	
T-1	Salt water ballast tanks, voids and cofferdams	Ayapoxi 83 TL - Surface Tolerant Epoxy Ayapoxi 83 TL - Surface Tolerant Epoxy	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	6 - 7 mils
				1	stripe coat between layers	
				Total	250 - 300 mic	12 - 14 mils
T-2		Ayapoxi 66 HB - High-Build Multi-Purpose Epoxy Ayapoxi 66 HB - High-Build Multi-Purpose Epoxy	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	6 - 7 mils
				2	stripe coat between layers	
				Total	250 - 300 mic	12 - 14 mils
T-3	Crude storage tanks	Ayapoxi 83 TL - Surface Tolerant Epoxy Ayapoxi 83 TL - Surface Tolerant Epoxy	SSPC-SP10 (Sa 2 1/2)	2	150 - 200 mic	6 - 8 mils
				1	stripe coat between layers	
				Total	300 - 400 mic	12 - 16 mils
T-4	Fuel storage tanks	Ayapoxi 64 EF - Phenolic Epoxy Ayapoxi 64 EF - Phenolic Epoxy	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	6 - 7 mils
				1	stripe coat between layers	
				Total	250 - 300 mic	12 - 14 mils
T-5	Slop storage tanks	Ayapoxi 72 EN - High-Solids Epoxy Novolac Ayapoxi 72 EN - High-Solids Epoxy Novolac	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	5 - 6 mils
				2	stripe coat between layers	
				Total	250 - 300 mic	10 - 12 mils
T-6	Storage Tanks (mud pits, brine water tanks, completion fluid tanks, produced fluid tanks, fuel tanks, etc.)	Ayapoxi 64 EF - Phenolic Epoxy Ayapoxi 64 EF - Phenolic Epoxy	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	5 - 6 mils
				2	stripe coat between layers	
				Total	250 - 300 mic	10 - 12 mils
T-7		Ayapoxi 72 EN - High-Solids Epoxy Novolac Ayapoxi 72 EN - High-Solids Epoxy Novolac	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	5 - 6 mils
				2	stripe coat between layers	
				Total	250 - 300 mic	10 - 12 mils
T-8	Storage Tanks	Ayapoxi 100 - 100% Solids Epoxy Ayapoxi 100 - 100% Solids Epoxy	SSPC-SP10 (Sa 2 1/2)	2	200 - 300 mic	8 - 12 mils
				1	stripe coat between layers	
				Total	400 - 600 mic	16 - 24 mils
T-9		Ayapoxi 54 EN - Epoxy Novolac Ayapoxi 54 EN - Epoxy Novolac	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	5 - 6 mils
				1	stripe coat between layers	
				Total	250 - 300 mic	10 - 12 mils
T-10	Methanol tanks	Ayazinc 84 Z - High Solids Inorganic Zinc	SSPC-SP10 (Sa 2 1/2)	1	75 - 100 mic	3 - 4 mils
T-11	Potable water tanks	Ayapoxi 86 GA - High-Solids Amine-cured Epoxy Ayapoxi 86 GA - High-Solids Amine-cured Epoxy	SSPC-SP10 (Sa 2 1/2)	2	125 - 175 mic	5 - 7 mils
				1	stripe coat between layers	
				Total	250 - 350 mic	10 - 14 mils
T-12		Ayapoxi 70 GA - High-Solids Amine-cured Coating Ayapoxi 70 GA - High-Solids Amine-cured Coating	SSPC-SP10 (Sa 2 1/2)	2	125 - 175 mic	5 - 7 mils
				1	stripe coat between layers	
				Total	250 - 350 mic	10 - 14 mils
T-13		Ayapoxi 66 GA - High-Build Amine-cured Coating Ayapoxi 66 GA - High-Build Amine-cured Coating	SSPC-SP10 (Sa 2 1/2)	2	150 - 200 mic	6 - 8 mils
				1	stripe coat between layers	
				Total	300 - 400 mic	12 - 16 mils
T-14	Fresh water tanks 	Ayapoxi 83 TL - Surface Tolerant Epoxy Ayapoxi 83 TL - Surface Tolerant Epoxy	SSPC-SP10 (Sa 2 1/2)	2	150 - 200 mic	6 - 8 mils
				1	stripe coat between layers	
				Total	300 - 400 mic	12 - 16 mils
T-15		Ayapoxi 83 TH - Surface Tolerant Epoxy TL Ayapoxi 83 TH - Surface Tolerant Epoxy TL	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	5 - 6 mils
				2	stripe coat between layers	
				Total	250 - 300 mic	10 - 12 mils
T-16	Water Tanks (including drill water tanks, ballast, hull void areas)	Ayapoxi 83 TL - Surface Tolerant Epoxy Ayapoxi 83 TL - Surface Tolerant Epoxy	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	5 - 6 mils
				1	stripe coat between layers	
				Total	250 - 300 mic	10 - 12 mils
T-17		Ayapoxi 66 HB - High-Build Multi-Purpose Epoxy Ayapoxi 66 HB - High-Build Multi-Purpose Epoxy	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	5 - 6 mils
				2	stripe coat between layers	
				Total	250 - 300 mic	10 - 12 mils
T-18		Ayapoxi 72 EN - High-Solids Epoxy Novolac Ayapoxi 72 EN - High-Solids Epoxy Novolac	SSPC-SP10 (Sa 2 1/2)	2	125 - 150 mic	5 - 6 mils
				2	stripe coat between layers	
				Total	250 - 300 mic	10 - 12 mils

