TECHNICAL DATA SHEET

W-POLI HPD 451

PRODUCT DESCRIPTION: Polyspartic finish primer. A high-solids product with excellent color and gloss retention and extra-fast drying.

RECOMMENDED USES: The product promotes a high gloss and chemical resistance film, widely used in painting equipment in aggressive industrial environments, where resistance and aesthetics are required. Indicated for chemical, petrochemical, paper and cellulose, sugar and alcohol, transportation, among others.

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.
Product meets Petrobras Standard N 2943 – Annex G – Requirements for polyaspartic coatings.
Product meets Petrobras Standard N 2913 – Item 4.5 – Polyaspartic coatings.

PACKAGING:

Component	Content	Package	Unit of measurement
Component A	13,3 2,4	20 3.6	L
Component B	2x 3,35 1,2	3.6 1,5	L

CHARACTERISTICS:

Color: Ral, Munsell or as per customer standard.

Gloss: Gloss >70 UB

VOC content: 223 g/l

Volume solid: 90 ± 2% (ISO 3233).
83 ± 2% (ISO 3233) for items produced via a dyeing system, identified with a letter T in their nomenclature description.

Shelf-Life: 24 months at 25°C

Thickness per coat (dry): 70 µm –300 µm

Theoretical coverage: 4,86 m2/l without dilution in the thickness of 185 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 ºC (140°F).

Drying:

	10 °C	25 °C	35 °C
Touch:	4 hours	2 hours	2 hours
Handling:	10 hours	7 hours	6 hours
Final:	168 hours	168 hours	168 hours

Overcoating Drying:

	10 °C	25 °C	35 °C
Min	8 hours	5 hours	4 hours
Max	48 hours	48 hours	48 hours

Obs If it is necessary to use an oven due to the production process, a flash off time of at least 15 minutes and a maximum temperature of 65°C (149°F) must be respected.

SURFACE PREPARATION

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

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.

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

For new works, it is necessary to treat spatter and weld seams, damaged areas, sharp edges and corners using abrasive blasting grade Sa2½ or SSPC-SP10, visual standard ISO 8501-1. In cases where the above practice is not possible, consult the Technical Department of Weg.

Surface treatment through the hydroblasting process

We recommend to paint on surfaces hydroblasted to the degree CWJ-2 according to standard SSPC-VIS 4. Allowed application on degree of flash rust light according to CWJ-2L.

Execute hydroblasting (pressure ≥ 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.

NOTE 1: The hydroblasting at extreme high pressure can remove oils and greases from the surface; however, that does not rescind the requirement of the previous degreasing stage.

Note 2: The high or extremely high hydroblasting does not open an anchor pattern (only if the surface has already been subject to some type of abrasive blasting).

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).

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.

It is recommended a roughness profile between 60 and 85 µm (2.36 - 3.35 mils).

Refinishing of surfaces with aged coating in good conservation conditions

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.

Maintenance and repair

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.

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)

2 A **X** 1 B.

Diluent
Pu diluent 5007

Dilution
Depending on the application method, dilute at most. 15%

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

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

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

In hot areas, we recommend consulting WEG Technical Department.

APPLICATION FORMS

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

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.

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

Conventional gun:

Gun:	JGA 502/3 Devilbiss or equivalent
Fluid nozzle:	EX
Air cap:	704
Atomization pressure:	60 - 65 psi
Pressure in the tank:	10 - 20 psi
Dilution:	15%

Airless Gun:

Use Airless:	Use at least pump 60: 1
Fluid pressure:	1500 - 2500 psi
Hose:	⅜” internal diameter
Nozzle:	0,015“ - 0,021“
Dilution:	Max. 5%

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.**NOTE:** For application by cutting it may be necessary to apply two or more passes to obtain a uniform layer according to the film thickness recommended by others.

Roller:
Use a thin nap, seamless sheepskin or microfiber roller for epoxy coatings.
NOTE: In this application method the product may show variations in spread.

Cleaning the equipment:
Pu diluent 5007

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 specificated in the pot life and will cure faster, making the cleaning difficult.

Clean all equipment immediately after use.

PERFORMANCE IN THE APPLICATION

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

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

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.

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

We recommend coating only if the surface temperature is at least 3°C (37,4°F) above the dew point temperature.

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.

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.

It should not be applied under adverse conditions, such as air relative humidity (RH) above 85%, as changes in color and appearance may occur.

Polyurethane systems (component A and B) present when exposed to air relative humidity, which can cause flaws in the dry film and reduction of pot life. Therefore, we recommend that the packages of each component be properly closed after use and kept in dry places protected from bad weather.

On newly painted surfaces in direct contact with water during the curing process, localized stains may occur with changes in their color (more visible in dark colors), delay in curing and compromised product performance.

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

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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