



AUSTRALIAN NATIONAL TESTING
LABORATORIES PTY. LTD.

TEST REPORT Number: 2976.11

Client: DuPont Corian®
Unit 3, 208 Walters Road
Arndell Park, NSW 2148

Issue Date: 03/12/09

SAMPLE DESCRIPTION "Corian Samples"

TESTED TO: Section 5, Clause 5.2: Sub-Clause: 5.2.2.2, 5.2.2.3, 5.2.2.4, 5.2.2.5 and 5.2.2.6 of ATS 5200.469:2005;

1. INTRODUCTION

Australian National Testing Laboratories tested the Corian samples that were selected and supplied by DuPont Corian® for testing.

APPLICABLE DOCUMENTS

The tests and data analysis were carried out in accordance with the following standards.

ATS 5200.469:2005	Technical Specification for plumbing and drainage products. Part 469: Waterless or Limited flush urinals – With an integral sealing device.
ISO 105-A02	Textiles – Tests for colourfastness. Part A02: Grey scale for assessing change in colour.
AS 3558.2:1999	Methods of testing plastic and composite materials sanitary plumbing fixtures. Method 2: Determination of chemical and stain resistance.
AS 3558.3:1999	Methods of testing plastic and composite materials sanitary plumbing fixtures. Method 3: Determinations of colourfastness.
AS 3558.4:1999	Methods of testing plastic and composite materials sanitary plumbing fixtures. Method 4: Determination of resistance to surface scratching.
AS 3558.5:1999	Methods of testing plastic and composite materials sanitary plumbing fixtures. Method 5: Determination of degradation by Ultraviolet light.
AS 3558.6:1999	Methods of testing plastic and composite materials sanitary plumbing fixtures. Method 6: Visual examination of surface finish for defects.
AS 3558.19:1999	Methods of testing plastic and composite materials sanitary plumbing fixtures. Method 19: Determination of impact resistance of sinks.

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Test Reference Number: 7-569406-CQ, Accreditation Number: 1356.

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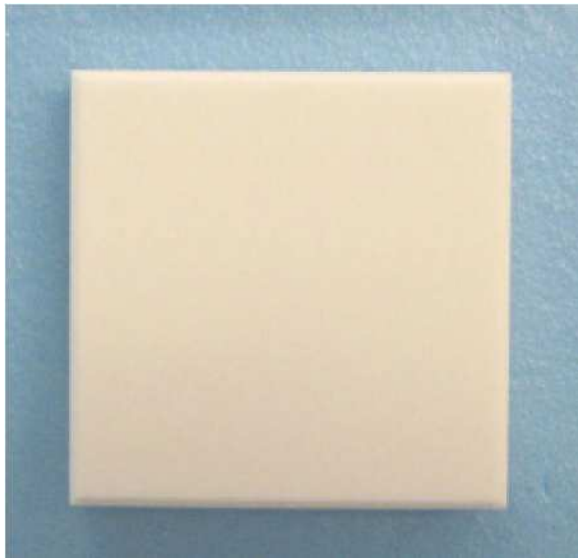
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2. SPECIMENS DESCRIPTIONS

The specimen is designated in this report as follows:

Sample Code	Description
Corian	50mm square samples



3. MATERIALS

Clause 5.2 of ATS 5200.469:2005 – Plastics and composite

5.2.2. Properties of finished Urinals

5.2.2.2. Surface quality

Testing was not performed under this clause.

5.2.2.3. Chemicals and stain resistance test

When tested in accordance to AS 3558.2:1999, individual sample will be exposed to two particular reagents that are used to mimic the effects of urine over a period of 16 hours. This is performed to show resistance against possible stains and chemicals.