NSF NOTE FOR POTABLE WATER STORAGE TANKS: All interior systems listed for Potable Water storage are compliance in accordance with NSF Standard 61, noted that the color used must be White.

Tank Coatings Recommended Systems

System Reference	Surface Area and Conditions	Coating System	Surface Preparation	N° of Coats	Dry Film Thickness	
T-19	Water, caustic and fuel storage	Ayapoxi 64 EF - Phenolic Epoxy	SSPC-SP5 (Sa 3)	1	125 - 150 mic	5 - 6 mils
		Ayapoxi 64 EF - Phenolic Epoxy		1	125 - 150 mic	5 - 6 mils
				Total	250 - 300 mic	10 - 12 mils
T-20	Caustic and fuel storage. Hot water storage up to 200°F / 93°C	Ayapoxi 54 EN - Epoxy Novolac	SSPC-SP5 (Sa 3)	3	100 - 125 mic	4 - 5 mils
				Total	300 - 375 mic	12 - 15 mils

Exterior Tank Coatings Systems (LNG Facilities)

T-21	Un-insulated with operating temperatures of less than 250 °F (121 °C)	Ayazinc 84 Z - High Solids Inorganic Zinc Ayapoxi 66 HB - High-Build Multi-Purpose Epoxy Ayakron 66 HS - Aliphatic Polyurethane	SSPC-SP10 (Sa 2 1/2)	1	75 - 100 mic	3 - 4 mils
				1	125 - 150 mic	5 - 6 mils
				1	50 - 75 mic	2 - 3 mils
				Total	250 - 325 mic	10 - 13 mils
T-22		Ayazinc 84 Z - High Solids Inorganic Zinc AyasiloX 90 PX - Epoxy Polysiloxane	SSPC-SP10 (Sa 2 1/2)	1	75 - 100 mic	3 - 4 mils
				1	125 - 150 mic	5 - 6 mils
				Total	200 - 250 mic	8 - 10 mils
T-23	Un-insulated with operating temperatures of 251 - 400 °F (122 - 204 °C)	Ayazinc 84 Z - High Solids Inorganic Zinc Ayatemp 42 - Silicone Acrylic Topcoat	SSPC-SP10 (Sa 2 1/2)	1	75 - 100 mic	3 - 4 mils
				1	40 - 50 mic	1.5 - 2 mils
				Total	115 - 150 mic	4.5 - 6 mils
T-24	Insulated with operating temperatures of less than 250 °F (121 °C)	Ayapoxi 54 EN - Epoxy Novolac	SSPC-SP10 (Sa 2 1/2)	2	75 - 125 mic	3 - 5 mils
				Total	150 - 250 mic	6 - 10 mils

