



# W-POXI BLOCK HPP 402 R ALUMÍNIO

**PRODUCT DESCRIPTION:** High-solids and high-build 2-pack novolac epoxy primer pigmented with aluminum. It has extremely low content of volatile organic compound (Low VOC). Tolerant to surfaces subjected to manual or mechanical cleaning or aged coating, but bonded. Excellent chemical resistance, in addition to good resistance to abrasion and impact. In addition to providing unmatched corrosion protection, W-POXI BLOCK HPP 402 has excellent surface hardness and impermeability.

**RECOMMENDED USES:** For initial protection of carbon steel without rolling scales and when corrosion is present and abrasive blasting is not possible. It is especially recommended for environments where the chemical and corrosion resistance is essential.

**CERTIFICATIONS AND APPROVAL:** This product, when supplied to comply with the RoHs Directive (Restriction of Certain Hazardous Substances) has the letter R in its description.

| PACKAGING: | Component   | Content | Package | Unit of measurement |
|------------|-------------|---------|---------|---------------------|
|            | Component A | 3,05    | 3,6     | L                   |
|            | Component B | 0,55    | 0,9     | L                   |

| CHARACTERISTICS:                 | Drying:  |            |            |
|----------------------------------|--|------------|------------|
|                                  | 10°C   | 25°C       | 35°C       |
| <b>Color:</b>                    | Aluminum   |            |            |
| <b>VOC content:</b>              | 120 g/l  |            |            |
| <b>Volume solid:</b>             | 85 ± 3% (ISO 3233).  |            |            |
| <b>Flash Point:</b>              | > 55 °C  |            |            |
| <b>Shelf-Life:</b>               | 12 months at 25°C.   |            |            |
| <b>Thickness per coat (dry):</b> | 120 µm –130 µm   |            |            |
| <b>Theoretical coverage:</b>     | 6,96 m <sup>2</sup> /l without dilution in the thickness of 125 µm dry. Without considering loss factors in application.   |            |            |
| <b>Resistance to dry heat:</b>   | Maximum temperature 220 °C . The product retains its physical and chemical properties up to the temperature of 220 °C however, variations in the coating color and gloss may occur from 60 °C. |            |            |
| <b>Touch:</b>                    | 10 hours   | 4 hours    | 2 hours    |
| <b>Handling:</b>                 | 24 hours   | 10 hours   | 6 hours    |
| <b>Final:</b>                    | 240 hours  | 168 hours  | 168 hours  |
| <b>Pot Life</b>                  | 120 minutes  | 90 minutes | 60 minutes |
| <b>Overcoating Drying:</b>       |  |            |            |
|                                  | 10°C   | 25°C       | 35°C       |
| Min                              | 10 hours   | 4 hours    | 2 hours    |
| Max                              | 30 hours   | 24 hours   | 20 hours   |

**SURFACE PREPARATION** The performance of this product depends on the degree of surface preparation.

The surface must be clean, dry and free of any contaminants. Completely remove oils, greases and fats, as described in the SSPC-SP 1 standard.

The accumulated dirt must be removed using a dry brush, clean and dry cloth, compressed air blow, vacuum cleaner and/or with the combination of such items, and the soluble salts must be removed through wash with a great quantity of fresh water, preferably with low pressure (up to 5,000 psi) according to SSPC-SP 12/NACE No. 5.

## Surface treatment through the hydroblasting process

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

This product can be applied to a surface that has been hydroblasted and presents the grade "moderate flash rust", WJ-2 M of the SSPC-VIS 4/NACE VIS 7 visual standard.

## Surface treatment through Abrasive Blasting process

Execute the abrasive blasting to near white metal, Sa 2 ½ grade of the ISO 8501-1 visual standard (A Sa 2 ½, B Sa 2 ½, C Sa 2 ½ and D Sa 2 ½) or according to SSPC-SP 10/NACE No. 2, SSPC-VIS 1 visual standard (A SP 10, B SP 10, C SP 10, D SP 10, G1 SP 10, G2 SP 10, G3 SP 10).

It is recommended a roughness profile between 40 and 85  $\mu\text{m}$ .

Inspect the newly blasted surface observing the presence of surface flaws that could become apparent after this stage, adopting appropriate actions to mitigate such defects through grinding, weld filling and/or epoxy putty.

In case of oxidation on the substrate from the end of the abrasive blasting to the beginning of the coating application, the surface must be blasted again until reaching the specified visual standard.

For areas close to sea air, it is necessary to wash the surface with fresh water at low pressure (minimum 3,000 psi) before the abrasive blasting. And in some cases it is necessary to repeat the washing procedure after the abrasive blasting to remove possible soluble contaminants settled on the surface proceeding with a new abrasive blasting.

## Surface treatment through the manual mechanical cleaning process

Execute manual mechanical cleaning for carbon steel surfaces that present the oxidation grades C or D, according to the SSPC-VIS 3 visual standard. For surfaces previously painted that present grades E, F or G according to standard SSPC-VIS 3.

