

Armourspray® VC

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Fusion Bonded Epoxy Powder Coating

Product Code: 982 Line

Description

Armourspray® VC is a fusion bonded epoxy powder coating which exhibits tough and flexible films where protection from extreme environments is vital.

Features

Exceptionally tough film
High chemical resistance
High build application
Exceptionally fast cure
No solvent or emissions

Benefits

Excellent corrosion resistance
Versatile coating suitable for many applications
Resistance to Cathodic Disbondment
Low energy requirement for application
Less waste and pollution to the environment

Uses

Armourspray® VC is recommended for the external protection of thin wall steel pipe, valves and fittings. Its chemical resistance and tough film also make it suitable for other applications where extended metal protection is required.

Performance Guide

Weather	Various test results available from Orica Camel Powder Coatings.	Salt Spray	No failure after 6 months immersion in 10% salt solution. Good resistance to all but strong acid salts.
Hot Water Immersion	Rating <1, 60°C, 100days (AS1580, 408.2)	Water Absorption	<5% absorbed water (23°C, 100days)
Impact Resistance	2J, 23°C (AS4158)	Abrasion	< 40mg loss in 1000 cycles (CS 17 wheel, 1000g load).
Cathodic Disbondment	< 15mm, 23°C, 28 days (AS3862, Appendix M)	Pencil Hardness	Min 2H
Flexibility	No cracks at 1% strain (0°C).	Knoops Hardness	Min 25
Thermal Stability	No holidays, 100°C, 100 days at 1% strain.	Cross Hatch Adhesion	No removal
UV Radiation	No holidays, 100 days (ASTM D2565)	Suitability for use with drinking water	Complies with AS4020.

Chemical Resistance

Sulphuric Acid (50% solution)	No failure (30 days)	No failure (6 months)
Nitric Acid (10% solution)	No failure (30 days)	No failure (6 months)
Concentrated Hydrochloric Acid	No failure (30 days)	Blistering (6 months)
Caustic Soda (20% solution)	No failure (30 days)	Slight discolouration (6 months)
Concentrated Ammonium Hydroxide	No failure (30 days)	Blistering (6 months)

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Colour	Ferrous Red, Blue Water and Iron Black	Specific gravity	1.3 - 1.6 @ colour
Gloss Level	Semi Gloss	Shelf life	6 months when stored below 30°C/dry conditions. Cold storage recommended.

Application Data

Application Method	Electrostatic spray or fluidised bed.		
Clean Up	Dust or vacuum loose powder. Avoid use of compressed air.		
Cure Schedule	Metal Temperature (°C)	Time (seconds)	
	235	35 (minimum)	
	220	60 (minimum)	
	205	90 (minimum)	
Cured Film Thickness	Recommended:	500 µm	
	Range:	300 – 700 µm	

Theoretical spreading rate at recommended film thickness

A covering rate of 1.5m²/kg corresponds to 300µm cured film thickness assuming no loss. Practical spreading rates will vary due to such factors as method and conditions of application and surface profile and texture.

Application Guide

Surface Preparation

Armourspray® VC must be applied to steel which has been dry abrasive blast cleaned to AS1627.4 Class 2.5 with a peak/trough profile to 50 to 85 micrometres. Refer to OCPC for details of surface preparation and pre-treatment for specific requirements.

Armourspray® VC should be applied on the same day as the surface is prepared and as soon after the cleaning as practical because blast-cleaned surfaces may start to rust quickly.

Application Procedure and Equipment

1. Armourspray® VC is applied by electrostatic spray, fluidised bed dipping or flock spraying (non-electrostatic) onto pre-heated valves or castings.
2. Substrates are grit blasted with angular grit and optionally chemically pre-treated, either by phosphating or with dried-in-place silicote chromate.
3. Armourspray® VC is applied to substrates preheated to between 205°C and 235°C. Parts may be air cooled or water quenched after coating with Armourspray® VC. The minimum advised coating thickness of Armourspray® VC on valves and fittings are 300µm for external surfaces and 350µm for internal surfaces, which are in contact with water.
4. Test for cure of the coating by contact with a drop of Methyl Ethyl Ketone for 60 seconds. Surface should be wiped dry and immediately checked for softening. No surface softening should occur.

The use of abrasive cleaners is not recommended, nor is the use of active organic solvents.

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Care and Maintenance

Armourspray® VC is a chemically resistant, hard wearing coating, most often used in areas where aesthetics are not important. Unlike common decorative coatings, no formal cleaning program is required.

It is however good practice to remove salts and other pollutant deposits where possible, and repair any exposed metal surfaces with appropriate repair kits (available from OCPC).

Health and Safety

The MSDS is an integral part of using this product as it contains information on the potential health effect of exposure, personal protective equipment needed and other relevant SH&E information.

For detailed information, refer to product label and the current Chemical Data Sheet available through Sales and Customer Service Offices.

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Precautions and Limitations

- As a result of possible wide application variations and stoving conditions, Armourspray® VC may show variation between Orica Camel Powder Coatings prepared samples and production applied material. Therefore, it is the applicator and/or their customer's responsibility to ensure the product conforms to their requirements.
- For optimum corrosion performance ensure recommended dry film thickness is obtained.

Transport and Storage

Sizes:	20 kg	Flashpoint:	N/A
Weight:	20 kg	UN:	N/A
Dangerous Goods Class:	N/A	Package Group:	N/A
Shelf Life	Six months when stored below 30°C/ dry conditions.		
Shipment Name:	Not dangerous goods. No special transport requirements.		

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