



SMOOTH NON-SLIP DECK PAINT (SHIPS)

1 SCOPE

A single pack paint for steel decks in light service conditions. Has a smooth finish. Available in blue, green, grey and terracotta.

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

- A single pack paint for steel decks in light service conditions. Has a smooth finish. Available in blue, green, grey and terracotta.
- Apply by brush to a primed or previously painted steel surface. Hard dry time 12 hours.

3.2 Sub-Classes

- This specification does not incorporate any sub-class.

3.3 Basis of this Specification

- This specification is not based on an AS/NZS standard.

4 REFERENCED DOCUMENTS

- The following standards are referenced in this document:
 - AS/NZS 1580** – Paints and related materials: Methods of test
 - AS 2700** – Colour standards for general purposes

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 consist of phenolic modified varnish.

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 shall typically consist of appropriate colouring pigments.

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.
- The manufacturers own quality control schedule of tests and limits shall be allowed subject to the approval of the Executive Officer (EO), APAS.
- On request, the EO may request the results of the tests for a batch and compare these with previous batches.
- 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).
- Subject to compliance with all the requirements of this specification, the level of Approval appropriate to the application shall be given to the system.

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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 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.
- d) 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. Painting should not be carried out whilst enclosed spaces are occupied, and exterior doors should be propped open as the vapours are heavier than air.
- 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 Method for Anti-skid Properties

- a) Apply one coat of the test paint to a tinplate panel and allow to dry for 7 days.
- b) Prepare two test blocks, 50 x 100 mm of rubber and leather. The rubber shall be a vulcanised compound with a hardness range of 60-80 Durometer "A" and the leather shall be vegetable-tanned sole leather sanded smooth with O grade abrasive paper.
- c) The measurement of coefficients of friction is carried out with contact surfaces:
 - i. Dry
 - ii. Wet with 4% sodium chloride in distilled water
 - iii. Oiled with oil complying with OMD 112
- d) Apply a load of 150g uniformly over the test block and determine the force required to equal the static and dynamic frictional forces by attaching a spring balance to the block and pulling balance and block across the test panel. Note the force when the block is just on the point of moving (Static Friction) and when moving with constant velocity (Dynamic Friction).
- e) Repeat three times for each combination of surfaces.

$$\mu = F/R$$

where: μ = coefficient of friction
F = frictional force (N)
R = weight of block plus load (N)



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8 TABLE 1: PERFORMANCE PROPERTIES

TEST	AS/NZS 1580 METHOD	REQUIREMENTS						
Preliminary Examination	103.1	To be readily incorporated. Shall be free of coarse particles, gel and foreign matter.						
Skin Formation	203.1 (Method B)	No skin.						
Viscosity	214.3	Method and result to be reported.						
Application Properties - Brushing	205.1	Shall show satisfactory application properties and the dry film shall have a uniform appearance and be free from defects.						
Hard Dry Condition (Mechanical Thumb Test)	401.6	Maximum 12 hours.						
Colour - Visual Comparison	601.1	To be an approximate match.						
Specular Gloss	602.2	Shall be stated.						
Finish	603.1	Shall be free of coarse particles, wrinkling or orange peel and have a uniform colour and appearance.						
Reincorporation after Storage	211.2	To comply with all the preceding requirements after 18 months storage at ambient temperature.						
Degree of Settling	211.2	Settling shall not fall below 6.						
Durability	457.1	No integrity failure after 12 months at a marine test site. <ul style="list-style-type: none"> The coating system applied to mild steel test panels shall comprise one coat of primer to APAS specification 0162 and one coat of test paint to APAS specification 0071. The following additional ratings shall apply after 24 months exposure: <table border="0"> <tr> <td>Degree of discolouration</td> <td>≤3</td> </tr> <tr> <td>Degree of chalking</td> <td>≤3</td> </tr> <tr> <td>Degree of colour change</td> <td>≤2</td> </tr> </table> 	Degree of discolouration	≤3	Degree of chalking	≤3	Degree of colour change	≤2
Degree of discolouration	≤3							
Degree of chalking	≤3							
Degree of colour change	≤2							
Anti-skid Properties	Clause 7, Appendix A	Coefficient of friction values ≥ than those stated in clause 9, Table 2.						
Practical Test		An in-situ test shall be made of the paint on steel decking or flooring subject to foot and vehicular traffic, duration of test at least six weeks.						
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 .						



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9 TABLE 2: COEFFICIENTS OF FRICTION

Coefficient of Static Friction				Coefficient of Sliding Friction		
Condition				Condition		
	Dry	Wet	Oily	Dry	Wet	Oily
Leather	0.75	0.75	-	0.50	0.50	-
Rubber	1.00	0.90	0.70	0.80	0.80	0.40



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10 APPENDIX B

Document History

Status: Current
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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• Updated background information in clause 2• Updated SUSMP information• Updated APAS website information
8	11-11-2020	<ul style="list-style-type: none">• Addition of Appendix B 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	16-01-2001	<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-P-71)