

# SOLUTIONS FOR THE FERTILIZER INDUSTRY

Coatings that ensure greater durability and productivity



Motors | Automation | Energy | Transmission & Distribution | Coatings



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WEG, through its Coatings unit, provides corrosion protection solutions by means of industrial and anticorrosive coatings. We serve several manufacturers of machinery, equipment and metal frames, with excellent reputation in the segment of Fertilizers and an extensive network of coating technicians in Brazil.

Below, we detail some of these requirements and our solutions, obtained through partnerships with our customers and suppliers. These solutions have as main objectives to avoid accidents with corrosion, to reduce the expenses with coating maintenance or avoid unscheduled stoppages in the production, thus ensuring our customers greater productivity and profit.

## Corrosion Resistance

Developed to guarantee greater durability and better productivity in the application, WEG coating system are used to protect machines, equipment, tanks, metallic structures, walkways, handrails, guardrails and pipes.

The product lines W-POXI CVD 323, W-POXI ERP 322, W-POXI ERD 322, WEGPOXI WET SURFACE 88 HT, LACKPOXI N 1265, WEG TAR FREE 712 N 2851, WEGPOXI WET SURFACE 89 PW, WEGTHANE HPA 501 and LACKTHANE N 2677 meet various requirements inherent in the production and storage stages of the Fertilizer industries and provide better productivity both for the maintenance of the structures already in place, and for the suppliers of new machines and structures.





## Port and Marine Regions

Port equipment and belt conveyors are assembled in an industrial environment close to the sea and are almost always exposed to air that contains a certain amount of moisture. They are also exposed to rain and at least one accelerator of the corrosive process, which is salt spray. In addition to these agents, there is also the presence of dust containing small particles of fertilizers and industrial gases, including  $\text{SO}_2$ , which contribute to accelerating the corrosive process of metals.

In other situations, pipes and metal frames are buried or submerged in fresh or salty water, like in signaling buoys and floating devices, and that also requires special attention.

Therefore, for the coating of metal structures, loading and unloading installations, ship loaders/unloaders, cranes, conveyor belts, silos and warehouses, WEG recommends and provides solutions in high performance epoxy coating systems and finish with polyurethane coatings with excellent resistance to weathering, such as the lines W-POXI ZSP 315 N 1277, WEG TAR FREE 712 N 2851, WEGPOXI WET SURFACE 88 HT, WEG FENOXI, WEGTHANE HPA 501, W-FENOXI HT, POLITHERM 24 and POLITHERM 26.



# MACHINERY AND EQUIPMENT PROTECTION

During processing, mixing machines, feeders, unloading hoppers and other equipment maintain continuous contact with fertilizers in extremely aggressive conditions for metal surfaces.

WEG has product lines formulated with the highest technologies in resins available on the market, guaranteeing excellent performance as coatings.

WEG solutions for machinery and equipment:

LACKPOXI N1277, WEGPOXI WET SURFACE 88 HT, WEG FENÓXI, WEG TAR FREE 712 N 2851, WEGPOXI BLOCK GFD 362 and WEGTHANE HPA 501.

## Complete Product for Various Situations

**WEGPOXI WET SURFACE 88 HT** is the ideal coating for many situations. It offers excellent chemical resistance in a high build single coat (it can be applied in a thickness of 500 micrometers dry), reducing application costs in maintenance and new coatings. It can be applied over other coatings as a system converter, over dry blasted or even hydroblasted surfaces. Used in machines in general, inside and outside metal frames, tanks and pipes in environments with high humidity and areas of aggressive splashes and spills. It provides extra-fast drying, allowing the area/equipment to be released in less time. In addition, it can be applied over wet surfaces and at a wide operating temperature range from 5°C to 70°C.

## Resistance to High Temperatures

Equipment, ovens, boilers, ducts, pipes, tanks and equipment that operate at high temperatures require special attention, as the heating of the surfaces accelerates the corrosion processes. To minimize these damages, WEG supplies the products W-TERM HPD 364, W-TERM HPA 660, ETHYL SILICATE ZINC N 1661 and ETHYL SILICATE ZINC ALUMINUM N 2231, used in all situations, such as in the maintenance of heated surfaces up to 150°C, and on equipment and pipes that operate at temperatures of 500°C.





## Contact with Chemicals

The different characteristics found in the Fertilizer industry, such as the contact with acids products and solid contaminants, besides the presence of high humidity, high temperatures, salts sulfides and other corrosive agents, generate the demand for high-performance materials and coatings.

Some products and inputs of the processing units are corrosive, and the equipment, tanks, pipes and structures that remain in contact with such chemical agents need special protection. WEG also has product lines especially developed to withstand such conditions, which involve transportation and storage of fertilizers, inputs, acids and bases, mixing equipment and discharge spouts.

W-POXI BLOCK HPP 402 is recommended for application over manual and/or mechanical cleaning, eliminating the use of abrasive jet. In the table on the right, we highlight the criteria of performance and resistance to corrosion according to ISO 12944 and the performance of the product W-POXI BLOCK HPP 402 in the condition of coating with painting roller and on surfaces prepared with manual sanding.

