SPECIFICATION AP-S0014

ZINC RICH PRE-CONSTRUCTION PRIMERS

1 SCOPE

A primer, usually grey in colour, containing a high proportion of zinc dust. Used to protect cleaned steel during fabrication processes (typically for 6 - 12 months) and provide continuing protection against under-film corrosion when overcoated.

2 BACKGROUND

a) To obtain a broad overview of the Australian Paint Approval Scheme (APAS), refer to APAS document AP-D001.
b) To obtain an overview of restricted ingredients in APAS certified products, refer to APAS document AP-D123.
c) To obtain the current list of APAS participating manufacturers (and suppliers) and resellers, refer to APAS document AP-D152.
d) To obtain an overview of how to participate in the APAS, refer to APAS document AP-D177.
e) 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) Apply to abrasive blast cleaned steel surfaces by spray or brush (as appropriate). Although these products are normally applied at a dry film thickness of typically 65-75µm, where only short-term protection is required or where weld through capabilities are necessary, application at 15-25µm may be considered.
b) Where weld through capability is required, the manufacturer should be asked to assure the products compliance with AS/NZS 3750.15 (applied at 65 - 75µm) can be used to repair zinc coated surfaces, damaged during welding or cutting operations.
c) In mild environments, e.g., interior, the primer is not normally overcoated, but in aggressive conditions, the primer should normally be overcoated within 12 months. Handling time varies from 5 minutes to 4 hours depending upon the product and the atmospheric conditions.

3.2 Sub-Classes

a) This specification incorporates sub-classes:
   i. **0014/1:** One pack, organic binder
   ii. **0014/2:** Two pack, epoxy binder
   iii. **0014/3:** Two pack, ethyl silicate binder
   iv. **0014/4:** Two pack, alkali silicate binder

3.3 Basis of this Specification

a) This specification is based on:
   i. AS/NZS 3750.9 Type 1 for 0014/1
   ii. AS/NZS 3750.9 Type 2 for 0014/2
   iii. AS/NZS 3570.15 Type 4 or 5 for 0014/3
   iv. AS/NZS 3570.15 Type 3 or 6 for 0014/4
b) Products in sub-class 0014/2 correspond to Paint Reference Number (PRN) 2 of AS/NZS 2312.
c) Products in sub-classes 0014/3 and 0014/4 correspond to PRN 1 of AS/NZS 2312.

4 REFERENCED DOCUMENTS

a) The following standards are referenced in this document:

   i. **AS/NZS 1580** – Paints and related materials: Methods of test.
   ii. **AS 2312** – Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings – Paint Coatings.
   iii. **AS/NZS 3750.9** – Paints for steel structures, Part 9: Organic zinc-rich primer
   iv. **AS/NZS 3750.15** – Paints for steel structures, Part 15: Inorganic zinc silicate paint

These documents may be purchased through the Reference Standards Australia website: https://www.standards.org.au/

   v. **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

b) The following APAS documents are referenced in this document:

   i. AP-D001 Rules Governing How APAS® Operates
   ii. AP-D123 Restrictions on Ingredients in Product Formulations
   iii. AP-D152 APAS® Participating Manufacturers and Resellers
   iv. AP-D177 Rules Governing How Product Manufacturers participate in APAS®
   v. AP-D181 Volatile Organic Compounds (VOC) Limits
   vi. 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

a) As applicable to the product seeking certification, refer to the standard associated with sub-class.

5.2 Volatiles

a) For VOC content restrictions, refer to APAS document AP-D181.

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5.3 Pigmentation

a) The pigmentation shall be chosen to impart the properties detailed in clause 7, Table 1 below.

6 PRODUCT APPROVAL REQUIREMENTS

6.1 General Requirements

a) 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

a) The product shall comply with **all** the requirements of clause 7, Table 1 below.
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 ±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 paint (SUSMP).
b) Shall be non-toxic when low film builds are burnt during cutting or welding of the primed steel, under normal conditions of ventilation.
c) The manufacturer's Safety Data Sheet (SDS) must be studied closely prior to using the product and complied with during use of the product
d) Since most products contain volatile and flammable solvents, the paint 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.
e) Care should be taken when applying all products to avoid contact with the skin using protective clothing and barrier cream. A full-face air fed respirator should be used when spraying. All pumping equipment should be adequately earthed.
f) 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.

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7 TABLE 1: PERFORMANCE PROPERTIES

TEST	AS/NZS 1580 METHOD	REQUIREMENTS
General Requirements	AS/NZS 3750.9 or AS/NZS 3750.15 (as applicable)	Shall comply with **all** the requirements of clause 2 **Material Requirements** from the applicable standard. All results shall be reported.
Application Properties: - Brushing - Rolling (if appropriate) - Spraying (if appropriate)	 205.1 205.3 205.2	Shall show satisfactory application properties and the dry film shall be free of defects.
Welding Performance	AS/NZS 3750.15	Where certification as a weld through primer is required, compliance with clause 2.6.8 of the Standard must be demonstrated.
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
Version: 9
Date Published: 26-08-2021

Document Version No.:	Date Published:	Summary of Changes:
9	26-08-2021	• General format change to clause 1 and 4 b) • Updated background information in clause 2 • Updated SUSMP information • Updated APAS website information
8	06-11-2020	• 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 and website details • Inclusion of VOC Content requirement to Table 1 Performance Properties • Addition of "People + Product = Protection" to Footer
7	07-04-2003	• Deleted reference to GPC numbering, added requirements for testing to AS3750 and incorporated a general format update
6	11-01-2001	• Initiated the second stage of the move to new specification numbering with prominence given to the new number (previously GPC-P-14)

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