

Solutions for Sugar & Ethanol Plants

For Sugar & Ethanol Plants, quality is essential in the supply of the end product for the great consuming companies, especially food and beverage industry.

The process itself requires more resistant coatings so as to extend the intervals between maintenances, and avoid accidents due to corrosion, reducing expenses with repairs on the coating, and preventing non-scheduled production stoppages. Such factors contribute to reducing the profits of the company significantly. When the equipment is painted with high performance coatings, those problems are avoided, ensuring greater productivity and consequent profit.

External Part – General Structure of the Plant

CONVENTIONAL SCHEMES

System composed of alkyd coatings recommended for painting the general structure of the plant and equipment of carbon steel which operates at temperatures up to 90°c, not subject to abrasion, and located in environments with low aggressiveness.

HIGH PERFORMANCE SYSTEM

Alternative coating system which resists to severe weathering conditions, composed of epoxy primer and aliphatic acrylic polyurethane top coat with color and gloss retention, providing longer durability of the coating and easy cleaning.

Equipment Area		Primer		Top Coat	
Equipment Area	Preparation	Product	μm	Product	μm
Carbon steel – external parts of:	St 3	W-LACK CVP 115	40	W-LACK SRA 111	40
Fertilizing machinery, scale, sugar cane barn, anaerobic biodigesters, wine pumps, centrifuges, columns of gas recovery, handrails, decanters, deaerators, diffusers, tubs, stairs, metallic structures, sugar cane mills, electric panels, sieves, choppers, pre-evaporators, overhead cranes, gearboxes, dryers, sugar silos, tanks, towers.		W-LACK CVD 121	40	-	-
conveyors, piping, valves, etc.	Sa 2 ½	W-POXI ERP 322	120	WEGTHANE HPA 501	50

Internal Parts - Tanks

Alcohol or vinasse storage tanks are subject to the aggression of the content itself as well as the water from condensation. In addition, the tank must prevent the evaporation of the stored product as much as possible. In order to meet such requirements, WEG recommends:

Equipment Area	Surface	Primer		Top Coat	
Equipment Alea		Product	μm	Product	μm
Alcohol tanks - internal (all the extension) Sa 2 ½	WEGPOXI BLOCK N 2912 Tipo II	450	-	-	
	00 2 72	W-FENÓXI HT	300	-	-
Alcohol tanks – external part	St 3 or Sa 2 ½	W-POXI ERP 322	150	WEGTHANE HPA 501	65
Internal Part of Effluent Treatment Tanks	Sa 2 ½	WEG TAR FREE WT	400	-	-

Areas with Temperature Above 200 °C

In addition to the conventional painting schemes, WEG Coatings offers solutions that provide greater resistance to areas operating at high temperatures.

W-TERM CVA 660

Top coat monocomponent finished paint with resistance to temperatures up to 600 °C for direct application over steel in a single coat.

ETILO SILICATO DE ZINC N 1661 + W-TERM HPA 660 600 °C

Coating system resistant to temperatures up to 500°c, it combines a single-component, modified silicone based top coat paint with inorganic zinc primers, forming a high performance system regarding to corrosion and high temperatures.



W-TERM CVP 655 ZINC + W-TERM HPA 660

High anticorrosive resistance allied to temperature resistance with the advantage of application over mechanical cleaning preparation.

Equipment Area	Surface	Primer		Top Coat		
Equipment Area	Preparation	Product	μm	Product	μM	
Carbon steel – external parts – areas with temperature up to 600 °C: Juice heaters, soot blower, piping, boilers, chimneys, pre-air, steam turbine, other equipment	Cleaning and degreasing	-	-	W-TERM CVA 660	25	
Carbon steel – external part - areas with temperature between 150 °C and 500 °C: Juice heaters, soot blow piping, boilers, chimneys, pre-air, steam turbine, other equipment	r, Sa 2 ½	Etil Silicato de Zinco N 1661	75	W-TERM HPA 660	25	
Carbon steel – external part - areas with temperature between 150 °C and 500 °C: Juice heaters, soot blow piping, boilers, chimneys, pre-air, steam turbine, other equipment	r, Manual mechanical treatment	W-TERM CVP 655 Zinco	50	W-TERM HPA 660	25	

Other Structures

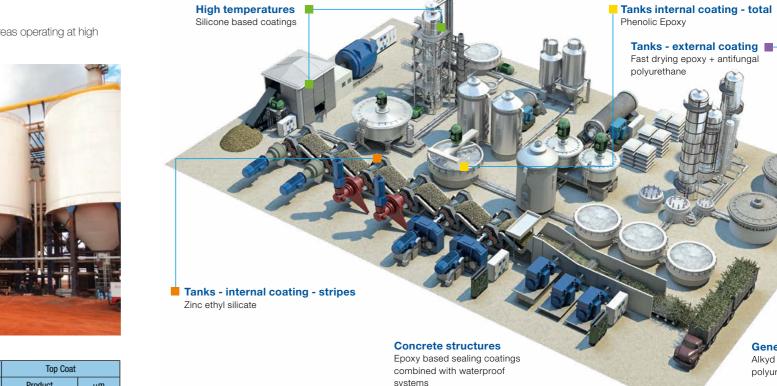
Some areas and structures of the plant require special protection and finishing. For such areas WEG Coatings offers the following solutions:

Equipment Area	Surface	Primer		Top Coat		
Equipment Area	Preparation	Product	μm	Product	μm	
Milling Housing	Sa 2 ½	WEG FENOXI	150	WEG FENOXI	150	
Internal part of Diffusor	Sa 2 ½	WEGPOXI BLOCK N 2912 TIPO II	450	-	-	
		WEG FENOXI	150	WEG FENOXI	150	
	Sa 2 ½	WEG TAR FREE N 2851	150	WEG TAR FREE N 2851	150	
Internal part of Gas Scrubbers		WEGPOXI BLOCK N 2912 TIPO III	450	-	-	

Special Surfaces

Non-ferrous surfaces, galvanized carbon steel and fiber glass do not present the same adhesion characteristics as the conventional carbon steel substrates. In order to ensure adhesion and protection, WEG Coatings offers a coating scheme with isocyanate epoxy primer and alkyd top coating or a double function acrylic polyurethane with adhesion over galvanized steel:

Equipment Area	Surface	Primer		Top Coat		
Ецирпенскіе	Preparation	Product	μm	Product	μM	
	Water cleaning,	LACKPOXI N 2198	20	W-LACK SRA 111	40	
	superficial sanding	W-THANE SRD 501	40	-	-	



General structure Alkyd system or epoxy / polyurethane systems

Concrete Structures

These systems present good performance over concrete substrates, providing high chemical resistance, abrasion resistance and impermeability.

Fauinment Area	Equipment Area Surface Preparation	Primer		Intermediate Coat		t Top Coat	
Equipment Area		Product	μm	Product	μm	Product	μm
Concrete – external parts I Equipment base, vinasse channels, vinasse holding tanks, and effluent treatment tanks	Wash with high pressure water,	W-POXI CVS 301	25	WEG TAR FREE WT	200	WEG TAR FREE WT	200
Concrete – external part Ramps – slippery areas		detergents and solvents		-	-	W-POXI ADA 314	500

Sugar Production

The sugar production sector follows strict hygiene rules and regulations, demanding greater protection and cleaning. For this purpose, WEG offers product lines with antimicrobial properties, preventing fungi and bacteria spreading.

Equipment Area	Surface	Primer		Top Coat		
Equipment Area	Preparation	Product	μm	Product	μm	
Masonry	Sanding and cleaning	W-POXI HIDRO AVA 413 Nobac	50	W-POXI HIDRO AVA 413 Nobac	50	
Concrete, stairs and floors	Wash with high pressure water, detergents and solvents	W-POXI CVS 301	25	W-POXI 711 NOBAC	150	

Structures for Contact with Food

Systems recommended for internal coating of drinking water tanks, alcoholic food as well as for non-greasy food products. They bear certification of the ADOLFO LUTZ and ITAL institutes.

Equipment Area		Surface	Primer		Top Coat		
	Equipment Area	Preparation	Product	μm	Product	μm	
Carbon alpha. Internal and of areas in control with food Tamparatures and place 120.90	Sa 2 ½	WEGPOXI BLOCK N 2912 TIPO II	450	-	-		
	Carbon steel – Internal part of areas in contact with food. Temperatures not above 120 °C	5d Z 72	WEG FENOXI	150	WEG FENOXI	150	

Technologies

In addition to the coating systems already used, WEG also offers innovative products for application in different structures of the plant (conditions on request).

W-FENÓXI HT

WEG has developed the W-FENÓXI HT line for the protection of steel against the chemical aggression of products such as solvents, alcohol, gasoline and other petroleum by-products.

Furthermore, W-FENÓXI HT presents:

- Excellent chemical protection
- Excellent corrosion protection
- Excellent abrasion protection
- High solids by volume
- Possibility of application in high layers (300 micrometers)

Applications

Recommended for the protection of tanks, pipes, metal structures against chemical attacks and corrosion, especially in food storage and drinking water.

Novolac Epoxy Technologie

WEGPOXI BLOCK N 2912 Type II

WEGPOXI BLOCK N2912 Type II is a high thickness Novolac Epoxy primer/top coat. This formula gives WEGPOXI BLOCK N2912 Type II an excellent protective barrier, in addition to great resistance to abrasion and impact.

Characteristics

- High thickness (400 500 micron)
- High solids
- Very low content of solvents (LOW VOC)
- Complies with N2913 of PETROBRAS standard for coating type II condition;

Its extremely low solvent contents confirm WEG Coatings commitment to develop efficient solutions, offering savings, efficiency and protection allied to environmental awareness.

Application method:

Airless gun, brush, roller and spatula.

Advantages

■ It offers better anticorrosive performance, greater durability, and consequently higher cost effectiveness in comparison to common painting schemes.



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