

## 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

### Benefits

Exceptionally tough film	Excellent corrosion resistance
High chemical resistance	Versatile coating suitable for many applications
High build application	Resistance to Cathodic Disbondment
Exceptionally fast cure	Low energy requirement for application
No solvent or emissions	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

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

### Chemical Resistance

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

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### Product Guide

<b>Colour</b>	Ferrous Red, Blue Water and Iron Black	<b>Specific gravity</b>	1.3 - 1.6 @ colour
<b>Gloss Level</b>	Semi Gloss	<b>Shelf life</b>	6 months when stored below 25°C/dry conditions. Cold storage recommended.

### Application Data

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

#### Theoretical spreading rate at recommended film thickness

A covering rate of 1.5m<sup>2</sup>/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 DCPC 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.



## Armourspray® VC

### 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 DCPC).

### 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 DGL 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

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

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