

W-POXI ENG 091

PRODUCT DESCRIPTION

High solids, high-build novolac epoxy primer/finish. Very low volatile organic compounds (Low VOC). Formulated with glass flakes providing excellent barrier protection, abrasion, and impact resistance. Due to glass flakes, the product delivers unmatched anticorrosive protection, excellent surface hardness, and impermeability.

RECOMMENDED USE

Developed for application on oil and formation water tanks. Also indicated for crude oil tanks, fuel oils, light products (fuels and solvents), ballast tanks, ships in general, and maritime structures. In offshore, can be used on decks, oil and natural gas exploration platforms, onboard machinery, pipelines, etc. Also indicated for industrial applications such as chemical and pulp industries, aerial or submerged metal structures (upon consultation), and various machinery. Indicated for internal and external application on various pipelines, immersed or buried. Particularly suitable for environments where anticorrosive and chemical resistance is an essential requirement.

CERTIFICATIONS AND APPROVALS

When supplied to comply with the ROHS Directive (Restriction of Certain Hazardous Substances), this product includes the letter R in its nomenclature description.

PACKAGING

Component A	3.6L Package containing 3.05L 20L Package containing 16.92L
Component B	0.9L Package containing 0.55L 3.6L Package containing 3.08L

CHARACTERISTICS

Color	Gray.
Gloss	Gloss
Volume Solids	92 ± 2% (ISO 3233)
Shelf Life	24 months
Dry Film Thickness	250 µm - 350 µm
Dry Heat Resistance	Maximum temperature 200 °C. The product maintains its chemical properties up to a temperature of 200 °C, but from 60°C, color and gloss variations in the paint may occur.
Theoretical Coverage	3,07 m ² /l without dilution at a dry film thickness of 300 µm. Loss factors during application are not considered.

DRYING

Drying			
	10 °C	25 °C	35 °C
Touch	14 hours	6 hours	4 hours
Manipulation	30 hours	16 hours	8 hours
Final	120 min	90 min	1 hour
Recoat Drying			
	10 °C	25 °C	35 °C
Minimum	10 hours	6 hours	3 hours
Maximum	72 hours	72 hours	72 hours

SURFACE PREPARATION

Standard Surface Preparation

The performance of this product is related to the degree of surface preparation. In case of doubts, for more information, consult WEG's Technical Department.

The surface must be clean, dry, and free of contaminants. Completely remove oils, greases, and fats according to SSPC-SP1.

Remove accumulated dirt using a dry brush, clean dry cloth, compressed air blow, vacuum, or a combination of these. Remove soluble salts by washing with plenty of fresh water, preferably under low pressure (up to 5,000 psi), according to SSPC-SP12/NACE No. 5 standard.

Abrasive Blasting

Inspect the freshly blasted surface, observing defects that may appear after treatment. Correct them by grinding, filling with welds and/or epoxy putty.

For areas near marine environments, wash with fresh water at low pressure (minimum 3,000 psi) before abrasive blasting. In some cases, repeat washing after blasting to remove soluble contaminants and perform a new abrasive blasting.

If oxidation occurs between the end of abrasive blasting and coating application, the surface must be blasted again until the specified visual standard is achieved.

The maximum soluble contaminant content on the blasted surface must meet ISO 8502-6 and ISO 8502-9 standards, not exceeding 20 mg/cm² (2 ¼g/cm²) in immersed, buried, or submerged areas.

Water Jetting

Application of this product is allowed on hydroblasted surfaces showing moderate flash rust, WJ-2M, according to SSPC-VIS 4/NACE VIS 7 visual standard.

Perform hydroblasting (pressure e 10,000 psi) according to SSPC-SP 12/NACE No. 5, reaching WJ-2 grade (C WJ-2, D WJ-2, E WJ-2, F WJ-2, G WJ-2, and H WJ-2) of SSPC-VIS 4/NACE VIS 7 visual standard.

NOTE 1: Ultra-high-pressure hydroblasting can remove oils and greases from the surface; however, this does not replace prior degreasing.

Hand and Power Tool Cleaning

Perform manual mechanical cleaning for carbon steel surfaces with oxidation grades C or D, according to SSPC-VIS 3 visual standards. For previously painted surfaces with grades E, F, or G, follow SSPC-VIS 3.

The manual mechanical cleaning process is recommended only for small areas.

Mechanically treat the surface until achieving at least St 3 grade according to ISO 8501-1 visual standard or SSPC-SP 11, using SSPC-VIS 3 visual standard as guidance.

