



DURA-PLATE® UHS

EPOXY TANK LINING

Revised 04/2025 Issue 4

PRODUCT DESCRIPTION

An ultra-high solids, edge retentive epoxy with proven long term performance as a lining for bulk storage tanks, ballast tanks, pipe internals and secondary containment. Applied using normal or plural airless spray.

RECOMMENDED USE

An API 652 (thin and thick film) lining for the internal protection of bulk storage tanks and pipes for the storage and transport of crude oil, refined petrochemicals (including aviation fuel) and fresh water. Superior build and pit-filling capabilities makes this lining suitable for new construction and maintenance.

PRODUCT TECHNICAL DATA

Volume Solids:	98 ± 2 % (ASTM-D2697-03)
VOC:	< 100 g/l EPA Method 24
Colours:	Grey, white, light green Finish: gloss
Flash Point:	Base: 110°C, Hardener: 74°C
Cleanser/Thinner:	Cleanser/Thinner No.13 for cleaning. Do not thin Dura-Plate UHS.
Pack Size:	A two component material supplied in separate containers to be mixed prior to use: 17.5 litre (22 kg) and 5 litre (6.3 kg) units when mixed. Weight will vary with colours and density.
Mixing Ratio:	4 parts base to 1 part hardener by volume
Density:	1.26 kg/l (may vary with colours)
Shelf Life:	36 months from date of manufacture, stored in originally sealed containers in a cool and dry environment

Recommended Application Methods:

Airless spray or plural spray.

Brush or roller application recommended for stripe coating and repair only.

Typical Thickness:

Recommended Spreading Rate Per Coat

	Typical	One coat system (min/max)	Two coat system (min/max)
Dry	500 µm	1 x 450 µm / 1 x 500 µm	2 x 250 µm / 2 x 300 µm
Wet	500 µm	1 x 450 µm / 1 x 500 µm	2 x 250 µm / 2 x 300 µm
Theoretical Consumption*	0.643 kg/m ² 0.510 l/m ²		
Theoretical Coverage*	1.56 m ² /kg 1.96 m ² /l		

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

Film thickness will vary depending on actual use and specification.

May be applied up to 1250 µm in one coat if required.

Pot Life:

Standard Hardener			Low Temperature Hardener		
+ 15°C	+ 25°C	+ 40°C	+ 5°C	+ 15°C	+ 25°C
40 Min	30 min	20 min	20 min	20 min	10 min

Pot life is dependent on temperature and volume. Please consider induction time (see average drying times).

AVERAGE DRYING TIMES

For 500 µm Dry Film Thickness (Standard Hardener)

	+ 15°C	+ 25°C	+ 40°C
To touch	12 hours	5 hours	3 hours
To handle	48 hours	14 hours	8 hours
To recoat (min)	48 hours	14 hours	8 hours
To recoat (max)	21 days	14 days	14 days
Cure to service	10 days	4 days	1 day
Induction time	15 min	none	none

For 500 µm Dry Film Thickness (Low Temperature Hardener) Plural component airless spray recommended

	+ 5°C	+ 15°C	+ 25°C
To touch	24 hours	5 hours	3 hours
To handle	48 hours	24 hours	8 hours
To recoat (min)	48 hours	24 hours	8 hours
To recoat (max)	30 days	21 days	14 days
Cure to service	7 days	5 days	3 days
Induction time	5 mins	none	none

Prior to further applications all contamination must be removed. In the case of extended recoating times consult Sherwin-Williams customer service.

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

APPROVALS & ENDORSEMENTS

Meets MIL-PRF-23236, Type VII, Class 5, 7, 9 and 11, Grade C (standard hardener only).

Meets or exceeds the requirements of AWWA C210-15.

Meets EI 1541 Section 2.2

SURFACE PREPARATION

Steel:

Ensure surfaces to be coated are clean, dry and free from all surface contamination such as oil, grease, dirt and corrosion products to achieve satisfactory adhesion.

Steel surfaces shall be blast-cleaned to Sa 2½ according to ISO 8501-1 (ISO 12944-4), using angular grit. Average surface profile Rz ≥ 50 microns.

Concrete surfaces (for Non EU countries only):
Sealer required. Consult Sherwin-Williams.



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MIXING

Mix contents of each component thoroughly using low speed power agitation. Make certain no pigment remains on the bottom or the sides of the can. Due to aeration in the base that occurs during manufacture, fill level may appear greater than 14L. Do not adjust prior to mixing. Combine Base with Hardener. Thoroughly agitate the mixture with power agitation.

To ensure that no unmixed material remains on the sides or bottom of the cans after mixing, visually observe the container by pouring the material into a separate container.

Always mix full pack size, units must not be split for part mixing.

Please consider induction time (see average drying times).

APPLICATION CONDITIONS

Material temperature shall be between + 20°C and + 30°C for optimal application.

Relative air humidity shall be below 85 %

Standard Hardener: 10°C minimum, 43°C maximum

Low Temp Hardener: 5°C minimum, 25°C maximum

At least 3°C above dew point

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for satisfactory application characteristics. Always purge spray equipment before use with listed cleaner. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Airless Spray

Unit: Efficient airless equipment, 74:1 pump
Tip Size: 0.48 – 0.54 mm (0.019 – 0.021 inch)
Filter: 30 mesh
Fan Angle: 60° - 80°
Operating Pressure: min 420 bar (6000 psi)
Spray hoses: Ø ¾ inch (10 mm), max. 20 m + 2 m with reduced Ø of ¼ inch (6 mm)

Plural Component Airless Spray

Unit: WIWA Duomix 333, or equal, 50:1 or greater
Tip Size: 0.48 – 0.54 mm (0.019 – 0.021 inch)
Fan Angle: 60° - 80°
Operating Pressure: min. 275 bar (4000 psi)
Fluid temperature required at tip: 30 - 35°C

In order to avoid blockage of spray equipment and hose, flush equipment with Cleanser No 13 regularly and before periods of extended downtime.

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 to achieve consistent 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 consult Sherwin-Williams customer service.

Brush and Roller

For stripe coating and repair only.

RECOMMENDED SYSTEMS

Steel

Airless application

1 x 500 µm Dura-Plate UHS or

2 x 250 µm Dura-Plate UHS or

1 x 150 µm Dura-Plate UHS Opti-Check Primer + 1 x 400 µm Dura-Plate UHS

Steel with hold primer

1 x 30 µm Macropoxy L574 + 1 x 500 µm Dura-Plate UHS

NOTE: Dura-Plate UHS may be applied at alternate thicknesses, up to 1250 µm, depending on application conditions.

Consult your Sherwin-Williams representative for additional information.

The systems listed above are representative of the product's use, other systems may be appropriate.

ADDITIONAL NOTES

Do not tint Part A.

Drying times, curing times and pot life should be considered as a guide only.

Do not mix previously catalyzed material with new.

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

Numerical values quoted for physical data may vary slightly from batch to batch.

Note: Recommended application procedure direct to steel: Apply a 125-150 µm coat to the substrate. Allow material to "wet" the surface. Then apply additional material, to bring total film thickness to the recommended range.

Suitable for use with cathodic protection systems.



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HEALTH & SAFETY

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

WARRANTY

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