C/S Wallflex®

System Technical Data Sheet

SYSTEM DESCRIPTION

Wallflex® is a two pack very durable, solvent free polyurethane medium build surface coating, which is suitable for use in both dry and wet environments. It controls the growth and spread of microbes by incorporating a cocktail of non-leaching anti-microbial additives.
Wallflex® can be decontaminated from radioactivity and is compliant with the Health Building Note 26 'Facilities for Surgical Procedures: Volume1'.
The system is available in an Eggshell finish, it is easy to clean and resistant to strong cleaning agents and low concentrations of aggressive chemicals.
Wallflex® will allow minimal water to permeate through the film. It is suitable for interior and exterior use and is colour and UV stable. It also has a very low VOC.

MAIN AREAS OF USE

- Healthcare – operating theatres, treatment rooms, cat. 1, 2 and 3 ACDP clean rooms/ laboratories, X-ray areas
- Food and pharmaceutical process areas - high chemical resistance
- Schools – laboratories and heavily trafficked corridors
- Swimming pool halls and changing areas
- Bathrooms/shower rooms
- Prisons and police stations – cells and communal areas
- Kitchens – live steam/steam cleaning

TEST DATA

FIRE RESISTANCE

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

SCRATCH RESISTANCE (BS 3900-E18:1997)

3H

SCRUB RESISTANCE (ASTM D2486)

4000+ cycles

ABRASION RESISTANCE (ASTM D1044, D3389)

5000 cycles

CHEMICAL RESISTANCE (IMMERSION TEST)

Chemical	First change after	Type of change	No further protection after
Hydrochloric Acid (10% in water)	4 days	Blistering & discolouration	7 days
Sulphuric Acid (10% in water)	6 months	Blistering	>24 months
Nitric Acid (10% in water)	4 days	Blistering & discolouration	14 days
Phosphoric Acid (10% in water)	18 months	Blistering & discolouration	>24 months
Formic Acid (10% in water)	4 days	Blistering	7 days
Lactic Acid (10% in water)	6 days	Blistering	12 days
Acetic Acid (10% in water)	4 days	Blistering	7 days
Caustic Soda (10% in water)	14 days	Blistering	>24 months
Caustic Potash (10% in water)	14 days	Blistering	1 month
Ammonia (10% in water)	4 days	Blistering	14 days
Formaldehyde (10% in water)	6 days	Blistering & swelling	10 days
Ethanol (96% in water)	3 days	Blistering & swelling	5 days
Ethanol (40% in water)	4 days	Blistering & swelling	1 month
Xylene	2 months	Blistering	6 months
White Spirit	>24 months	No change	No change
Ethylene Glycol Acetate	21 months	Blistering	>24 months
Methyl Ethyl Ketone	1 day	Blistering	4 days
Trichloroethylene	<1 day	Blistering & swelling	<1 day
Distilled Water	7 days	Blistering	>24 months
Tap Water	14 days	Blistering	>24 months

BACTERIAL RESISTANCE (JIS Z 2801)

- Bacillus subtilis
- Escherichia coli
- Pseudomonas aeruginosa
- Salmonella typhimurium
- Staphyloccocus 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
- Penicillum notatum
- Aspergillus niger

ADHESION STRENGTH (BS EN 24624:1993)

1.9Nmm^{-2}

APPROXIMATE SOLIDS CONTENT (BS 3900)

99.5 % by volume
99.6 % by weight

SPECIFIC GRAVITY

(BS 3900-A19:1998; ISO 2811; ASTM D1475)
1.25

GLOSS UNITS (ASTM D523)

Eggshell 20-35 at 60° viewing angle

VOC LEVEL OF THE TOPCOAT

<5 g/ltr

C/S Hotline: +65 6276 4276 Email: sales@c-sgroup.com.sg www.c-sgroup.com.sg

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
Wallflex® is available in an Eggshell 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 5ºC**. **Coating conditions** must remain **at least 3ºC** 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™** 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 @ 20ºC @ 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).

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 @ 20ºC @ 60% RH) before applying the **Wallflex® Topcoats.**
Always check compatibility prior to commencing coating.

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 @ 20ºC @ 60% RH) before applying the **Wallflex® Topcoats**.

Previously decorated surfaces
Clean down surface using **C/S Wallclenze™**, removing any loose or flaky coating.
Fill any areas where necessary spot prime using **C/S White Primer™** (see above) and continue with one coat of **C/S Universal Undercoat™**. If the substrate was previously decorated with **Wallflex®**, two topcoats are all that is required.

APPLICATION OF C/S HYGIENIC MASTIC

APPLICATION OF C/S HYGIENIC MASTIC
C/S Hygienic Mastic™ is a white, single pack, moisture curing polysiloxane with inbuilt biocides, which is used to enhance the elastomeric properties of **Wallflex®**.
It is applied via a cartridge gun to all dissimilar surfaces/ materials and any junction that may crack, after the primer but before any undercoat or topcoat.

The mastic should be applied in the following circumstances:
- in areas where there is positive or negative pressure (e.g. operating theatres)
  - < 60 Pa - Mastic only
  - > 60 Pa - Mastic and Fibreglass Reinforcement
- in areas where temperature cycling occurs (e.g. cat. 3 labs)
- when applying system in wet areas (e.g. bathrooms)
- when using fibreglass reinforced system

SYSTEM APPLICATION

C/S UNIVERSAL UNDERCOAT™
Required ONLY for application over C/S White Primer. For all other primers proceed with application of Topcoats.
Universal Undercoat™ (Single Pack) is applied onto the primed surface using Brush and Roller (medium pile roller). Allow to dry (4-6 hours @ 20ºC @ 60% RH) before applying two coats of Topcoat.

WALLFLEX® TOPCOAT
Two coats of **Wallflex® Topcoat** (Two Pack) are applied using Brush and Roller (medium/short pile roller or sponge). Allow 4-6 hours @ 20ºC @ 60% RH between coats.
Allow 48 hours 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. Copies can also be downloaded from our website 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 **Wallflex®**.

Light reinforcement (FG Light) - a lightweight fibreglass tissue (50 g/m^2), 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^2) and a lightweight fibreglass tissue (50 g/m^2). 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)[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
Universal Undercoat	9-11 m^2/ltr	5 and 15 (Single Pack)	140µ to 160µ	70µ to 90µ
Wallflex Topcoat - Eggshell	9-10 m^2/ltr	2.5 and 5 (Two Pack)	90µ to 100µ	90µ to 100µ

[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 5ºC and 35ºC

SHELF LIFE

2 years from manufacture when stored correctly and unopened.

OPERATIONAL TEMPERATURE

Wallflex® system once applied and cured is stable in temperatures between -15ºC and 80ºC.

HEALTH AND SAFETY

Always read the Material Safety Data Sheets of the products before commencing any application.
To request MSDS please call +44 (0)1296 652800 or send an e-mail to info@c-sgroup.co.uk.

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

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