



LOW GLOSS TOPSIDE PAINT – BLACK OR GREY (SHIPS)

1 SCOPE

A protective air-drying camouflage paint of low gloss for use on exterior surfaces in marine atmospheres which may be immersed in sea water, such as submarine superstructures. Available in black and grey.

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 protective air-drying camouflage paint of low gloss for use on exterior surfaces in marine atmospheres which may be immersed in sea water, such as submarine superstructures. Available in black and grey.
- Apply by brush or spray as a multi-coat system over suitably pre-treated or primed steel, aluminium, galvanised steel or glass reinforced plastic.
- There is no similar specification listed within APAS.

3.2 Sub-Classes

- This specification does not incorporate any sub-class.

3.3 Basis of this Specification

- This specification is not based on any AS/NZS.

4 REFERENCED DOCUMENTS

- The following standards are referenced in this document:
 - AS/NZS 1580** – Paints and related materials: Methods of test
 - AS 2106** – Methods for the determination of the flash point of flammable liquids (closed cup) general
 - AS 2700** – Colour standards for general purposes
 - BS 3900-G2** – Methods of tests for paints- Resistance to Aqueous Liquids

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 be an oleo-resinous varnish based on a reduced phenolic resin chosen to impart the properties detailed in clause 7, Table 1 below.

5.2 Volatiles

- The volatile component shall typically be white spirit.
- For VOC content restrictions, refer to APAS document AP-D181.

5.3 Pigmentation

- The pigmentation shall consist of appropriate colouring pigments chosen to impart the properties detailed in clause 7, Table 1 below.

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.
- On request, the EO may request the results of the tests for a batch and compare these with previous batches.



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- 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 the paint contains a hydrocarbon solvent, the paint is flammable and should be stored away from all sources of heat or ignition. 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.
- 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.



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7 TABLE 1: PERFORMANCE PROPERTIES

TEST	AS/NZS 1580 METHOD	REQUIREMENTS
Preliminary Examination	103.1	To be readily reincorporated. Shall be free of coarse particles, gel and foreign matter.
Density	202.1	To be within $\pm 3\%$ of stated value.
Non-Volatile Content	301.1	To be within $\pm 3\%$ of stated value.
Skin Formation	203.1 (Method B)	No skin.
Flash Point	AS 2106	28°C minimum.
Thinner Compatibility	208.1	Satisfactory with 10% of white spirit.
Application Properties - Brushing - Spraying	205.1 205.2	Shall show satisfactory application properties and the dry film shall be free of defects.
Surface Dry Condition	401.1	Maximum 4 hours.
Hard Dry Condition (Mechanical Thumb Test)	401.6	Maximum 16 hours.
Colour - Visual Comparison	601.1	Black to be black; Grey to be a close match to N42 Storm Grey of AS 2700.
Specular Gloss (85°)	602.2	Black 10 ± 5 ; Grey 15 ± 5 .
Bend Test - 6mm mandrel	402.1	No cracking or loss of adhesion on soft aluminium panels.
Recoating Properties	404.1	No separation when tested by AS/NZS 1580.402.1 on tinplate panel.
Scratch Resistance	403.1	750g minimum on tinplate panel.
Resistance to Humidity	452.1	No sign of breakdown or rusting after 10 days exposure of two coats over etch primer on steel and hard aluminium panels.
Resistance to Seawater (aerated)	BS 3900-G2	After 4 weeks exposure, no sign of breakdown or rusting of two coats over etch primer on steel and hard aluminium panels.
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 12 months storage at ambient temperature.



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7 TABLE 1: PERFORMANCE PROPERTIES (cont.,)

TEST	AS/NZS 1580 METHOD	REQUIREMENTS
Degree of Settling	211.2	Not to fall below 6.
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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8 APPENDIX A

Document History

Status: Current
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Document Version No.:	Date Published:	Summary of Changes:
9	26-08-2021	<ul style="list-style-type: none">• General format change to clause 1, 5.1, 6.2 and 6.3• Updated background information in clause 2• Updated SUSMP information• Updated APAS website information
8	09-11-2020	<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	08-04-2003	<ul style="list-style-type: none">• Deleted reference to GPC numbering, incorporated a general format update
6	12-01-2001	<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-39)