



TWO PACK EXTERIOR POLYURETHANE VARNISH (GENERAL PURPOSE)

1 SCOPE

A two pack, full gloss transparent coating for dressed timber surfaces. Durability approximately maximum of 18 months from 3 coats.

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

- For the protection of dressed timber in sheltered exterior areas to impart a transparent light yellow or brown finish. Apply three coats by brush or spray, each to a dry film thickness of 20 - 25µm. Handling time 16 hours.
- The poor durability performance of this product class limits its suitability, such that it should only be considered in exposed areas where, for aesthetic reasons, timber grain appearance is essential. Regular and frequent repainting is mandatory to maintain a satisfactory appearance.

3.2 Sub-Classes

- This specification does not incorporate any sub-class.

3.3 Basis of this Specification

- This specification is based on AS/NZS 3730.27, Type 3 products.
- Products correspond to Paint Reference Number (PRN) B20 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
 - AS/NZS 3730.27** – Guide to the properties of paints for buildings, Part 27: Clear coatings for interior timber floors

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 web site 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 consist of a solvent-borne hydroxy functional polymer (Part A component) and a solvent borne polyisocyanate functional polymer (Part B component).

5.2 Volatiles

- The volatiles shall typically consist essentially of hydrocarbons.
- For VOC content restrictions, refer to APAS document AP-D181.

5.3 Pigmentation

- Products (both Part A and B components) shall be unpigmented.

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 7, Table 1 below.
- The manufacturers own quality control schedule of tests and limits shall be allowed subject to the approval of the Executive Officer (EO), APAS.



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- 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) These products are a health and safety risk in terms of both the volatile organic solvents and the polyisocyanate component.
- d) Since the paint contains a hydrocarbon solvent, the wet paint is flammable and should be stored away from all sources of heat or ignition. Care should be taken to avoid contact with the skin by the use of protective clothing and barrier cream.
- e) Component containers should be resealed immediately after use and good ventilation 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. A full-face air fed respirator should be used when spraying. All pumping equipment should be adequately earthed.
- f) In higher concentrations, monomeric isocyanates in these products can cause throat irritation and in severe instances, asthmatic symptoms. Some workers are sensitised at airborne concentrations well below the normal hygienic standards. This precludes persons with a history of respiratory problems from using these products.
- g) 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.
- h) The product shall comply with all requirements of clause 6.3 and 6.4 of APAS document AP-D192.



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7 TABLE 1: PERFORMANCE PROPERTIES

TEST	AS/NZS 1580 METHOD	REQUIREMENTS
Individual Component Testing – To be carried out on <u>both</u> Part A and Part B components		
Preliminary examination	103.1	To be a clear, bright liquid free of any sediment, coarse particles, gel or skin.
Skin Formation	203.1	No skin or gel particles to be formed.
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 is still required .
Mixed Product Testing		
General Requirements	AS 3750.27	Shall comply with all the requirements of clause 5 Typical Properties and Characteristics , except as amended as below. All results shall be reported.
Surface Dry Condition	401.1	Maximum 6 hours.
Hard Dry Conditions (Mechanical Thumb Test)	401.6	Maximum 16 hours.
Resistance to Water at Room Temperature	455.1	Not more than slight whitening or dulling, and to recover completely in 2 hours.
Specular Gloss	602.2	≥ 85 units at 60°.
Finish	603.1	Shall have a bright, uniform clear finish free from any visible defects.
Durability	457.1	Three coats exposed at a temperate site for 18 months shall show no undue whitening, yellowing or discolouration. In addition, the following minimum ratings shall apply: Degree of change in gloss ≤3 Checking, cracking ≤1 Flaking, blistering ≤1
VOC Content	APAS AP-D181	Refer to APAS document AP-D181 for method and limits. <ul style="list-style-type: none">If the APAS specification is not listed on AP-D181, a declaration of VOC content is still required.



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8 APPENDIX A

Document History

Status: Current
Version: 9
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Document Version No.:	Date Published:	Summary of Changes:
9	27-08-2021	<ul style="list-style-type: none">• General format change to clause 1, 5.1 a), 5.3 and 6.2• Updated background information in clause 2• Updated SUSMP information• Updated APAS website information
8	10-11-2020	<ul style="list-style-type: none">• Addition of Appendix A Document History and removal of the Editorial Note previously used in specification versions• Updated document to the current format• Updated internal and external document references• Inclusion of VOC Content requirement to Table 1 Performance Properties• Addition of "People + Product = Protection" to Footer
7	21-04-2003	<ul style="list-style-type: none">• Deleted reference to GPC numbering and incorporated a general format update
6	15-01-2001	<ul style="list-style-type: none">• Initiated the second stage of the move to new specification numbering with prominence given to the new number (previously GPC-V-54)