

W-THANE DF 475

PRODUCT DESCRIPTION

Two-component aliphatic acrylic polyurethane primer-finish, with high volume solids and high coverage. Provides excellent color and gloss retention, flexibility and hardness.

RECOMMENDED USE

Recommended for painting transformers, radiators, refineries, chemical and petrochemical industries, pulp and paper factories, and industrial machinery and equipment. Indicated for low and medium aggressiveness environments.

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 3.11L
Component B	0.5L Package containing 0.48L

CHARACTERISTICS

Color	According to customer standard. RAL and Munsell chart.
Gloss	Semi-Gloss
VOC content	563.33 g/l
Volume Solids	71 ± 2% (ISO 3233)
Shelf Life	24 months
Dry Film Thickness	75 µm - 125 µm
Dry Heat Resistance	Maximum temperature 155 °C. The product maintains its chemical properties up to a temperature of 155 °C, but from 60°C, color and gloss variations in the paint may occur.
Theoretical Coverage	7,10 m ² /l without dilution at a dry film thickness of 100 µm. Loss factors during application are not considered.

DRYING

Drying

	10 °C	25 °C	35 °C
Touch	2 hours	1 hour	30 min
Manipulation	16 hours	10 hours	4 hours
Final	216 hours	168 hours	120 hours

Recoat Drying

	10 °C	25 °C	35 °C
Minimum	12 hours	6 hours	2 hours
Maximum	48 hours	24 hours	16 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.



Recommended Surface Profile

It is recommended a roughness profile between 40 and 60 micrometers.

Abrasive Blasting

Perform abrasive blasting to near-white metal, Sa 2½ grade, according to ISO 8501-1 visual standard (A Sa 2½, B Sa 2½, C Sa 2½, D Sa 2½), or according to SSPC-SP10/NACE No. 2, visual standard SSPC-VIS 1 (A SP10, B SP10, C SP10, D SP10, G1 SP10, G2 SP10, G3 SP10).

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.

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 # 2 mm, ISO 8501-3).

Phosphated Surfaces

Carry out the coating conversion process by phosphating, using either zinc or tricationic phosphate, with a mass between 2.0 g/m² and 4.0 g/m². Follow the sequential steps: degreasing; washing; pickling; washing; conditioner; phosphating; washing; passivation; deionized water rinse; drying.

NOTE: Surface preparation must be performed according to all sequential steps relevant to the phosphating process, following the recommendations of the pretreatment manufacturer.

Over Primer

Respect the product recoat interval. If exceeded, perform light manual/mechanical sanding to break gloss and clean dust/residues for better adhesion between coats.

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.
Mixing Ratio	By volume: 6.5 A x 1 B.
Thinner	PU DILUENT 5008
Dilution	Depending on the application method, dilute to a maximum of 10%.
Notes	Dilute according to recommendation. Only add the thinner after the A + B components are completely mixed. Excessive thinning of the paint may affect film formation, appearance, and make it difficult to achieve the specified thickness. The amount of Diluent may vary depending on the type of equipment used and environmental conditions during application. Only add Diluent after complete mixing of the other components. Do not dilute with solvents not allowed by local legislation, and do not exceed the indicated dilution percentage. Excessive dilution may affect film formation, appearance, and make it difficult to achieve the specified thickness.
Pot Life	4 h



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

Wait 7 to 10 minutes before application.

In very hot locations, we recommend consulting WEG's Technical Department.

APPLICATION METHODS

Conventional Spray Gun

Spray gun: JGA 502/3 Devilbiss or equivalent
Fluid nozzle: EX
Air cap: 704
Atomization pressure: 50 - 70 psi
Tank pressure: 10 - 30 psi.

Airless Spray Gun

Airless: Use minimum pump 60:1
Fluid pressure: 2000 - 2500 psi
Hose: 1/4" inner diameter
Nozzle: 0.015" - 0.021".
Filter: mesh 60.

Flooding

Application viscosity varies according to ambient temperature and equipment height.

Roller

Use a short-haired, seamless wool 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:

PU DILUENT 5008

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

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



Light colors may require more than one coat to achieve uniform coverage.

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

During the initial curing (first 24 hours), humidity must not exceed 70%, otherwise the visual appearance may be compromised.

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

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.

Do not apply under adverse conditions, such as RH above 70% or on condensed surfaces. Small variations in color, appearance, and gloss may occur during high humidity, rainy days, cold locations, or when parts dry outdoors.

Polyurethane systems (components A and B) are sensitive to relative humidity, which may cause defects in the dry film and reduction in pot life. After use, keep containers closed and protected.

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

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.

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.

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