Exterior Tank Coatings Systems – New Construction and Maintenance

T-25	Severe exposure	Ayapoxi 83 TH - Surface Tolerant Epoxy TL AyasiloX 90 PX - Epoxy Polysiloxane	SSPC- SP3 or WJ-2L	1	150 - 250 mic	6 - 8 mils
				1	100 - 150 mic	4 - 6 mils
				Total	250 - 400 mic	10 - 14 mils
T-26		Ayapoxi 66 HB - High-Build Multi-Purpose Epoxy Ayakron 73 HS - High-Solids Aliphatic Polyurethane	SSPC- SP3 or WJ-2L	2	100 - 150 mic	4 - 6 mils
				1	100 - 150 mic	4 - 6 mils
				Total	300 - 450 mic	12 - 18 mils
T-27		Ayazinc 70 Z - Zinc-Rich Epoxy Primer AyasiloX 90 PX - Epoxy Polysiloxane	SSPC- SP3 or WJ-2L	1	75 - 100 mic	3 - 4 mils
				1	100 - 150 mic	4 - 6 mils
				Total	175 - 250 mic	7 - 10 mils
T-28		Ayazinc 70 Z - Zinc-Rich Epoxy Primer Ayapoxi 66 HB - High-Build Multi-Purpose Epoxy Ayakron 73 HS - High-Solids Aliphatic Polyurethane	SSPC- SP3 or WJ-2L	1	75 - 100 mic	3 - 4 mils
				1	100 - 150 mic	4 - 6 mils
				1	100 - 150 mic	4 - 6 mils
				Total	275 - 400 mic	11 - 14 mils
T-29	Moderate exposure	Ayapoxi 83 TH - Surface Tolerant Epoxy TL AyasiloX 55 PX - Single Pack Acrylic Polysiloxane	SSPC- SP3 or WJ-2L	1	150 - 200 mic	6 - 8 mils
				1	50 - 75 mic	2 - 3 mils
				Total	200 - 275 mic	8 - 11 mils
T-30	Mild exposure	Ayawater 40 W - Waterborne Acrylic Primer Ayawater 35 W - Waterborne Acrylic Topcoat	SSPC- SP3 or WJ-2L	2	50 - 75 mic	2 - 3 mils
				1	50 - 75 mic	2 - 3 mils
				Total	150 - 225 mic	6 - 9 mils
T-31	CONCRETE - All exposures	Ayawater 35 W - Waterborne Acrylic Topcoat	ASTM D - 4258	2	50 - 75 mic	2 - 3 mils
				Total	100 - 150 mic	4 - 6 mils

Exterior Tank Coatings – Overcoat Systems

T-32	Moderate to Severe exposure	Ayapoxi 83 TH - Surface Tolerant Epoxy TL AyasiloX 55 PX OR Ayakron 66 HS	Refer to the coating system data sheet	1	150 - 200 mic	6 - 8 mils
				1	50 - 75 mic	2 - 3 mils
				Total	200 - 275 mic	8 - 11 mils
T-33	Moderate exposure	Ayalkyd 60 PA - Alkyd Primer AyasiloX 55 PX - Single Pack Acrylic Polysiloxane	Refer to the coating system data sheet	2	50 - 75 mic	2 - 3 mils
				1	50 - 75 mic	2 - 3 mils
				Total	150 - 225 mic	6 - 9 mils
T-34	Mild exposure	Ayawater 40 W - Waterborne Acrylic Primer Ayawater 35 W - Waterborne Acrylic Topcoat	Refer to the coating system data sheet	1	50 - 75 mic	2 - 3 mils
				1	50 - 75 mic	2 - 3 mils
				Total	100 - 150 mic	4 - 6 mils

Estimating Guide

Elevated Tanks*



Capacity (Gals.)	Riser Diameter (m)	Inside Area (m ²)	Outside Area (m ²)**
50.000	1,22	292,64	603,87
100.000	1,22	399,48	743,22
150.000	1,22	473,81	919,74
200.000	1,22	548,13	1.031,22
250.000	1,22	622,45	1.179,86
500.000	1,52	929,03	1.820,90
750.000	2,44	1.263,48	2.703,48
1.000.000	2,44	1,579,35	3.428,12

