

## C/S Armourglaze™ System Technical Data Sheet

### SYSTEM DESCRIPTION

Armourglaze™ is a highly durable, medium solids, high build surface coating, which is a two pack solvent based polyurethane system. It controls the growth and spread of microbes by incorporating a cocktail of non-leaching anti-microbial additives. The system will tolerate some thermal movement without cracking, or flaking.

There is a choice of a Satin or Gloss finish, which are easily cleaned and resistant to very aggressive cleaning agents, chemicals and abrasives.

Armourglaze™ is suitable for internal and external use and is colour and UV stable. It acts as an anti-carbonation coating and is resistant to chlorine. Gloss finish has a high light reflectance. The system can also be used as an anti-graffiti coating.

### MAIN AREAS OF USE

- Healthcare - mortuaries, cat. 3 or 4 ACDP clean rooms/laboratories
- Veterinary facilities and zoos
- Food and pharmaceutical process areas - very high chemical resistance
- Exterior and interior building walls requiring anti-graffiti protection
- Prisons and police stations
- Car parks
- Swimming pool hall walls
- Plant rooms

### TEST DATA

#### FIRE RESISTANCE

BS 476 part 7 Class 1  
BS 476 part 6 Designated 0

#### SCRATCH RESISTANCE (BS 3900-E18:1997)

4H

#### PERMEABILITY

Permeability factor  $\mu$  to water vapour 35,000  
Permeability factor  $\mu$  to carbon dioxide 2,750,000

#### SCRUB RESISTANCE (ASTM D2486)

4000+ cycles

#### ABRASION RESISTANCE (ASTM D1044, D3389)

6000 cycles

#### CHEMICAL RESISTANCE (IMMERSION TEST)

Chemical	First change after	Type of change	No further protection after
Hydrochloric Acid (10% in water)	6 months	Blistering & gloss reduction	>24 months
Sulphuric Acid (10% in water)	15 months	Blistering	36 months
Nitric Acid (10% in water)	8 months	Blistering & brown discolouration	13 months
Formic Acid (10% in water)	<1 month	Blistering	2 months
Caustic Soda (10% in water)	>24 months	Very slight blistering & gloss reduction	>48 months
Formaldehyde (40% in water)	>38 months	Slight softening	>48 months
Vaporised Hydrogen Peroxide (48-50% in water)	>26 months	Blistering	>48 months
Benzyl Alcohol	7 days	Softening	24 months
Distilled/Tap Water	13 months	Slight blistering	>48 months

#### BACTERIAL RESISTANCE (JIS Z 2801)

- Bacillus subtilis
- Escherichia coli
- Pseudomonas aeruginosa
- Salmonella typhimurium
- Staphylococcus aureus (Oxford and Anti-biotic Resistant strain)
- Enterococcus faecalis
- Corynebacterium diphtheriae
- Shigella sonnei

#### FUNGAL RESISTANCE (JIS Z 2801)

- Saccharomyces sp (a)
- Saccharomyces sp (b)
- Ascomycetes sp (a)
- Ascomycetes sp (b)
- Ascomycetes sp (c)
- Ascomycetes sp (d)
- Penicillium chrysogenum
- Trichoderma harziamen
- Saccharomyces cerevisiae
- Penicillium notatum
- Aspergillus niger

#### ADHESION STRENGTH (BS EN 24624:1993)

1.5Nmm<sup>-2</sup>

#### APPROXIMATE SOLIDS CONTENT (BS 3900)

64.2 % by volume  
73.8 % by weight

#### SPECIFIC GRAVITY

(BS 3900-A19:1998; ISO 2811; ASTM D1475)  
1.32

#### GLOSS UNITS (ASTM D523)

Satin 50-80 at 60° viewing angle  
Gloss 80+ at 60° viewing angle

#### VOC LEVEL OF THE TOPCOAT

220 g/ltr

## COLOURS AND FINISHES

### COLOURS

The system can be supplied in any BS 4800, RAL Classic and NCS 2nd Series as standard. Colours can also be matched to a customer's requirement but will take an extended time over standard colours (please contact our Customer Service Team for details).

### AVAILABLE FINISHES

Armourglaze™ is available in a Satin or Gloss finish.

## SUBSTRATE PREPARATION AND APPLICATION OF PRIMERS

### SUBSTRATE MOISTURE & APPLICATION CONDITIONS

Substrate moisture should not exceed **12 units** as measured on a protimeter or equivalent device on the wood scale (**20 units** when **C/S Multi Surface Primer™** is used).

Do not apply when the substrate temperature is below 5°C. Coating conditions must remain at least 3°C above the dew point.

### APPLICATION OF PRIMERS

All substrates that exhibit signs of bacteria or fungal growth prior to application must be treated with **C/S Fungiclenze™**. Ensure substrate is free from oil, grease and laitance.

#### Plaster and Plasterboard (excluding wet areas)

Apply one coat of **C/S White Primer™** (Single Pack) using a good quality long pile synthetic roller sleeve, cutting in with a good quality brush.

In the areas where there may be raised fibres due to filling etc. back roll to seal fibres down. In areas of high absorption/friable surfaces a second coat may be required.

Allow to dry (2-4 hours @ 20°C @ 60% RH) before applying the **C/S Universal Undercoat™**.

Note: **C/S Penetration Primer™** is recommended for use on Plaster/Plasterboard when fibreglass reinforced system is applied. For further details refer to application instructions for fibreglass systems (FG Light or FG Heavy).

