



Protective & Marine Coatings

DURA-PLATE™ 301W SURFACE TOLERANT

Revised 10/2019 Issue 10

PRODUCT INFORMATION

PRODUCT DESCRIPTION

DURA-PLATE® 301W is a low temperature curing, surface and humidity tolerant two-pack modified epoxy. It can be applied without dew point restrictions and over wet steel surfaces. 301W shows good chemical and abrasion resistance and good edge-retentive properties. It can be applied over steel prepared by hydroblasting, grit blasting or mechanical tooling.

- Excellent edge retention
- No dew point or relative humidity restrictions
- Excellent anticorrosive properties
- Can be applied over wet substrates
- Can be applied over medium flash rust
- Excellent substrate and intercoat adhesion

ENDORSEMENTS

Dura-Plate 301W is approved for Network Rail maintenance specification.

Certificate No's XM92-M34-197, XM92-M34-200, XM92-M34-201.

PRODUCT CHARACTERISTICS

| | |
|-----------------------------|-------------------------------------|
| Finish: | Semi-gloss |
| Colour: | Limited range |
| Volume Solids: | 97 ± 3% |
| Weight Solids: | 98 ± 2% |
| VOC (EPA Method 24): | <100 g/l; 0.83 lb/gal |
| Mix Ratio: | 7:3 by volume |
| Specific Weight: | 1.3 kg/litre (may vary with shade). |

Theoretical Spreading Rate per coat:

| | Minimum | Maximum |
|--|------------------|-------------------|
| Wet microns (mils) | 103 (4.1) | 309 (12.3) |
| Dry microns (mils) | 100 (4) | 300 (12) |
| ~Coverage m²/L (sq ft/gal) | 9.7 (403) | 3.3 (137) |

This figure makes no allowance for surface profile, uneven application, overspray or losses in containers and equipment

Brush application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule

| | @ 0°C/32°F | @ 10°C/50°F | @ 20°C/68°F |
|-------------------|------------|-------------|-------------|
| To touch: | 21 hours | 15 hours | 4.5 hours |
| To recoat: | | | |
| minimum: | 48 hours | 24 hours | 8 hours |
| maximum: | 6 months | 6 months | 6 months |
| To handle: | 48 hours | 24 hours | 20 hours |
| Pot life: | 90 minutes | 50 minutes | 30 minutes |

These figures are given as a guide only. Factors such as air movement and humidity must also be considered

Can be overcoated with Dura-Plate 301 Range for up to 6 months provided the surfaces to be coated have been suitably cleaned. For overcoating with polyurethane and epoxy topcoats, maximum recommended interval without abrasion is 28 days.

For overcoating with other products and/or outside of this window please contact Sherwin-Williams

RECOMMENDED USES

DURA-PLATE 301W is an anticorrosive coating for long service life steel protection. It can be used for both immersion and above the waterline service in marine, offshore, construction and industrial applications.

It is suitable for new building, conversion, repair or maintenance applications. It provides superior performance protecting areas such as ballast tanks, void tanks, crude oil tanks, slop tanks, mud pits, wet spaces, bilges, decks, external hull and steel bridges.

PERFORMANCE CHARACTERISTICS

| Test Name | Test Method | Results |
|--|--|--|
| Adhesion (Pull-off) ASTM D4541 | After application and curing | 1740 - 2500 psi 12,0 - 17,2 MPa |
| | After 1000 hrs salt fog | 1350 - 1550 psi 9,3 - 10,8 MPa |
| | After 2000 hrs salt fog | 1305 psi / 9,0 MPa |
| | After 1000 hrs condensation | 1500 - 1800 psi 10,3 - 12,4 MPa |
| Atmospheric Exposure | 12 months | Rust rating: 10 Blistering rating: 10 Scribe undercut: 1.0mm |
| Cathodic Disbonding | ASTM G8 | Passes |
| Humidity Resistance | ASTM D4585, 1000 hrs. ASTM D4585, 2000 hrs. | ASTM D1654, Rating:10 No defects |
| Salt Fog Resistance | ASTM B117, 1000 hours ASTM B117, 2000 hours | D1654: Rating: 10 No defects |

| | |
|---------------------|--|
| Shelf Life: | 12 months, unopened Store indoors at 4.5°C (40°F) to 38°C (100°F) |
| Flash Point: | > 102°C (>212°F), mixed (ASTM D56) |
| Clean Up: | TH03 |

RECOMMENDED SYSTEMS

| | | Dry Film Thickness / ct. | |
|---------------------------------|--------------------------|--------------------------|--------|
| | | Microns | (Mils) |
| Immersion or Atmospheric | 1-2 cts. DURA-PLATE 301W | 100-300 | (4-12) |
| | 1-3 cts. DURA-PLATE 301W | 100-150 | (4-6) |
| Atmospheric | 1-2 cts. DURA-PLATE 301W | 100-150 | (4-6) |
| | * 1-2 cts. Topcoat | 50-100 | (2-4) |

* Polyurethane and Isocyanate free topcoats from the Sherwin-Williams portfolio

The systems listed above are representative of the product's use, other systems may be appropriate, please contact Sherwin-Williams.