Single Fluted Column Tanks*



Capacity (Gals.)	Inside Area (m ²)		Outside Area (m ²)**
	Wet	Dry	
500.000	1.133,42	1.625,80	1.793,03
750.000	1.477,13	2.485,17	2.571,09
1.000.000	1.844,13	2.958,96	3.089,03
1.500.000	2.587,35	3.342,19	3.692,90
2.000.000	2.880,00	5.040,00	4.436,12

Pedestal Column Tanks* (Spherical)



Capacity (Gals.)	Inside Area (m ²)		Outside Area (m ²)**
	Wet	Dry	
50.000	204,39	250,84	366,97
100.000	311,23	274,06	497,03
150.000	385,55	320,52	603,87
200.000	464,52	380,90	720,00
250.000	529,55	418,06	808,26
500.000	836,13	510,97	1.184,51
750.000	1.091,61	659,61	1.532,90
1.000.000	1.370,32	826,84	1.899,87

* Based on height of 30,48 m to base of tank. ** Includes supporting columns.
NOTE: All figures are approximate

Stand Pipes & Reservoirs*



Tank Dimensions (m)		Shell Area (m ²)	Roof Area (m ²)	
Diameter	Height		If Flat Roof	If Cone Roof
3,05	3,13	29,26	7,43	7,43
3,66	4,57	52,49	10,68	10,68
6,10	3,05	58,53	29,26	29,73
6,10	5,49	104,98	29,26	29,73
7,62	7,32	175,12	45,52	46,45
7,62	10,97	268,49	45,52	46,45
9,14	12,19	350,24	65,50	66,89
10,67	9,14	306,58	89,19	90,58
12,80	12,19	5.141,25	131,46	133,78
13,72	10,97	472,88	147,72	150,04
14,63	14,63	672,62	168,15	170,48
15,85	12,19	607,12	197,42	200,21
18,29	12,19	700,49	262,45	266,63
20,42	12,19	782,24	327,48	332,19
20,42	14,63	938,32	327,48	332,19
22,35	12,19	867,25	392,98	397,63
24,38	12,19	934,14	466,84	473,81
27,43	12,19	1.050,73	590,86	599,24
30,48	12,19	1.167,33	729,75	739,97
33,53	14,63	1.541,26	882,58	895,12
36,58	12,19	1.400,98	1.050,73	1.065,13
40,84	12,19	1.564,49	1.309,93	1.328,51
45,72	12,19	1.751,22	1.641,60	1.664,36
45,72	14,63	2.101,47	1.641,60	1.664,36
54,86	12,19	2.101,47	2.366,24	2.396,90
60,96	14,63	2.801,96	2.918,55	2.958,96

* Figure shown is for one side (inside or outside). For both sides, double indicated figure)

Horizontal Cylindrical Tanks*



Capacity (Gals.)	Tank Dimensions (m)		
	Outside Diameter	Inside Diameter	Length
1.000	1,37	1,37	3,43
2.000	1,78	1,78	3,84
5.000	2,59	2,59	4,29
8.000	2,59	2,59	6,73
10.000	2,59	2,59	8,36
15.000	3,05	3,05	8,81
20.000	3,05	3,05	11,68
25.000	3,05	3,05	14,60

Products Overview

Ayapoxi 66 HB

Multi-Purpose Epoxy

High-solids, high build epoxy coating for use on bare steel and organic zinc primed surfaces for new construction, repair and field maintenance tank exterior projects. Also suitable for ballast tanks.

Ayapoxi 83 TH

Surface-Tolerant Epoxy

Low VOC, high solids maintenance coating for tank exteriors and interiors, with a recoat/cure time of 12 hours/7 days. Water and high humidity resistant.

Ayapoxi 83 TL

Surface-Tolerant Epoxy

Low VOC, high solids maintenance coating for tank exteriors and interiors. Provides exceptional protection against corrosion in fresh or marine water, as well as in corrosive chemical environments.

Ayapoxi 100

100% Solids Epoxy

100% solids multi-purpose high build epoxy, with excellent barrier properties, chemical and abrasion resistant. Suitable for use as a tank lining for a variety of fuel and clean products.