Test	Reference ISO 12944 - 6:2008 C5I high <sup>1)</sup>	Result
Adhesion (ISO 4624)	≥ 5 Mpa or more	Excellent
<b>Salt spray (ISO 9227 - 5.2 NSS), 1.440 horas</b>		
ISO 4628-2	0(S0) - No blisters	Excellent
ISO 4628-3	Ri 0 - No oxidation/rust	Excellent
ISO 4628-4	0(S0) - No cracking	Excellent
ISO 4628-5	0(S0) - No peeling	Excellent
Corrosion around the cut (mm)	max. 1.0	Excellent
<b>Chemical resistance (ISO 2812-1, immersion 10% NaOH solutions, 168 hours)</b>		
ISO 4628-2	0(S0) - No blisters	Excellent
ISO 4628-3	Ri 0 - No oxidation/rust	Excellent
ISO 4628-4	0(S0) - No cracking	Excellent
ISO 4628-5	0(S0) - No peeling	Excellent
Corrosion around the cut (mm)	max. 1.0	Excellent
<b>Chemical resistance (ISO 2812-1, immersion 10% H2SO4 solutions, 168 hours)</b>		
ISO 4628-2	0(S0) - No blisters	Excellent
ISO 4628-3	Ri 0 - No oxidation/rust	Excellent
ISO 4628-4	0(S0) - No cracking	Excellent
ISO 4628-5	0(S0) - No peeling	Excellent
Corrosion around the cut (mm)	max. 1.0	Excellent
<b>Saturated humidity/condensation (ISO 6270-1, 720 hours)</b>		
ISO 4628-2	0(S0) - No blisters	Excellent
ISO 4628-3	Ri 0 - No oxidation/rust	Excellent
ISO 4628-4	0(S0) - No cracking	Excellent
ISO 4628-5	0(S0) - No peeling	Excellent
Corrosion around the cut (mm)	max. 1.0	Excellent

Note: 1) Tests performed with the application of 3 coats with 150 micrometers, on steel sheets prepared only with manual sanding (Standard Cleaning St2).

# SOLUTIONS FOR FLOORS



LEARN MORE BY ACCESSING OUR  
FLOOR CATALOG

In addition to protection for fertilizers industries, WEG Coatings also offers full coating solutions for industrial floors.

The proper care with the workplace floor directly contributes to increasing productivity. Floors in poor conditions, besides the bad aspect, hinder operations, causing accidents and delays. In addition to the protection, the coating improves the environment aesthetics, contributing to making the work environment more pleasant.

## Conventional Coating

Traditional coating systems include three types of floor painting: for light, moderate and heavy traffic.

The floor system for light traffic is recommended where pedestrians and light vehicles circulate. The moderate traffic system, for places where there is circulation of cars and light vehicles. While the heavy traffic system, for places where trucks circulates and for industries in general.



## Urethane

Innovative solutions for maximum floor protection, considering concerns about contamination, cleaning requirements and long-term maintenance costs.

This coating is recommended for numerous applications, especially for the food and beverage industry. It has antimicrobial agents, not proliferating bacteria and fungi, has self-leveling characteristics and is extremely hygienic.



### High Build

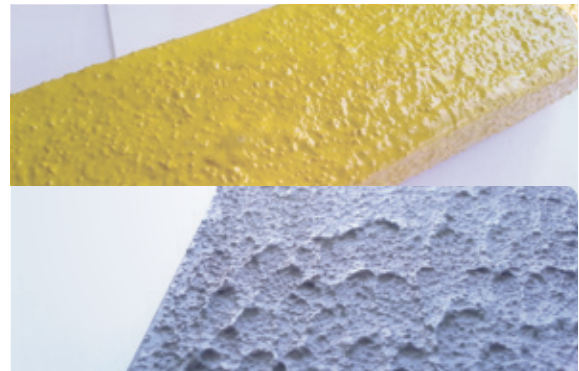
Coating recommended for new or old floors, indoors or outdoors of industries in general, where there is heavy traffic of heavy vehicles.



### Anti-slip

Epoxy coating with anti-slip properties, which can be applied in areas such as: ramps, stairs, escape routes. It provides greater safety for pedestrians and even for vehicles.

Available in two textures: high texture and low granulometry (BG).



### Road Surface Marking

WEG Coatings also has a wide line of products for road surface marking. They are robust products developed on a solvent and water base, using imported resins with proven quality. These products meet the requirements of Brazilian standards ABNT NBR 11862 and ABNT NBR 13699 and can be applied on asphalt and cement floors.



## Specification for Each Situation

Our teams are always available to evaluate and prepare coating specifications appropriate and customized for each situation.

We consider the characteristics of the aggressive microenvironments, usage and operating conditions and cost effectiveness, thus providing the most suitable coating system for each customer, with great durability at the lowest possible cost.

For WEG's worldwide  
operations visit our website



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