Treat the surface mechanically until obtaining at least grade St 2 of the ISO 8501-1 visual standard or according to SSPC-SP 2; the SSPC-VIS 3 visual standard can be used as an aid.

## Application over primer

**NOTE:** Observe the product overcoating interval to apply the next coat. In case the maximum overcoating interval has been exceeded, it is necessary to manually/mechanically sand the surface to break the gloss of the previous coat and clean the sanding residues so as to provide better adhesion between the coats.

## Treatment of Steel Carbon Surfaces

Hard superficial layers (for example, layers resulting from flame cut) must be removed by grinding it before beginning the abrasive blasting.

All the welds must be inspected e, if necessary, be repaired before the ending of the abrasive blasting. Porosity, cavities, weld splashes, etc. must be repaired by means of proper mechanical treatment or weld repair; in the other areas, round the sharp edges ( $r \geq 2$  mm, ISO 8501-3).

## Refinishing of surfaces with aged coating in good conservation conditions

In cases where the aged coating has good adhesion to the substrate, we recommend superficial sanding to break the gloss, followed by the cleaning of the dust and residues of the sanding in order to provide better adhesion between the coats.

We recommend the user of this coating to seek ways to make sure the original aged painting is still well bond to the substrate before executing this refinish. Loose aged coatings or not well bonded must be completely removed. We emphasize that the refinishing must only be made on surfaces in good conservation conditions.

It is acceptable to use less demanding surface preparation standards, provided that the absence of contaminants is guaranteed by cleaning with fresh water at high pressure (between 5,000 psi and 10,000 psi) according to SSPC-SP 12/NACE In. 5. If any further explanation is necessary, contact our technical area to determine alternatives for the proper surface preparation on a case by case basis.

Remove all the existing contaminants on the coating. In case the film has spots not well bonded, remove it with brush off grade 1 or according to SSPC-SP7 standard. ISO 8501-1 visual standard.

Corrosion spots, worn or damaged areas and the like shall be prepared by commercial abrasive blasting to Sa 2 of ISO 8501-1 visual standard or according to SSPC-SP 6 / NACE No. 3, SSPC-VIS 1 visual standard. If it is not possible to execute the abrasive blasting, as an alternative the surface can be prepared with rotary power tools according to SSPC-SP 11.

## Maintenance and repair

In cases where the aged coating has good adhesion to the substrate, we recommend superficial sanding to break the gloss, followed by the cleaning of the dust and residues of the sanding in order to provide better adhesion between the coats.

For further information, consult WEG Technical Department.

## PREPARATION FOR APPLICATION

### Mixture

Homogenize the contents of each component by means of mechanical or pneumatic stirring (A and B). Ensure that no sediment is settled at the bottom of the package. Add component B to component A, at the recommended mixture proportion, under stirring, until complete homogenization, observing the mixing ratio. Avoid mixing for extended periods, since the heat of the friction will significantly reduce the product pot life.

### Mixing ratio (Volume)

5.5 A X 1 B.

### Diluent

**Epoxy diluent 3005**

### Dilution

Depending on the application method, dilute at most 10%

Do not dilute with solvents that are not allowed by local legislation and do not exceed the recommended dilution percentage.

Only add the diluent after complete mixing of components A + B.

The quantity of diluent may vary depending on the type of equipment used and the ambient conditions during the application.

Excessive dilution of the coating may affect the formation and aspect of the film and not allow to reach the specified thickness.

### Pot life of the mixture (25°C)

1 h 30 min

The pot life is reduced with a higher room temperature.

The pot-life test is performed according to the Brazilian standard ABNT NBR 15742; however, different volumes of coating prepared at once combined with different ambient and coating temperatures will influence the pot life, and different results than those mentioned in this data sheet may be found.

### Induction time (25°C)

No induction time required.

In hot areas, we recommend consulting WEG Technical Department.

## APPLICATION FORMS

The data below is a guide, and similar equipment may be used.

In the spray application, make a 50% overlap in each gun pass, concluding with a cross pass. This technique is used to avoid uncovered and unprotected areas and to obtain a suitable aesthetic finish.

Recoat all sharp edges, cracks and weld beads with a brush to prevent premature failures in these areas.

Changes in nozzle sizes and pressures may be necessary to improve spraying characteristics. Before application, check the equipment and its components are clean and in best condition. Purge the compressed air line to prevent contamination of the coating.

After mixing 2-pack products, if there are stops in the application, and pot life is exceeded (the coating shows variation in fluidity) it can no longer be diluted for further application.

The data below is a guide, and similar equipment may be used.

### Conventional gun:

|                       |                                   |
|-----------------------|-----------------------------------|
| Gun:                  | JGA 502/3 Devilbiss or equivalent |
| Fluid nozzle:         | EX                                |
| Air cap:              | 704                               |
| Atomization pressure: | 50 - 70 psi                       |
| Pressure in the tank: | 10 - 20 psi                       |
| Dilution:             | 10%                               |

### Airless Gun:

|                 |                         |
|-----------------|-------------------------|
| Use Airless:    | Use at least pump 60: 1 |
| Fluid pressure: | 3500 – 4500 psi         |
| Hose:           | 3/8" internal diameter  |

Nozzle: 0,025" - 0,031"  
Filter: Mesh 60

Dilution: Max. 5%  
Note: The diameter of the fluid hose should not be smaller than ½" with ¾" in the harness, and its length should not exceed 5 meters.

