

C/S Wallshield WB™ System Technical Data Sheet

SYSTEM DESCRIPTION

Wallshield WB™ is a two pack very durable, medium solids and build water based polyurethane acrylate coating system. It controls the growth and spread of microbes by incorporating a cocktail of non-leaching anti-microbial additives. It cures with a low odour and has almost zero VOC. Available in a Matt or Satin finish, it is easy to clean and resistant to mild cleaning agents and low concentrations of aggressive chemicals. Wallshield WB™ will allow water to permeate through the film rather than cause blisters. It is suitable for interior and exterior use and is colour and UV stable. The system is non-tainting and can be safely applied in food manufacturing facilities without the need to halt food production.

MAIN AREAS OF USE

- Food manufacturing
- Pharmaceutical environments (cat 1 and 2)
- Healthcare
circulation - medium traffic areas, washrooms, wards, treatment rooms, operating theatres (non HBN 26)
- Leisure Facilities
- Schools
- Kitchens, Cafeterias

TEST DATA

FIRE RESISTANCE

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

CHEMICAL RESISTANCE (IMMERSION TEST)

Chemical	First change after	Type of change	No further protection after
De-ionised Water	2 months	Softening & blisters	3 months
Tap Water	1 month	Softening & blisters	2 months
Sodium Chloride (10% in water)	3 months	Blisters	18 months
Potassium Hydroxide (10% in water)	7 days	Blisters	2 months
Sodium Carbonate (10% in water)	2 months	Softening	21 months
White Spirit	2 months	Blisters	15 months
Disinfectant (3% in water)	1 month	Softening & blisters	3 months
Detergent (3% in water)	1 month	Softening & blisters	3 months
Sodium Hydroxide (10% in water)	1 day	Hazy	2 months
Ammonia (10% in water)	7 days	Softening	5 months
Premium Petrol	<1 day	Severe blistering	<1 day
Diesel Oil	2 months	Colour	>21 months
Petroleum	6 months	Softening	>21 months
Skydrol 500B	14 days	Softening	2 months
Solvesso 100	3 months	Blisters	5 months
Hydrochloric Acid (10% in water)	1 day	Blisters	7 days
Sulphuric Acid (10% in water)	<1 day	Blisters	14 days
Nitric Acid (10% in water)	<1 day	Blisters	7 days
Phosphoric Acid (10% in water)	7 days	Blisters	14 days
Formic Acid (10% in water)	<1 day	Blisters	<1 day
Acetic Acid (10% in water)	1 day	Blisters	7 days
Linoleic Acid	7 days	Colour	4 months
Coconut Fatty Acid	3 days	Blisters	7 days
Oleic Acid	1 month	Blisters	6 months
Tartaric Acid (5% in water)	2 months	Softening & blisters	3 months
Lactic Acid (5% in water)	7 days	Blisters	3 months
Citric Acid (5% in water)	1 month	Softening	2 months
Linseed Oil	3 months	Colour	>21 months
Glycerine	9 months	Hazy	>21 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

SCRUB RESISTANCE (ASTM D2486)

4000+ cycles

ABRASION RESISTANCE (ASTM D1044, D3389)

3000

SCRATCH RESISTANCE (BS 3900-E18:1997)

2H

ADHESION STRENGTH (BS EN 24624:1993)

1.3Nmm⁻²

APPROXIMATE SOLIDS CONTENT (BS 3900)

42.3% by volume

46.3% by weight

SPECIFIC GRAVITY

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

1.25

GLOSS UNITS (ASTM D523)

Matt 10-20 at 60° viewing angle

Satin 50-80 at 60° viewing angle

VOC LEVEL OF THE TOPCOAT

<10 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 customers requirement but will take an extended time over standard colours (please contact our Customer Service Team for details).

AVAILABLE FINISHES

Wallshield WB™ is available in a Satin or Matt 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 (**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™.

Plaster, Plasterboard, Cementitious Screeds and Non-Vibrated Concrete (excluding wet areas)

Ensure substrate is free from oil, grease and laitance. 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 Wallshield WB Undercoat™.

Note: C/S Penetration Primer™ is recommended for use on Plaster/Plasterboard when Wallshield WB™ system with Fibreglass Reinforcement is applied. For further details refer to 'Application Instructions - C/S Wallshield WB™ inc. FG Light/ Heavy'.

Plastics

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 Wallshield WB™ Topcoats (Two Pack).

Always check compatibility prior to commencing coating.

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

Clean down surface using C/S Wallcienze™, 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 (2-3 hours @ 20°C @ 60% RH) before applying the Wallshield WB™ Topcoats.

Previously decorated surfaces

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

Fill any areas where necessary spot prime using C/S Wallshield WB Undercoat™ (see above) and continue with one coat of C/S Wallshield WB Undercoat™.

C/S WALLSHIELD WB UNDERCOAT™

Required ONLY for application over C/S White Primer. For all other primers proceed with application of Wallshield WB Topcoats.

Wallshield WB Undercoat™ (Single Pack) is applied onto the specified primer using Brush and Roller (long/medium pile roller).

Allow to dry 4-6 hours @ 20°C @ 60% RH before applying the Wallshield WB™ Topcoat.

C/S WALLSHIELD WB™ TOPCOAT SYSTEM

Wallshield WB™ Topcoat System (Two Pack) is applied in two coats (either two matt coats to achieve a matt finish, or two satin to achieve a satin finish). Apply using Brush and Roller (medium pile roller). Allow 4-6 hours @ 20°C @ 60% RH between coats.

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. Copies can also be downloaded directly from our website www.c-sgroup.co.uk.

COVERAGE AND PACK SIZES

Product	Coverage Rates (per coat) ¹	Pack Sizes (ltr)	Recommended Build Thickness (per coat)	
			Wet Film	Dry Film
White Primer	7-9 m ² /ltr	5 and 20 (Single Pack)	120μ to 140μ	30μ to 40μ
Multi Surface Primer	6-14 m ² /ltr	2.5 and 5 (Two Pack Water Based)	120μ to 140μ	70μ to 80μ
Plastic Primer	12-15 m ² /ltr	2.5 and 5 (Single Pack)	60μ to 80μ	20μ to 30μ
Wallshield WB Undercoat	9-11 m ² /ltr	5 and 15 (Single Pack)	140μ to 160μ	70μ to 90μ
Wallshield WB Topcoat - Satin	7-8 m ² /ltr	5 and 15 (Two Pack)	100μ to 120μ	40μ to 50μ
Wallshield WB Topcoat - Matt	7-8 m ² /ltr	5 and 15 (Two Pack)	100μ to 120μ	40μ to 50μ

¹ 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

Wallshield WB™ once applied and cured is stable in temperatures between -5°C and 80°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
- C/S Wallshield WB™ Application Instructions
- Product Data Sheets for Primers, Wallshield WB Undercoat, Wallshield WB™ Topcoat Bases and Hardener 605

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