

# AltroGuard™ Polyucoat Plus System

## Technical Data Sheet

**Product Description** AltroGuard Polyucoat is a very flexible and tough water-based polyurethane emulsion which, when applied over AltroGuard Flexibase, provides an elastomeric, high build coating system. The system allows for minor thermal and structural movement unlike conventional coatings.

When cured, the surface has a satin gloss finish, with very good resistance to light mechanical damage or chemical attack. An integral biocide, Altrosan, provide a sterile surface throughout the lifetime of the product. Easy to apply, the AltroGuard Polyucoat Plus system maximises protection with the added choice of pastel colours to co-ordinate with other finishes, and has a six year product warranty.

### Features

- Water-based, single pack component
- Non-hazardous
- Low Odour
- Quick drying
- Colour stable
- UV resistant
- Integral biocide
- Choice of pastel colours
- Minimum two top coats required
- Spray, roller or brush applied

The AltroGuard Polyucoat Plus system can be used on all internal walls and ceilings, which are constructed from a range of common building materials. (See Substrate preparation for a guide). Suitable for the following areas:-

- Abattoirs, Agricultural
- Corridors (heavy duty\*)
- Laboratories (heavy duty\*)
- Veterinary Surgeries
- A&E Departments
- Breweries
- Operating Theatres
- Prisons
- Storage Areas
- Toilets
- Kitchens (under 200 meals daily)
- Production Areas (light & medium duty)
- Hot Areas (max of 80°c)
- Mortuaries/Funeral Parlours

**Test Data Fire - BS 476 Parts 6+7:** Achieves class O rating, when applied to a non combustible substrate.

**Chemical Resistance:** AltroGuard Polyucoat Plus is resistant to a wide range of chemicals including:

Diluted Household  
Decon 90 solution - 50%  
50% saline solution  
Cooking Oil, applied hot and cold  
10% Nitric Acid  
10% Sulphuric Acid  
10% Acetic Acid  
10% Hydrochloric Acid  
10% Phosphoric Acid  
10% Sodium Hydroxide  
10% Potassium Hydroxide

Please enquire with Altro for details of resistance to other specific chemicals

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**Scratch Resistance - BS 3900 Part E2. Part 5.3:** Polyucoat Plus rated as 2.90kg

**U.V. Resistance:** Polyucoat (white) subject to 500 hours in the Q.U.V. Product showed no change.

**Impact Resistance -BS 3900 Part E3:** Tested using a front impact onto the coated test surface, using an indentation depth of 5.0mm. No cracking or delamination was observed

**Water Vapour Transmission Rate ASTM E96, Procedure B :**

AltroGuard Flexibase 107.7g/m<sup>2</sup>/24hrs

AltroGuard Polyucoat 42.9g/m<sup>2</sup>/24hrs

**Tainting BS 5929 Part 3, 1984:** Sensory evaluation was conducted on chocolate using the triangle test method (TES-S-002), Odour Transfer.

No tainting after a drying time of 48 hours.

**Biological Testing;** AltroGuard Polyucoat was evaluated using a Zone of inhibition test and gave positive inhibition to growth against the following organisms:-

**Bacteria** Aeromas hydriphila, Bacillus cereus, Bacillus coagulans, Bacillus subtilis, Enterococcus faecalis, Enterococcus hirea, Escherichia coli, Klebsiella pneumoniae, Listerua monocytogenes, MRSA, Proteus vulgaris, Pseudomonas aeruginosa, Salmonella Enteritidis, Salmonella typhomurium, Staphylococcus aureus, Staphylococcus epidermis

**Fungus** Aspergillus Niger

**Yeasts** Candida albicans, Saccharomyces Cerevisiae

**Tensile Strength and Elongation at Break:**

Tested to break both as an unsupported film and coated onto the lightweight glass fibre scrim. The following results were recorded.

Flexibase:

Extension at break 289% - reinforced 4.8%

Tensile Strength 1.5N/mm<sup>2</sup> reinforced 11.2N/mm<sup>2</sup>

Polyucoat

Extension at break 68% -reinforced 4.8%

Extension at break aged 32%

Tensile Strength 7.5N/mm<sup>2</sup> reinforce

12.0N/mm<sup>2</sup>

**Presence of toxic chemical:** AltroGuard Polyucoat Plus does not incorporate any toxic elements beyond some naturally occurring traces at insignificant levels. Analysis was conducted to investigate the possible presence of the following:- Phenol, Antimony, Arsenic, Copper, Lead, Mercury, Nickel and Zinc.