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Requirement	Result		Conformity to Clause 5.2.2.3 of ATS 5200.469:2005
Test reagent, Teepol Gold D6515 (5% Solution and deionized water) is applied to two areas on the surface of the test sample. One area is covered by a watchglass and the other is left uncovered. This is left for 16 hours. The sample is later washed and examined for colours change.	Under Glass	Unaffected	Conforms
	Open Air	Unaffected	Conforms
Test reagent, Urea (6%) analar grade is applied to two areas on the surface of the test sample. One area is covered by a watchglass and the other is left uncovered. This is left for 16 hours. The sample is later washed and examined for colours change.	Under Glass	Unaffected	Conforms
	Open Air	Unaffected	Conforms

5.2.2.4. Colourfastness test

When tested in accordance to AS 3558.3:1999, the sample will be removed from the colour fixture, cut into two (each having a size of 50 ± 2 mm) whereby one part is immersed in a tank filled with distilled water at 90 ± 2 °C for 48 hours; and the other is used as a reference sample. This is performed to show the colourfastness of the material.

Requirement	Result	Conformity to Clause 5.2.2.4 of ATS 5200.469:2005
(a) Sample should not show a change in colour after it has been submerged in distilled water.	The sample registered a change in colour of grade 4 using a grey scale in accordance with ISO 105.A02. Clause does not specify minimum grade permissible.	Accreditation body to review
(b) Sample should not show any surface defects such as cracking, crazing, blistering, or other defects.	No defects were observed	Conforms

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5.2.2.5. Surface scratching test

When tested in accordance to AS 3558.4:1999, each sample will be tested for scratch resistance with a 2H pencil lead, it will be held at $45 \pm 10^\circ$ to the surface and pushed across the material to a distance of 6 to 10 mm with maximum downward force. The effects will be assessed. Complete this test at least three times and ensure no scratches are visible.

Requirement	Result		Conformity to Clause 5.2.2.5 of ATS 5200.469:2005
The surface of each sample shall not have any indentation or scratching deeper than 0.15mm. However, removable scratches are defined in AS 3558.4 as acceptable.	Test 1	Unaffected	Conforms
	Test 2	Unaffected	
	Test 3	Unaffected	

5.2.2.6 Impact test

Clause 5.2.2.6 specifies samples shall be tested in accordance with AS 3558.5 Samples were subjected to UV exposure before being tested for impact resistance in accordance with AS 3558.19. When tested in accordance to AS 3558.5:1999, two specimens are placed on a sheet, underneath two ultraviolet sunlamps with lampshades, shown in Figure 1 for a duration of $24 \pm 2, -0$ h, at a temperature range of 45°C to 55°C.

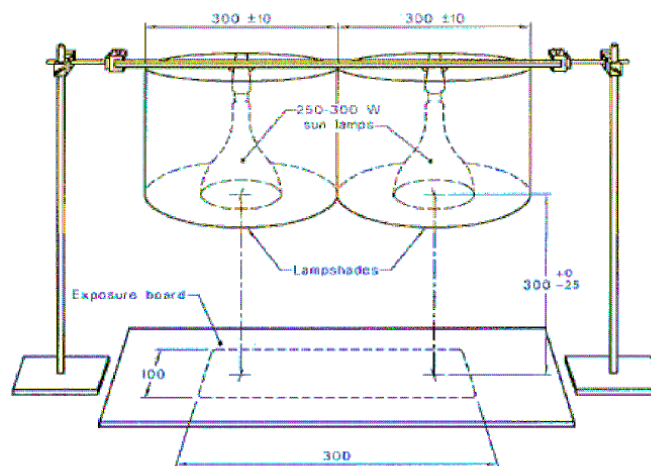


FIGURE 1 TYPICAL ULTRAVIOLET LAMP EXPOSURE TEST SET-UP

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Table with 3 columns: Requirement, Result, and Conformity to Clause 5.2.2.6 of ATS 5200.469:2005 and AS 3558.5:1999. It details surface defect testing results.

5.2.2.6. When tested in accordance to AS 3558.19:1999, a steel ball 38 ± 0.5 mm in diameter is used to test the resistance of material. No height specification or parameters are given for plain samples, and therefore the exposed sample was subjected to three strikes from 750mm height using the steel ball specified to represent worst case scenario.

Table with 3 columns: Requirement, Result, and Conformity to Clause 5.2.2.6 of ATS 5200.469:2005. It details the results of three impact tests.

Signed:

Jeff Profke.
Director

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