### Ceramic Tiles, Melamine Surfaces, Vibro-Concrete & Wet Areas

Clean down surface using **C/S Wallclenze™**, paying particular attention to joints (grout or mastic).

Apply one coat of **C/S Multi Surface Primer™** (Two Pack Water Based) using a good quality medium or short pile mohair roller. Allow to cure (4-6 hours @ 20°C @ 60% RH) before applying the **Armourglaze™ Topcoats**.

### Plastics

Always check compatibility prior to commencing coating.

Clean plastic surface down using **C/S Gel Cleaner™**.

Apply one coat of **C/S Plastic Primer™** (Single Pack) using a short pile mohair or sponge roller. Allow to dry (2-4 hours @ 20°C @ 60% RH) before applying the **Armourglaze™ Topcoats**.

### Previously decorated surfaces

Check compatibility before commencement.

Clean down surface using **C/S Wallclenze™**, removing any loose or flaky coating.

Fill any areas where necessary spot prime using **C/S Multi Surface Primer™** (see above) and continue with **Armourglaze™ Topcoats**.

## SYSTEM APPLICATION

### C/S UNIVERSAL UNDERCOAT™

Required ONLY for application of the system over White Primer. For all other primers proceed with application of Topcoats.

**Universal Undercoat™** (Single Pack) is applied onto the specified primer using Brush and Roller (medium pile mohair roller). Allow to dry (4-6 hours @ 20°C @ 60% RH) before applying two coats of Topcoat.

### C/S ARMOURGLAZE™ TOPCOAT SYSTEM

**Armourglaze™ Topcoat System** (Two Pack) is applied in two coats, either two satin coats (to achieve satin finish), or one satin and one gloss (to achieve gloss finish). Apply using Brush and Roller (short/medium pile mohair roller). Allow to dry 4-6 hours @ 20°C @ 60% RH between coats.

Allow 48 hours after final coat before putting into service.

If spray application is required, please contact our Technical Department.

ALWAYS SAND LIGHTLY BETWEEN COATS.

Note: Application instructions will be issued with the product. To request a copy please call +44 (0)1296 652800, or send an e-mail to [info@c-sgroup.co.uk](mailto:info@c-sgroup.co.uk). Copies can also be downloaded from our website [www.c-sgroup.co.uk](http://www.c-sgroup.co.uk).

## OPTIONAL TREATMENTS

### FIBREGLASS REINFORCEMENT (FG)

Where greater resistance to impact, abrasion or steam cleaning is required, two fibreglass reinforcement options can be incorporated into **Armourglaze™**.

**Light reinforcement (FG Light)** - a lightweight fibreglass tissue (50 g/m<sup>2</sup>), applied in a single layer. It is particularly useful where the existing wall surface may incorporate old minor cracking or unevenness.

**Heavy reinforcement (FG Heavy)** - a dual gauge fibreglass system, comprising of a heavy duty chop strand mat (150 g/m<sup>2</sup>) and a lightweight fibreglass tissue (50 g/m<sup>2</sup>). This option provides the ultimate in impact resistance and durability within a coating system. In many cases it also allows direct coating over heavily cracked and uneven wall surfaces, without the need for raking out, filling etc.

## COVERAGE AND PACK SIZES

Product	Coverage Rates (per coat) <sup>1</sup>	Pack Sizes (ltr)	Recommended Build Thickness (per coat)	
			Wet Film	Dry Film
White Primer	7-9 m <sup>2</sup> /ltr	5 and 20 (Single Pack)	120µ to 140µ	30µ to 40µ
Multi-Surface Primer	6-14 m <sup>2</sup> /ltr	2.5 and 5 (Two Pack Water Based)	120µ to 140µ	70µ to 80µ
Plastic Primer	12-15 m <sup>2</sup> /ltr	2.5 and 5 (Single Pack)	60µ to 80µ	20µ to 30µ
Universal Undercoat	9-11 m <sup>2</sup> /ltr	5 and 15 (Single Pack)	140µ to 160µ	70µ to 90µ
Armourglaze Topcoat - Satin	7.5-9.5 m <sup>2</sup> /ltr	2.5 and 5 (Two Pack)	120µ to 140µ	75µ to 90µ
Armourglaze Topcoat - Gloss	8-10 m <sup>2</sup> /ltr	2.5 and 5 (Two Pack)	120µ to 140µ	75µ to 90µ

<sup>1</sup> Coverage rate will vary for different substrate types and will also depend on whether the surface to be coated is smooth or textured. For further details contact us on +44 (0)1296 652800.

## SHELF LIFE AND STORAGE

### STORAGE

Always store out of sunlight at temperatures between 5°C and 35°C

### SHELF LIFE

2 years from manufacture when stored correctly and unopened.

## OPERATIONAL TEMPERATURE

**Armourglaze™** once applied and cured is stable in temperatures between -15°C and 90°C.

## HEALTH AND SAFETY

Always read the Material Safety Data Sheets of the products before commencing any application.

Copies of Material Safety Data Sheets are available on request from our Customer Service Team on +44 (0)1296 652800.

## OTHER INFORMATION

### OTHER SUPPORTING INFORMATION AVAILABLE

- C/S Wallglaze® Brochure
- NBS Style Specification Clauses
- BS 4800 Colour Chart
- C/S Wallglaze® Cleaning and Maintenance
- Product Data Sheets, Application Instructions and Material Safety Data Sheets