

## CLEAR WATER REPELLENT COATING FOR MASONRY AND CONCRETE - EXTERIOR

### 1 SCOPE

Clear, water repellent coatings for application to exterior stonework, concrete or masonry to prevent the ingress of water from rain, without causing an obvious change in appearance.

### 2 BACKGROUND

- To obtain a broad overview of the Australian Paint Approval Scheme (APAS), refer to APAS document AP-D001.
- To obtain an overview of restricted ingredients in APAS certified products, refer to APAS document AP-D123.
- To obtain the current list of APAS participating manufacturers (and suppliers) and resellers, refer to APAS document AP-D152.
- To obtain an overview of how to participate in the APAS, refer to APAS document AP-D177.
- APAS approval to this specification may be gained by compliance with the requirements detailed in this specification and those in APAS document AP-D192.

### 3 DESCRIPTION AND GUIDE FOR USERS

#### 3.1 General Requirements

- This specification provides for two types of clear water repellent coatings for application to exterior stonework, concrete or masonry to prevent the ingress of water from rain, without causing an obvious change in appearance.
- One or two coats may be applied by brush or spray to a clean surface so that the solution flows down at least 25cm before being absorbed into the pores of the substrate.
- These products should not be confused with low molecular weight penetrating silane and siloxane treatments which are covered under APAS specification AP-S0168.

#### 3.2 Sub-Classes

- This specification incorporates the following sub-classes:
  - 0116/1:** Silicone based, not overcoatable
  - 0116/2:** Overcoatable

#### 3.3 Basis of this Specification

- This specification is not based on any known specification or standard.
- This product type corresponds to Paint Reference Number (PRN) B33 of AS/NZS 2311.

### 4 REFERENCED DOCUMENTS

- The following standards are referenced in this document:
  - AS/NZS 1580** – Paints and related materials: Methods of test.
  - AS/NZS 2311** – Guide to the painting of buildings

These documents may be purchased through the Reference Standards Australia website:

<https://www.standards.org.au/>

- The Poisons Standard June 2021:** Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) No. 33, Part 2: Control on Medicines and Poisons, Section Seven / Appendix I Paint or Tinters

This document is available from the Australian Government Federal Register of Legislation website at:

<https://www.legislation.gov.au/Details/F2021L00650>

- The following APAS documents are referenced in this document:
  - AP-D001 Rules Governing How APAS® Operates
  - AP-D123 Restrictions on Ingredients in Product Formulations
  - AP-D152 APAS® Participating Manufacturers and Resellers
  - AP-D177 Rules Governing How Product Manufacturers participate in APAS®
  - AP-D181 Volatile Organic Compounds (VOC) Limits
  - AP-D192 Rules Governing APAS® Product Certification Scheme

All APAS documents are available for download from the APAS website: <https://vs.csiro.au/apas/documents/>

### 5 COMPOSITIONAL REQUIREMENTS

#### 5.1 Binder

- The binder shall typically be comprised of:
  - Silicone oil or resin or a solution of sodium silicate containing not less than 5% by weight of silicone for 0116/1 sub-class products.
  - The binder is unrestricted for 0116/2 sub-class products.

#### 5.2 Volatiles

- The volatile portion is typically hydrocarbons or water.
- For VOC content restrictions, refer to APAS document AP-D181.

#### 5.3 Pigmentation

- Not applicable.

### 6 PRODUCT APPROVAL REQUIREMENTS

#### 6.1 General Requirements

- The product and its application for approval shall comply with the relevant requirements of APAS document AP-D192 during the life of the approval.

#### 6.2 Technical Requirements

- The product shall comply with **all** the requirements of clause 8, Table 1 below.