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APPLICATION CONDITIONS

Ambient Temperature:
Minimum: 0°C/32°F

Substrate Temperature:
Minimum: 0°C/32°F
Maximum: 50°C/122°F

Relative humidity: No restrictions

APPLICATION EQUIPMENT

**Airless Spray - GRACO KING 56:1 OR SIMILAR - ALL FILTERS
REMOVED - MIN 3/8" HOSE DIAMETER**

Nozzle Size: 17-21 thou (0.43 – 0.54mm)
Fan Angle: 60° - 80°
Operating Pressure: 3500-3900 psi (246-274kg/cm²)

The airless spray details given above are intended as a guide only. Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent with satisfactory atomisation. As conditions will vary from job to job, it is the applicators' responsibility to ensure that the equipment in use has been set up to give the best results. If in doubt Sherwin-Williams should be consulted.

Brush

The material is suitable for brush application, as a stripe coat or for touch up of small areas @ 75µm dft maximum.

Application of more than one coat will be necessary to give equivalent dry film thickness to a single spray applied coat.

ADDITIONAL NOTES

Epoxy Coatings - Colour Stability:

Variable colour stability is a feature of epoxy materials which tend to yellow and darken with age whether used on internal or external areas. Therefore any areas touched-up and repaired with the same colour at a later date may be obvious due to this colour change.

When epoxy materials are exposed to ultra-violet light a surface chalking effect will develop. This phenomenon results in loss of gloss and a fine powder coating at the surface which may give rise to colour variation depending on the aspect of the steelwork. This effect in no way detracts from the performance of the system.

ORDERING INFORMATION

16 litre (20.8kg) kit: Part A: 11.2 litres in a 20 litre container
Part B: 4.8 litres in a 5 litre container

4 litre (5.2kg) kit: Part A: 2.8 litres in a 5 litre container
Part B: 1.2 litres in a 2.5 litre container

WARRANTY

Any person or company using the product without first making further enquiries as to the suitability of the product for the intended purpose does so at their own risk, and Sherwin-Williams can accept no liability for the performance of the product, or for any loss or damage arising out of such use.

The information detailed in this Data Sheet is liable to modification from time to time in the light of experience and of normal product development, and before using, customers are advised to check with Sherwin-Williams, quoting the reference number, to ensure that they possess the latest issue.

SURFACE PREPARATION

Surface must be clean and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

DURA-PLATE 301W is tolerant to hydroblasted, wet or dry abrasive blasted or mechanically prepared surfaces.

Abrasive blasting: Sa 2 ISO 8501-1:2007 (SSPC-SP6/NACE 3)

Hydroblasting: NACE WJ-2/SSPC SP WJ-2 ISO8501-4 Wa 2.5 (Medium Flash Rusting)

Mechanical Prepared: St3 ISO 8501-1:2007 (SSPC-SP3)

Additional Cleaning Options:

Independent of the type of surface preparation, the moisture tolerance of D301W allows for a clean water surface washing before coating to reduce salt contamination. D301W tolerance to iron oxide allows the coating to be applied to a flash rusted surface (equivalent to M degree as described at SSPC VIS4 (I) / NACE N°7 standard).

Recoating over old paints in good condition: D301W in most cases can be applied over existing sound coating systems. Adhesion to existing coatings should be tested in a small area, before painting. Also, the adhesion of the old material should be verified. All loose materials should be removed. Please contact Sherwin-Williams to evaluate surface preparation alternatives. Acceptable cleaning and degreasing the surface is required. Abrading the old coating surface, to promote adhesion, is also recommended.

Tolerant to application to surfaces which may be wet at the time of application. An acceptable 'wet' surface is defined as a surface on which a thin, even film of moisture is present, but is free from running water, droplets or pooled water. An acceptable wet condition can be field tested by drawing a "V" the size of a hand in a vertical substrate. If this causes water to drip or run down the surface then the water load on the surface is too high ("saturated"). If not, it is considered "wet" and it is acceptable to apply Dura-Plate 301W".

Surface Preparation Standards

| Condition of Surface | ISO 8501-1 BS7079:A1 | Swedish Std. SIS055900 | SSPC | NACE |
|----------------------|----------------------|------------------------|-------|------|
| White Metal | Sa 3 | Sa 3 | SP 5 | 1 |
| Near White Metal | Sa 2.5 | Sa 2.5 | SP 10 | 2 |
| Commercial Blast | Sa 2 | Sa 2 | SP 6 | 3 |
| Brush-Off Blast | Sa 1 | Sa 1 | SP 7 | 4 |
| Hand Tool Cleaning | Rusted | C St 2 | SP 2 | - |
| | Pitted & Rusted | D St 2 | SP 2 | - |
| | Rusted | C St 3 | SP 3 | - |
| Power Tool Cleaning | Pitted & Rusted | D St 3 | SP3 | - |
| | | D St 3 | SP3 | - |

HEALTH AND SAFETY

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.