**Scrub Resistance:** Tested using a load of 0.5lbs AltroGuard Polyucoat showed a loss of 0.0083g after 100 revolutions and 0.0088g after 200.

## Preparation, Cleaning & Maintenance

**AltroGuard Bioclean:** Altroguard Bioclean is a specially formulated product, developed for use as part of substrate preparation and for routine cleaning of the cured AltroGuard system. This product has been tested to BS EN1276 (1997) and passes at a dilution of 1:25. It utilises a biodegradable biocide. It could, if required, be applied by mechanical means, such as a hand spray or a hot pressure washer with no detriment to the equipment.

a) Surface Preparation

Light contamination: 1:1 with clean water

High contamination: use undiluted

This product should be left on the surface for a minimum of 15 minutes and should then be washed off very thoroughly with clean water and the surface allowed to dry, before commencing application of coatings.

b) General Cleaning and Disinfection

Dilute 1 part with 20 parts of clean water. Wash off thoroughly with clean water after use.

## Substrate Preparation

The table below is a guide to suitable substrates and the typical preparation and application routines required.

SUBSTRATE	PRE-TREATMENT	PRIMERS	BASE COAT	1ST COAT	2ND COAT
Blockwork*	General Preparation	Consolidating Primer	Flexibase	Polyucoat	Polyucoat
Bricks/Stone*	General Preparation	Consolidating Primer	Flexibase	Polyucoat	Polyucoat
Cement Render*	General Preparation	Consolidating Primer	Flexibase	Polyucoat	Polyucoat
Metal (nonferrous)	Wire Brush	Proprietary Metal Primer	Flexibase	Polyucoat	Polyucoat
Metal (ferrous)	General Preparation	Proprietary Metal Primer	Flexibase	Polyucoat	Polyucoat
Plasterboard*	General Preparation	Consolidating Primer	Flexibase	Polyucoat	Polyucoat
Asbestos Board*	General Preparation	Consolidating Primer	Flexibase	Polyucoat	Polyucoat
Plaster *	General Preparation	Consolidating Primer	Flexibase	Polyucoat	Polyucoat
Ceramic Tiles	General Preparation RegROUT if needed	Tile Primer	Flexibase	Polyucoat	Polyucoat
Plastics	Abrade	Not Required	Flexibase	Polyucoat	Polyucoat
Painted Surfaces	General Preparation	Not Required	Flexibase	Polyucoat	Polyucoat
Emulsion Surfaces	General Preparation	Not Required	Flexibase	Polyucoat	Polyucoat
Wood**	Lightly Sand	Proprietary timber primer	Flexibase	Polyucoat	Polyucoat

\* Substrate should be dry i.e. Maximum protimeter reading of 15% (WME) preferably <12%

**General Preparation:** Remove loose flakes, heavy oil or grease by scraping. On suitable substrates, wash with AltroGuard Bioclean or a proprietary solvent or detergent based product to remove all traces of contamination. Non-porous substrates may be cleaned using high pressure steam cleaners.

Mould growth should be treated with Altro Guard Bioclean and any presence of algae should be treated with a dilution of bleach and allowed to dry.

Cracks not liable to movement should be filled with acrylic or polymer/cement based filler.

Cracks subject to movement should be filled with AltroMaster 100

**Tiles Primer:** Apply one coat of AltroGuard two part Primer by brush/roller and allow to dry.

**Top Coat:** Apply one coat of Acryliccoat diluted 50% to prime suitable surfaces .

Then apply two or three coats top coats, allowing to touch dry between coats, by brush, roller or spray. Product should be diluted by 10% for roller application.

### Consolidating Primer

Apply a coat of AltroGuard Consolidating Primer by brush, roller or spray. Additional coats may be required wet on wet on very dusty plaster or concrete/render with heavy laitence, surface integrity should be assessed before applying any coats of AltroGuard Flexibase

### Scrim:

A reinforcement lightweight scrim may be introduced into the AltroGuard Flexibase to resist impact damage or scuffing.

## Application Equipment

**Spraying:** Most types of industrial airless spray equipment are suitable, pressure 176-211 kg/cm<sup>2</sup>-2500-3000psi, tip size 11-10 thou. Apply using even coats when a smooth finish is required. Use protective equipment when spraying.

**Brushes:** Use soft nylon or bristle paintbrushes, overcoating 90 degrees to first coat.

**Rollers:** Use short pile mohair or sheepskin rollers for coating or reinforcing matting. Dilute AltroGuard Acryliccoat by 10% prior to application.