Ayapoxi 54 EN

Epoxy-Novolac

Provides excellent protection to prepared steel and concrete exposed to chemical immersion, splash, spillage and fumes. It is used as a low VOC high performance tank lining for roadtankers and storage tanks in the chemical and petrochemical industries.

Ayapoxi 64 EF

Epoxy-Phenolic

Provides excellent protection to prepared steel and concrete exposed to chemical immersion, splash, spillage and fumes of corrosive chemical and weather environments. It is used as a low VOC high performance tank lining for ship tanks, roadtankers, barges, railroad cars and storage tanks in the chemical and petrochemical industries.

Ayapoxi 72 EN

High-Solids Epoxy-Novolac

High solids epoxy-novolac offering excellent protection to prepared steel and concrete exposed to chemical immersion, splash, spillage and fumes. It is used as a low VOC high performance tank lining for roadtankers and storage tanks in the chemical and petrochemical industries.

Ayapoxi 66 GA

High-Build Amine-cured Coating

NSF Standard 61 compliant high build amine-cured epoxy for potable water tanks 1500 gallons or greater, pipes and valves 36 inches in diameter or greater, with a recoat/cure time of 8 hours/2 days. Low VOC tank lining.

Ayapoxi 70 GA

High-Solids Amine-cured Coating

NSF Standard 61 compliant high solids amine-cured epoxy for potable water tanks 1500 gallons or greater, pipes and valves 36 inches in diameter or greater, with a recoat/cure time of 8 hours/2 days. Low VOC, high build tank lining which provides a DFT of 5-16 mils per coat.

Ayapoxi 86 GA

High-Solids Amine-cured Coating

NSF Standard 61 compliant high solids amine-cured epoxy for potable water tanks 1500 gallons or greater, pipes and valves 36 inches in diameter or greater, with a recoat/cure time of 8 hours/2 days. Low VOC, high build tank lining which provides a DFT of 3-5 mils per coat.

Ayazinc 84 Z

High-Solids Inorganic Zinc

As a single coat, Ayazinc 84 Z resists severe weathering and marine environments. When used as a primer with recommended topcoats it is resistant to industrial chemical exposure. Suitable for tank exteriors.

Ayazinc 70 Z

Zinc-Rich Epoxy Primer

Recommended as a shop or field maintenance primer over bare steel on tank exteriors. Fast dry times allow for rapid topcoating.

Ayalkyd 60 PA

Alkyd Primer

Low VOC primer used with Ayasilox 55 PX to give a high performance maintenance system with the ease of one pack application. Recommended for tank exterior application by brush, roller or spray.

Ayakron 66 HS

Alyphatic Poliurethane

Low VOC finish coat with excellent long-term gloss and color retention. Recommended as a topcoat for tank exteriors where attractive appearance is required.

Ayakron 73 HS

High-Solids Alyphatic Poliurethane

High gloss, high solids, gloss retentive finish coat with outstanding impact and abrasion resistance for tank exterior applications.

Ayasilox 55 PX

Single Pack Acrylic Polysiloxane

One component, non-isocyanete topcoat, which provides a high-gloss polyurethane-like finish with better weathering than a standard aliphatic polyurethane. Suitable finish coat for tank exteriors due to its ease of application and its compatibility with epoxy, alkyds and other types of primers.

Ayasilox 90 PX

Epoxy-Polysiloxane

High solids, low VOC weatherable epoxy which replaces epoxy/aliphatic polyurethane systems in one coat. Exceptional gloss retention, corrosion and abrasion resistance. Recommended for tank exterior application by brush, roller or spray-without thinning.

Ayatemp 42

Silicone Acrylic Topcoat

Silicone acrylic high performance coating, high temperature resistant (up to 482 °F). It can be applied as a topcoat over inorganic zinc primers.

Ayawater 40 W

Waterborne Acrylic Primer

Fast dry, low VOC primer, suitable for dry-fall application. Recommended as a primer for new construction and maintenance for tank exteriors.

Ayawater 35 W

Waterborne Acrylic Topcoat

Fast dry, low VOC finish coat, suitable for dry-fall application with Ayawater 40 W to provide a new construction and maintenance coating system with the ease of one pack application for tank exteriors.





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