If manual mechanical cleaning is not possible, alternatively perform near-white metal abrasive blasting, Sa 2½ grade according to ISO 8501-1 visual standard (C Sa 2½ and D Sa 2½) or SSPC-SP 10/NACE No. 2, visual standard SSPC-VIS 1 (C SP 10, D SP 10).

This surface treatment is not recommended for internal tank maintenance.

Carbon Steel Surfaces

Hard surface layers (e.g., layers resulting from flame cutting) must be removed by grinding before starting abrasive blasting.

All welds must be inspected and, if necessary, repaired before completing abrasive blasting. Porosities, cavities, weld splatter, etc., must be repaired with proper mechanical treatment or welding repair. In other areas, round edges and sharp corners (r e 2 mm, ISO 8501-3).

Over Primer

For touch-ups, maintain the original painting system.

If an anticorrosive primer is needed, it must be approved by WEG technical department. The primer must be dry and free of contaminants.

Existing shop primer must be removed via abrasive blasting to near-white metal, grade Sa 2½, ISO 8501-1 standard or SSPC-SP 10/NACE No.2, unless the manufacturer ensures integrity and performance of the painting system over the primer.

Small worn or damaged areas should be prepared with abrasive blasting to near-white metal, grade Sa 2½, ISO 8501-1 standard or SSPC-SP10/NACE No.2. If not possible, use rotary-mechanical tools grade St 3 or SSPC-SP11, using SSPC-VIS3 visual standard as reference.

For exterior coatings with exceeded maximum recoat interval, open the anchor profile using manual or mechanical tools (60 or 80-grit sandpaper, rotary brush, etc.) or light abrasive blasting grade Sa 1, ISO 8501-1 standard or SSPC-SP 7/NACE No.4. For interior coatings, only light blasting grade Sa 1, ISO 8501-1 standard or SSPC-SP 7/NACE No.4 is acceptable.

Respect the primer recoat interval before applying the product. If exceeded, perform sanding

according to the technical bulletin. Painting over primer with exceeded interval may have adhesion lower than specified by Petrobras N2913 and ASTM D4541.

APPLICATION PREPARATION

Mixing	Homogenize the content of each component using mechanical or pneumatic stirring (A and B). Ensure no sediment remains at the bottom of the container. Add component B to component A in the indicated mixing ratio under stirring until completely homogenized, respecting the mixing ratio. Avoid prolonged mixing, as frictional heat will significantly reduce the product's shelflife.
Mixing Ratio	By volume: 5.5 A x 1 B.
Thinner	EPOXY DILUENT 3005
Dilution	Depending on the application method, dilute to a maximum of 3%.
Notes	In very hot locations, we recommend consulting the WEG Technical Department.
Pot Life	1 h 30 min The shelf life of the mixture is reduced as the ambient temperature increases. The pot-life test of the mixture is carried out according to ABNT NBR 15742; however, different volumes of paint prepared at once, combined with varying ambient and paint temperatures, will affect the mixture's shelf life, potentially resulting in outcomes different from those stated in this technical bulletin.
Induction Time	No induction time required. In very hot locations, we recommend consulting WEG's Technical Department.

APPLICATION METHODS

Airless Spray Gun	Airless: Use minimum pump 70:1 Fluid pressure: 3500 - 4500 psi Hose: The hose from the airless pump to the whip must be a maximum of 15 meters with 1/2" (12.7 mm) inner diameter. The whip hose that reaches the gun must be 1.5 meters with 3/8" (9.5 mm) inner diameter. Nozzle: 0.031" - 0.035" Note: Due to the product containing glass flakes, premature nozzle wear may occur. All filters must be removed. For more information on using this product with an Airless gun, please refer to the attachment at the end of this technical bulletin.
Roller	Use a short-haired, seamless wool or synthetic roller for epoxy paints. Recommended only for small areas or touch-ups. Use a low-pile seamless wool roller or synthetic roller for epoxy paints. For application with brush and/or roller, it may be necessary to apply two or more coats to achieve a uniform layer and the recommended film thickness.
Brush	Recommended only for small area touch-ups or "stripe coat" (screws, nuts, weld beads, sharp corners, and touch-ups).
Cleaning of the equipments:	EPOXY DILUENT 3005
Notes	The data presented serves as a guide and similar equipment may be used. Changes in pressures and nozzle sizes may be necessary to improve spraying characteristics. Purge the compressed air line to avoid paint contamination.



Do not allow catalyzed product to remain in contact with application equipment, as at temperatures above the indicated "pot life", the paint will show variation in flow and will harden, making cleaning difficult.

Before application, ensure that the equipment and respective components are clean and in optimal condition.

After mixing two-component products, if there are application stops and the pot life has been exceeded (paint shows variation in flow), it can no longer be re-thinned for later application.

