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# Product Data Sheet PDS004: Duturo

## 1 Product description

Duturo is a roller applied textured coating for walls that gives a hardwearing stone like finish which is tough, flexible and resistant to cracking.

Duturo is suitable for both interior and exterior use as a decorative coating for walls. It is ideally suited to corridor walls and high traffic areas in hotels and offices where good aesthetics and durability are the key requirements.

For exterior applications the dry Duturo finish must be protected with 2 coats of Armourcoat Clearseal.

## 2 Properties

- hard, durable and impact resistant
- flexible and crack resistant
- suitable for interior and exterior use (standard colour range only)
- hand crafted seamless finish
- water based product with exceptionally low VOC content
- washable
- class O fire rated for unrestricted use
- non Newtonian thixotropic paste viscosity 80000cP +/- 10000cP
- specific density 1.8 kg/L +/- 0.1kg/L
- dry solids content 79% +/- 2%.

## 3 Health and Safety

All products in the Duturo range are water based, non combustible and have low VOC emissions. They are all non hazardous but in keeping with good working practices avoid prolonged skin contact.

If contact with skin occurs wash immediately with soap and water as Duturo is difficult to remove once it has dried.

## 4 Suitable substrates

Duturo can be applied to any flat or shallow curved surfaces provided they are sound and free from cracks and peeling paint or paper. Ideal surfaces include plastered walls, taped and jointed plasterboard walls, previously decorated walls and ply or MDF panels.

Whilst Duturo will bond adequately to MDF great care should be taken when using it as a substrate as it will tend to crack along any joints. MDF may also swell and warp.

*Armourcoat have a specification sheet SSS8 for suitable substrates.*

## 5 Application instructions

- apply one coat of correct primer with a brush or roller to seal the wall and provide a good surface key for Duturo. Leave to dry fully.

In very good conditions this may be as fast as 2 hours but ideally leave the primer overnight and provide good drying conditions

- using a short pile roller apply a consistent layer of Duturo to the wall. Roll over the surface vertically and horizontally to achieve a consistent coat thickness. Whilst the material is still wet roll lightly over the surface to achieve a consistent stipple and then blade lightly over the surface to achieve the correct level of texture
- leave the surface until it is no longer tacky to the touch (30 - 120 minutes) and then work across the surface with a clean blade in a quick sweeping action to smooth the surface
- for the best results a 2 coat application is necessary. The first coat should be trowel applied to grain thickness and then left overnight to dry. The second coat should be applied as the first coat
- see Duturo Application Instructions for more detail on creating the various finishes

## 6 Colour range and textures

Duturo is available in a range of 36 colours which can be further enhanced with a range of 6 Colourwash glazes. Bespoke colours can be created on request.

As Duturo is a hand applied product and can be used to create a wide range of different textured finishes we recommend that the final texture is agreed on site between the applicator and client at the beginning of the works.

## 7 Test data

Fully cured Duturo (28 days) had the following performance results:

### 7.1 Shore D hardness

A test panel of Duturo DT-D315 was tested for hardness using an Elcometer 3120 Shore Durometer D. An average of 5 readings was taken. Tests were carried out at 23°C and 35% RH.

Sample	Duturo DT-D315
Shore D Hardness	74

### 7.2 Scrub resistance

A European laboratory performed the following performance test; the results are quoted to American Standard Modified ASTM D 2486 79.

Wet Scrubs	4600 cycles
Dry Scrubs	>8000 cycles

### 7.3 Abrasion resistance

Samples were tested for weight loss using a Taber Abrader after 50 cycles with a 1000g weight (H18 disc).

Duturo DT- D301	0.3130g
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### 7.4 VOC testing

Samples of Duturo DT-D301 and Colourwash base were tested for VOC following procedures outlined in ASTM D3960 Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.

Sample	VOC (grams/litre)	VOC (Lbs/Gal)
Duturo DT-D301	95	0.8

Testing was carried out by an accredited American testing laboratory

## 7.5 Moisture vapour permeability:

Triplicate dry film samples of Duturo DT-D301 (1.1 kg/m<sup>2</sup>) were tested in accordance with procedures outlined in ASTM D 1653 Test Methods for Water Vapor Transmission of Organic Coating Films, Method B, Water Method.

