Protective & Marine Coatings

DOX-ANODE D5V2

PRODUCT TECHNICAL DATA

FULL DESCRIPTION	:	DOX-ANODE D5V2
MATERIAL TYPE	:	Self curing solvent based zinc silicate coating.
RECOMMENDED USE	:	For the protection of blast cleaned steel surfaces.
	:	Capable of withstanding temperatures up to 400ºC.
	:	May be used as a holding primer at dry film thicknesses down to 20 microns (thinned 15% with Cleanser/Thinner No.4 after thorough mixing of the two components).
	:	Capable of curing at temperatures down to 0ºC.
ENDORSEMENTS	:	Complies with BS5493:1977 - Table 4E - Type EP2A.
	:	Complies with SSPC20:2004 – Level 1 Zinc content.
	:	Shell Specification VI(g) - Dep 40.48.00.30 - GEN.
	:	Complies with British Gas Specification PS PA9.
RECOMMENDED APPLICATION METHODS	:	Airless Spray : Brush (for small areas and touch up only)
	:	Conventional Spray
COLOUR AVAILABILITY	:	Grey
FLASH POINT	:	Base : Above 55°C Additive : 10°C
% SOLIDS BY VOLUME	:	65 ± 3% (ASTM-D2697-91) (Using the mercury/tungsten method).
V.O.C.	:	470 gms/litre determined practically in accordance with UK Regulations PG6/23
		319 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive
		129 gms/kilo content by weight from formulation, to satisfy EC SED

TYPICAL THICKNESS

Dry film thickness	**Wet film Thickness**	**Theoretical coverage**
75 microns	115 microns	8.7 m^2/ltr*

** 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*

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PRACTICAL APPLICATION RATES- microns per coat

	Airless Spray	**Conventional Spray**	**Brush**
Dry	75*	75	25
Wet	115	115	39

** Maximum sag tolerance with overlap typically 125µ dry by airless spray.*

AVERAGE DRYING TIMES

	At 5°C	**At 23°C**	
To touch	15 minutes	5 minutes	
To recoat	48 hours	24 hours	at 60% R.H.
To recoat	24 hours	16 hours	at 85% R.H.
To handle	45 minutes	15 minutes	

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

RECOMMENDED THINNER	:	Cleanser/Thinner No. 4
RESISTANCE TO	:	Moisture - Excellent Abrasion - Excellent
		Petroleum solvents - Excellent Weather - Excellent (subject to zinc salts)
		Aliphatic solvents - Excellent
RECOMMENDED TOPCOATS	:	Prior to overcoating, any water soluble salts caused by weathering must be removed by either fresh water washing or flash blasting.
	:	The use of a thin sealercoat or tie coat is essential before overcoating the material with a high build system, in order to reduce bubbling/pinholing effects.
	:	The material is overcoatable by a wide range of non-saponifiable systems such as 2-pack epoxy, vinyl, chlorinated rubber, polyurethane etc. Consult Sherwin-Williams for detailed specifications.
	:	The recoating times given above are a guide only, in all cases the Dox-Anode D5 should be fully cured before overcoating - see test for curing overleaf.
POT LIFE	:	12 hours at 5°C 8 hours at 23°C
PACKAGE	:	A two component material supplied in two containers to be mixed prior to use.
Pack Size	:	5 litre unit when mixed.
Mixing Ratio	:	9.9kg of 2 powder components in a 5 litre can, 3.43 litres additive in 5 litre polyurethane bottle.
Weight	:	2.62 kg/litre.
Shelf Life	:	Use before expiry date on additive bottle - 9 months.

SURFACE PREPARATION:
Blast clean to Sa2½ BS EN ISO 8501-1:12007). Average surface profile in the range 30-75 microns.
May also be applied to a previous coat of Dox-Anode D5V2 with suitable cleaning of surface.

APPLICATION EQUIPMENT:
Airless Spray
Nozzle Size : Max 0.45mm (18 thou)
Fan Angle : Max 65°
Operating Pressure : 120kg/cm² (1700 psi)
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.
Conventional Spray
Nozzle Size : 1.4mm (55 thou)
Atomising Pressure : 2.8kg/cm² (40 psi)
Fluid Pressure : 1.4kg/cm² (20 psi)
The details of atomising pressure, fluid pressure and nozzle size are given as a guide. It may be found that slight variations of pressure will provide optimum atomisation in some circumstances according to the set up in use. Atomising air pressure depends on the air cap in use and the fluid pressure depends on the length of line and direction of feed i.e. horizontal or vertical.
Brush
The material is suitable for brush application to small areas and for touch up purposes. Application of more than one coat may be necessary to give equivalent dry film thickness to a single spray applied coat.

APPLICATION CONDITIONS AND OVERCOATING:
This material is supplied in 2 parts, a powder component (supplied as two separate bags of zinc dust and filler pigment) and a liquid component. The shelf life of the liquid component before mixing should not be allowed to exceed the expiry date on the container. Both bags of pigment which make up the powder component must be added slowly with mechanical stirring to the liquid component, which must be shaken thoroughly prior to use.
For application by conventional spray it is not normally necessary to sieve the mixed paint but if any lumps or bits are observed during the mixing then it should be strained through a fine gauze (40 mesh).
For application by airless spray, straining through a 40 mesh gauze is necessary immediately prior to use.
To avoid pigment packing in the equipment all filters including that in the gun should be removed from the airless spray equipment.
This material is very fast drying and should not be left in the spray equipment after use. All equipment, guns, lines, pots, etc., should be cleaned immediately after use with Cleanser/Thinner No.4.
The mixed paint should be stirred constantly to keep the pigment evenly dispersed.
This material may be applied at a temperature as low as 0ºC providing that the surfaces are dry and the temperature of the surface to be painted is at least 3ºC above dew point of the ambient air. The maximum temperature for application is 35ºC; if for any reason it is desired to apply at a higher temperature, please consult Sherwin-Williams. Maximum relative humidity 95%, minimum 50%.
Over-application of this material should be avoided as zinc silicate coatings have a tendency to mud-cracking if applied at excessive thicknesses (Typically in excess of 125µ d.f.t.).
Where this material requires overcoating with a further coat of the same material, either by specification or because of inadequate thickness of the first coat, it is essential that the first coat should be fully cured before overcoating unless the sum of the two coats applied is less than 100 microns dry film thickness.

ADDITIONAL NOTES:
Drying times, curing times and pot life should be considered as a guide only.
Test for Curing
First, rub the applied coating with a clean dry tissue or cloth to remove any dry overspray which may be present. A clean section of tissue/cloth (white) should then be soaked in Cleanser/Thinner No.4 and then again rubbed gently on the coating for no longer than 5 seconds, full cure is indicated by the resistance of the film to this test. If no trace of zinc is apparent, then the material is fully cured and overcoatable. If however, there is any removal of the material, it is not fully cured and should not be overcoated. A further test should be carried out after a further period of curing (Rating 5 according to ASTM D4752-03).
Both temperature and humidity influence rate of curing of zinc silicate coatings.
Numerical values quoted for physical data may vary slightly from batch to batch.

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