

WEG TAR FREE HSD 302 HT

PRODUCT DESCRIPTION: High-build, two-component epoxy direct to metal with non-toxic and anti-corrosion pigments. Product formulated for carbon steel surfaces. The product has excellent chemical and corrosion resistance, and good abrasion resistance.

RECOMMENDED USES: Suitable for highly aggressive environments, providing excellent corrosion protection over carbon steel. Used inside and outside water storage tanks and piping, it can be applied in a high-build single coat.

CERTIFICATIONS AND APPROVAL: It complies with standard AWWA C210-15 - Liquid Epoxy Coatings and Linings for Steel Water Pipe and Fittings.

It complies with Sabesp standard NTS 036.
This product complies with regulation GM/MS No. 888 of the Ministry of Health, dated May 4, 2021.
It complies with the Ministry of Health Directive No. 2914 regarding water for human consumption.

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 | 3.6 20 | 3.6 20 | L |
| | Component B | 3.6 20 | 3.6 20 | L |
| | Component B II | 3.6 20 | 3.6 20 | L |

NOTA: The WEG TAR FREE HSD 302 HT SE catalyst is the most recommended for application with drying in oven, because it is an accelerated drying version.

| CHARACTERISTICS: | Color: | Black, Red oxide, White, Blue, Gray |
|------------------|----------------------------------|--|
| | Gloss: | Semigloss |
| | VOC content: | 50 g/l |
| | Volume solid: | 97 ± 3% (ISO 3233). |
| | Flash Point: | > 60 °C |
| | Shelf-Life: | 24 months at 25°C |
| | Thickness per coat (dry): | 400 µm –1.000 µm |
| | Theoretical coverage: | 1,35 m ² /l without dilution in the thickness of 700 µm dry. Without considering loss factors in application. |

Resistance to dry heat: Maximum temperature 120 °C . The product retains its physical and chemical properties up to the temperature of 120 °C however, variations in the coating color and gloss may occur from 60 °C (140°F).

Drying:

| | 10 °C | 25 °C | 35 °C |
|------------------|------------|------------|------------|
| Touch: | 4 hours | 2 hours | 1 hour |
| Handling: | 16 hours | 6 hours | 4 hours |
| Final: | 192 hours | 168 hours | 168 hours |
| Pot Life | 60 minutes | 45 minutes | 30 minutes |

Overcoating Drying:

| | 10 °C | 25 °C | 35 °C |
|-----|----------|----------|----------|
| Min | 10 hours | 6 hours | 3 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 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 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 50 and 100 µm (1.97 - 3.94 mils).

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.

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

NOTE: If it is not possible to execute the manual mechanical cleaning process, as an alternative the surface can be prepared with commercial abrasive blasting, grade Sa 2 of the ISO 8501-1 visual standard (C Sa 2 and D Sa 2) or according to SSPC-SP 6/NACE No. 3, SSPC-VIS 1 visual standard (C SP 6, D SP 6).

Treat the surface mechanically until obtaining at least grade St 3 of the ISO 8501-1 visual standard or according to SSPC-SP 11; 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).

For further information, consult WEG Technical Department.

PREPARATION FOR APPLICATION

Mixture

Homogenize the contents of each component with mechanical or pneumatic stirring (A and B). Check there are no sediment settled at the bottom of the package. Add component B to component A, at the recommended proportion (volume), under stirring, until complete homogenization, observing the mixing ratio.

Mixing ratio (Volume)

1 A X 1 B.

Diluent

Epoxy diluent 3005

Dilution

Depending on the application method, dilute at most. 5%

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)

45 min

Check the pot life values in the Characteristics field.

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 if the equipment and its components are clean and in best condition.

Purge the compressed air line to prevent contamination of the coating.

After mixing two-component 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.

Airless Gun:

| | |
|-----------------|-------------------------|
| Use Airless: | Use at least pump 60: 1 |
| Fluid pressure: | 2500 – 3500 psi |
| Hose: | 3/8" internal diameter |
| Nozzle: | 0,017" - 0,025" |

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:

Only recommended for small areas or retouching. Use a thin nap, seamless sheepskin or microfiber roller for epoxy coatings.

Not recommended for painting the interior of tanks

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.

**NOTE:****Cleaning the equipment:**

Epoxy diluent 3005
Clean all equipment immediately after use.

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:

Epoxy-based products are known by having 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.

Light colors may require more than one coat for an even coverage.

Exposure of the film to temperatures above 120°C (248°F) may compromise the product adhesion and chemical resistance performance.

Before application, the weather conditions must be observed: There should be no threat of rain or drizzle. The surface temperature must be at least 3°C (37.4°F) above the dew point and the relative humidity must not exceed 85%.

Under adverse weather conditions indoors and/or outdoors with high relative humidity, rain, or drizzle, low or low temperatures and excessively high temperatures, variations in color and other product characteristics may occur. Consult the WEG Technical Department for more information.

After the application, during the curing process, when the coated parts are subjected to low temperatures and/or high humidity, exudation may occur on the film, and it must be removed by washing with fresh water or cleaning with a cloth soaked in appropriate solvent. Such exudation does not affect the quality and corrosion resistance of the applied film; however, it should be removed as described above.

Epoxy systems may have longer curing time when exposed to low temperatures. For temperatures below 10 °C (50°F), consult WEG Technical Department.

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 (37.4°F) 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°C - 27 °C (69.8°F - 80.6 °F) 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.

For further information, consult WEG Technical Department.

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.

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.

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.

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