**Brush:**

Only recommended for touch up small areas or stripe coat (screws, nuts, weld and sharp edges). Use a brush 75 to 100 mm wide for larger surfaces and 25 to 38 mm for touch up.

**Roller:**

Use a thin nap, seamless sheepskin or microfiber roller for epoxy coatings.

For application with brush and/or roller, two or more passes may be necessary to obtain a uniform layer according to the recommended film thickness per coat.

**Cleaning the equipment:**

Epoxy diluent 3005  
Clean all equipment immediately after use.

**NOTE:**

Do not leave catalyzed product in contact with the equipment used in the application, because the coating will vary in fluidity at temperatures above specified in the pot life and will cure faster, making the cleaning difficult.

Furthermore, it is a good working practice to periodically wash the spray equipment along the day. The cleaning frequency will depend on the amount sprayed, temperature and elapsed time, including all delays.

**PERFORMANCE IN THE APPLICATION**

For a good performance of the product, we recommend following the directions below:

Variations in color, aspect and gloss (more noticeable in dark colors) may occur, as well as delay in curing and low coating performance, when applied during periods of high air relative humidity, rainy days, low temperatures or drying the coating outdoor.

Epoxy-based products are known to have excellent anti-corrosion properties and low resistance to sunlight exposure. In situations of exposure of the film to the weather, over time it will present a loss of gloss known as chalking and its shade will change as a consequence. Remember that even undergoing such chalking, the film anti-corrosion protection is not impaired.

In paintings carried out in front of the sea, if exposed to sea air, we recommend to wash with fresh water between coats eliminating settled impurities.

The product should be stored at 20 - 30 °C to achieve viscosity for proper application.

It should not be applied in adverse conditions, such as air relative humidity above 85% or on condensed surfaces. Small variations in color, appearance and gloss of the coated parts may occur in periods of high air relative humidity, rainy days, at low temperatures or in situations where the coated parts are placed to dry outdoors.

Do not use excessive air pressure. Adjust the fluid pressure and nozzle properly for a better atomization.

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

The product allows the coating over recently hydroblasted surfaces with small traces of flash rust equivalent to the "moderate" grade described in standard SSPC VIS4 (I) / NACE No. 7.

It is not recommended to apply this product over a surface covered with a water film or exposed to rain, neither to expose the freshly painted surface to direct contact with water during the curing process or places with low temperatures or to put the parts to dry outdoors, as staining with changes in color (more noticeable in dark colors), delay in curing and impairment of the product performance may occur.

We recommend coating only if the surface temperature is at least 3 °C above the dew point temperature.

Do not apply the product after the pot life has expired.

For better application properties, the coating temperature should be between 21 - 27 °C prior to the mixing and application.

In coatings with variation in application method in the same job, the final aspect and gloss of the painted surfaces may show differences.

The temperature of the substrate, the weather and environmental conditions during the application and during the curing of the product, and the thickness of the coat may interfere in the product drying time.

# TECHNICAL DATA SHEET



For a good performance of the product, we recommend following the directions below:

For further information, consult WEG Technical Department.

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## COMPATIBILITY OF SYSTEMS AND MAINTENANCE REFINISHING

The primer overcoating interval should be observed before applying the topcoat. If the maximum recommended overcoating interval is exceeded, manual/mechanical sanding is necessary to break the gloss. The primer surface must be dry and free of any contaminants.

For further information, consult WEG Technical Department.

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## SAFETY PRECAUTIONS

Product developed for industrial use intended for handling by qualified professionals.

Please read carefully all the information contained in the MSDS of this product, available at: [www.weg.net](http://www.weg.net).

Store in a covered, well-ventilated area. 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.

Wear protective gloves / protective clothing / eye protection / face protection.

Avoid release this product and its packaging, as well as materials used during handling and application in the environment.

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## NOTE:

The information contained in this technical datasheet is based upon the experience and knowledge acquired in the field by the technical team of WEG.

If using the product without previous inquiry to WEG Coating concerning its suitability for the customer's intended purpose, the customer is aware that the use shall be its exclusive responsibility, WEG not being responsible for behavior, safety, suitability or durability of the product.

Some information contained in this datasheet are estimated, and can undergo variances arising from factors outside the manufacturer's control. Thus, WEG does not guarantee and does not assume any responsibility regarding the yield, performance or any other material or personal damage resulting from the incorrect use of the products concerned or the information contained in this Technical datasheet.

The information contained in this technical datasheet is subject to periodic modification, without prior notice, due to the policy of evolution and continuous improvement of our products and services, providing solutions with quality to satisfy our customers' requirements.