In spray application, overlap each gun pass by 50%, finishing with a cross pass. This technique avoids uncovered or unprotected areas and ensures proper aesthetic finish.

Reinforce all sharp corners, gaps, and weld beads with a brush to avoid premature failures in these areas.

Clean all equipment immediately after use.

It is considered good practice to periodically wash the spraying equipment during the day. The cleaning frequency depends on the amount sprayed, temperature, and elapsed time, including all delays.

APPLICATION PERFORMANCE

The product must be stored between 20°C and 30°C to maintain the proper viscosity for application.

Due to the product containing glass flakes in its formulation, nozzle wear may occur.

For coatings applied in coastal areas exposed to sea spray, it is recommended to wash with fresh water between coats to remove deposited impurities.

Do not apply the product after the pot life has been exceeded.

Do not use excessive air pressure. Properly adjust fluid and nozzle pressure for better atomization.

As this is a primer, color variation between batches of this material may occur.

For optimal application properties, the paint temperature should be between 21°C and 27°C before mixing and application.

During curing, if the applied parts are exposed to low temperatures and/or high humidity, exudation may occur on the film, which should be removed with fresh water or cloth moistened with appropriate Diluent. This does not affect the quality or corrosion resistance of the film.

Before application, observe weather conditions: there must be no threat of rain or drizzle. Surface temperature must be at least 3°C above the dew point, and relative humidity should not exceed 85%. Adverse conditions may cause color variations and other characteristics. Consult WEG Technical Department.

Due to high viscosity and thixotropy, dispersed bubble entrapment will occur. Volume solids test according to ISO 3233 may show values below 80%; this should not be considered for yield calculations.

Painting is recommended only if surface temperature is at least 3°C above the dew point.

Substrate temperature, climatic and environmental conditions during application and curing, as well as applied film thickness, may affect drying time.

Epoxy systems may have longer curing times when exposed to low temperatures. For curing at temperatures below 10°C, consult the WEG Technical Department.

The product allows painting on recently water-blasted surfaces with slight traces of flash rust (or relatively advanced degree of flash rusting, equivalent to the "moderate" degree described in SSPC VIS4(1) / NACE N°7).

Paintings performed with varying application methods on the same project may result in differences in gloss and final appearance.

It is not recommended to apply this product on surfaces with a water film, under direct rain impact, on freshly painted surfaces exposed to water during curing, in places with low temperatures, or in situations where parts are applied and left to dry outdoors, as localized staining with color change (more visible in dark colors), curing delay, and compromised product performance may occur.

Small variations in color, appearance, and gloss (more noticeable in dark colors), as well as delayed curing and performance compromise, may occur during high humidity, rainy days, cold locations, or when parts dry outdoors.



Epoxy-based products are known for their excellent anticorrosive properties and low resistance to sun exposure. When the applied film is exposed to weathering, over time it will lose gloss, a phenomenon known as chalking, which consequently alters its color. It is important to note that, despite this chalking, the film's anticorrosive protection is not compromised.

Under adverse weather conditions in indoor and/or outdoor environments with high relative humidity, rain or drizzle, low or very low temperatures, and excessively high temperatures, variations in color and other product characteristics may occur. Please consult WEG's Technical Department for more information.

SAFETY PRECAUTIONS

Product developed for industrial use intended for handling by qualified professionals. Carefully read all information contained in the SDS of this product, available at: www.weg.net.

Store in a covered and well-ventilated place. Keep the container tightly closed and away from sources of heat or ignition.

Use only in well-ventilated areas, avoiding the accumulation of flammable vapors. Keep the product away from heat and sources of ignition.

Do not inhale mists/vapors/aerosols generated during handling and/or application. Use protective gloves/protective clothing/eye protection/face protection.

Empty containers and materials with paint residues must be disposed of according to current legislation. Take care of the environment.

NOTE

The information contained in this technical bulletin is based on the experience and knowledge acquired in the field by WEG's technical team.

In the event of using the product without prior consultation with WEG regarding its suitability for the purpose for which the customer intends to use it, the customer acknowledges that the use will be at their own exclusive responsibility, and WEG is not liable for the behavior, safety, suitability, or durability of the product.

Some information mentioned in this bulletin is only an estimate and may vary due to factors beyond the manufacturer's control. Therefore, WEG does not guarantee and assumes no responsibility for performance, efficiency, or any material or personal damages resulting from the incorrect use of the products in question or from the information contained in this Technical Bulletin.

The information contained in this technical bulletin is subject to periodic modifications, without prior notice, due to our policy of continuous improvement and evolution of our products and services, providing quality solutions to meet the needs of our customers.