**Cleaning:** Clean brushes, rollers and spray equipment with clean water, Dried material can be removed by paint stripper or cellulose

## Coverage

AltroGuard Flexibase 4-8 m<sup>2</sup>/per litre  
AltroGuard Polyucoat 7-10 m<sup>2</sup>/per litre  
AltroGuard Consolidating Primer 15-20 m<sup>2</sup>/perlitre  
AltroGuard Tile Primer 25-30 m<sup>2</sup>/per litre  
Coverage is calculated on a smooth substrate and may vary depending upon equipment used, porosity, texture and colour of substrate.

## Drying Times

Under normal circumstances, individual components are usually touch dry within four hours and may be overcoated on the same day. Low temperatures and high relative humidity will extend drying time.

## Maintenance

Wash down periodically, or to a planned programme as required, with AltroGuard Bioclean or a proprietary cleaning agent (always test suitability first and follow the manufacturers instructions). AltroGuard Bioclean should be used if there is a possibility of build up of micro-organisms on the surface particularly when a hygienic surface is required

Cured installations may be pressure cleaned ensuring that water temperatures and pressure does not exceed 60°C/100bar. Care should be taken to keep the nozzle a minimum of 600mm (approx. 2ft) from the surface.

## Product Sizes

AltroGuard Flexibase	10 & 25 litres
AltroGuard Polyucoat	10 & 25 litres
AltroGuard Consolidating Primer	1 & 5 litres
AltroGuard Tiles Primer	1 & 5 litres
AltroMastic 100	310ml tubes
AltroGuard Lightweight Scrim	50m x 1m roll

## Colours

Available in white and six standard colours to co-ordinate with the Altro Whiterock Extruded and Pastels range. Other RAL or BS standard colours may be available to minimum order quantities.

## Notes

AltroGuard Systems are not suitable for use in showers or wash bays where the wall is consistently exposed to warm water  
Do not install near foodstuffs in unventilated conditions  
Always ensure adequate ventilation.  
Do not apply in damp conditions or at a temperature below 5°C.  
Applied uncured materials should be protected from frost.

## Health & Safety

Safety Data Sheet available on request from your distributor

# Specification

## M60 Painting/Clear Finishing AltroGuard™ Polyucoat Plus

### Background

- Painted Surfaces
- Brick/Stone
- Blockwork
- Cementious Renders
- Plasterboard
- Plaster
- Metal
- Glazed Ceramic Tile
- Plastic (not polypropylene or polyethylene)
- Wood

### Note

A range of preparation products are available and consideration should be given to whether substrates are

- a) Previously decorated
- b) Primed or sealed
- c) Uncoated or new material
- d) Type of material
- e) A sterilisation requirement

Refer to AltroGuard System Selection & Substrate Guide, also check NBS clauses 400 to 652 which cover the majority of preparation work,

### Moisture Content

All Substrates to be dry to touch i.e. maximum Protimeter reading 15%(WME), preferably <12% (WME)

### General Substrate Preparation

- All surfaces to be structurally sound
- All loose paint to be removed
- Surface contamination to be removed
- Remove defective finishes, and sand down
- Make good defects, holes, or depressions using proprietary repair compound
- Structural cracks should be filled

### Wall Coating Type

AltroGuard Flexibase - Modified Acrylic Emulsion  
AltroGuard Polyucoat - Modified Polyurethane Emulsion

### AltroGuard Flexibase

Reference	Colour
AGFB01	White

### AltroGuard Polyucoat

AGPU/01	White
AGPU/41	Linen
AGPU/43	Seafoam
AGPU/44	Ice
AGPU/45	Dove
AGPU/46	Barley
AGPU/47	Sunrise

A range of pastel colours (to BS4800 and RAL) are available to special order

## Specification

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### Fire Rating

Class 1 BS476 Part 6 & 7 Class O (on non combustible substrates)

### Application

- Do not apply near foodstuffs or in Unventilated conditions
- Do not apply in temperatures below 5°C or damp conditions
- Ideal application temperature 13 - 25°C
- Stir thoroughly before use
- Overcoating to take place once each coat is touch dry
- Apply a minimum of one coat of Flexibase, plus two coats of Polyucoat
- Apply by: 1. Airless spray  
2. Brush  
3. Roller
- Use in accordance with manufacturers instructions

### Storage

- Store between 5°C and 25°C
- Do not store below 5°C or allow to freeze
- Shell life: 12 months

### Protection

- If required, Megafilm, Polythene sheet, Correx. Cardboard.
- Protection not normally necessary as the application of the wall covering should be as late in the contract as possible.

### Specification

For particular applications contact Altro Walls for full written specification.

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