WVT (perms)	27.00
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Testing was carried out by an accredited American testing laboratory.

## 7.6 Chemical exposure

Tests were carried out in accordance with ASTM D 1308-89. Various solvents were applied individually to the coatings surface and then left uncovered. After 60 minutes the panels were wiped and inspected (A). The panels were subsequently given a 24 hours recovery time after which they were reinspected (B).

Tests were carried out using Duturo DT-D317 (1.1 kg/m<sup>2</sup>)

### 7.6.1 Solvent resistance

	Initial	72 hours later
Water	Slight Softening	Recovers
Cold Distilled Water	Slight Softening	Recovers
Household Bleach	Slight Softening	Slight Softening
Household Detergent	Slight Softening	Recovers
White Spirits	Slight Softening	Slight Softening
Flash All Purpose Cleaner	Slight Softening	Slight Softening
Vinegar	Slight Softening	Recovers

\*Some colours may fade when exposed to bleach for prolonged periods.

Various stains were applied individually to the coating surface and then left uncovered. After 60 minutes and 16 hours stains were wiped clean and then gently scrubbed using a soft bristle brush and some diluted Flash All Purpose cleaner. The 16 hour exposure test was repeated on the Duturo sample coated with 2 coats of Armourcoat Clearseal.

## 7.6.2 Stain resistance

Test Liquid	60 minutes	16 hours	16 hours with 2 coats of Clearseal
Water	No visible stain	No visible stain	No visible stain
Coffee	No visible stain	No visible stain	No visible stain
Tomato Sauce	No visible stain	No visible stain	No visible stain
Mustard	No visible stain	No visible stain	No visible stain
Butter	No visible stain	No visible stain	No visible stain
Fruit (cut apple)	No visible stain	No visible stain	No visible stain

## 7.7 Fire test results

### 7.7.1 British fire test results

BS 476: Part 6: 1989

Fire propagation index, I	0.1
Subindex, i1	0.0
Subindex, i2	0.0
Subindex, i3	0.1

BS476: Part7: 1997

**Class 1 surface spread of flame.**

**ARMOURCOAT DUTURO complies with requirements for a CLASS 0 surface AS DEFINED IN PARAGRAPH a13(B) of Approved Document B Fire Safety to the Building Regulations 2000.**

Tests were conducted using Duturo DT-D317 (1 kg/m<sup>2</sup>). The substrate comprised of skimmed plasterboard which had been sealed and primed.

### 7.7.2 American fire test results

Test carried out in accordance with the procedure outlined in ASTM E84 01 Standard Test Method for Surface Burning Characteristics of Building Materials (NFPA 255, ANSI/UL 723 and UBC 8-1).

Flame Spread Classification	Class 1
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Tests were conducted using Duturo DT-D301 (20 mil nominal thickness dry). The substrate was 0.5-inch thick gypsum wallboard.

## 8 Coverage rates

### One Coat Application

Coverage rate approximately 1-1.25 kg/m<sup>2</sup> or 0.09-0.11 kg/ft<sup>2</sup>

One pail will cover approximately 12m<sup>2</sup> -15m<sup>2</sup> (120ft<sup>2</sup> -150ft<sup>2</sup>)

### **Two Coat Application**

Coverage rate approximately 1.7kg/m<sup>2</sup> - 2.0 kg/m<sup>2</sup> (0.16kg/ft<sup>2</sup> - 0.19 kg/ft<sup>2</sup>)

One pail will cover approximately 7.5m<sup>2</sup> - 9.0m<sup>2</sup> (75ft<sup>2</sup> - 90ft<sup>2</sup>)

## **9 Storage**

Store in dry conditions between 5°C - 25°C. Protect from frost. Protect from sunlight and sources of direct heat. Keep container sealed when not in use.

Shelf life of Duturo in unopened container under correct storage conditions is 12 months from date of manufacture.

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