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- b) The manufacturers own quality control schedule of tests and limits shall be allowed subject to the approval of the Executive Officer (EO), APAS.
- c) On request, the EO may request the results of the tests for a batch and compare these with previous batches.
- d) Density and non-volatile content by weight (NVCW) figures for each production batch of the approved product shall be within  $\pm 3\%$  of the actual (not theoretical) figures quoted in the original product approval submission (APAS document AP-D139).
- e) Subject to compliance with all the requirements of this specification, the level of Approval appropriate to the application shall be given to the system.

### 6.3 Health and Safety Requirements

- a) Shall not be a Schedule 1, Schedule 2 or Schedule 3 paint (SUSMP).
- b) The manufacturer's Safety Data Sheet (SDS) must be studied closely prior to using the product and complied with during use of the product.
- c) Since products may contain hydrocarbon solvents, they may be flammable and should be stored away from all sources of heat or ignition. Containers should be resealed immediately after use and good ventilation should be provided during use to minimise the risk of fire or explosion and the long-term toxic effects of absorption of the vapour into the lungs.
- d) Care should be taken to avoid contact with the skin by the use of protective clothing and barrier cream. All pumping equipment should be adequately earthed. A full-face air fed respirator should be used when spraying.
- e) Products intended for sale in Australia shall comply with all the requirements of the SUSMP. Products intended for sale in other countries shall comply with all local WHS and environmental requirements.
- f) The product shall comply with all requirements of clause 6.3 and 6.4 of APAS document AP-D192.

## 7 APPENDIX A

### Test for the Effectiveness of Water Repellency

- a) A clay brick shall be coated all round with the water repellent in accordance with the manufacturer's instructions and allowed to dry for 7 days.
- b) The coated brick, together with an untreated brick, shall be weighed and then placed in a tray and the tray filled with water to a depth of 25 mm.
- c) After 7 days, the bricks shall be removed from the tray, patted dry with suitable towelling and reweighed. The change in mass shall be expressed as a percentage.
- d) The water repellent coating shall be deemed acceptable providing that the water absorption of the treated brick is less than 0.5% and that of the untreated brick is more than 5.0%.



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8 TABLE 1: PERFORMANCE PROPERTIES

TEST	AS/NZS 1580 METHOD	REQUIREMENTS
Preliminary Examination	103.1	To be readily reincorporated and shall be free of coarse particles, gel and foreign matter.
Effectiveness of Water Repellency	Clause 7, Appendix A	Refer Appendix A for full test and results requirements.
Overcoating Properties after 7 days Drying	404.1 408.4	A coat of latex paint complying with APAS specification AP-S0280/1 shall be applied. After 24 hours, shall be examined for any film defects or poor adhesion.  There shall be no visible defects and adhesion shall not have a rating greater than 2.
Reincorporation After Storage	211.2	To comply with all the preceding requirements after 12 months storage at ambient temperature.
VOC Content	APAS AP-D181	Refer to APAS document AP-D181 for method and limits.  If the APAS specification is not listed on AP-D181, a declaration of VOC content <b>is still required</b> .



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### 9 APPENDIX B

#### Document History

Status: Current  
Version: 9  
Date Published: 27-08-2021

Document Version No.:	Date Published:	Summary of Changes:
9	27-08-2021	<ul style="list-style-type: none"><li>• General format change to clause 1 and 3.1 c)</li><li>• Updated background information in clause 2</li><li>• Updated SUSMP information</li><li>• Updated APAS website information</li></ul>
8	12-11-2020	<ul style="list-style-type: none"><li>• Addition of Appendix B Document History and removal of the Editorial Note previously used in specification versions</li><li>• Updated document to the current format</li><li>• Updated internal and external document references and website details</li><li>• Inclusion of VOC Content requirement to Table 1 Performance Properties</li><li>• Addition of "People + Product = Protection" to Footer</li></ul>
7	13-05-2003	<ul style="list-style-type: none"><li>• Deleted reference to GPC numbering and incorporated a general format update</li></ul>
6	31-01-2001	<ul style="list-style-type: none"><li>• Initiated the second stage of the move to new specification numbering with prominence given to the new number (previously GPC-M-116)</li></ul>