1. SCOPE

a) This specification applies to products that are water based and designed for use on building exteriors.
b) The APAS is a product certification scheme made available to financial Members of APAS. APAS is a trademark protected against unauthorised use by relevant laws and regulations applicable at the time of publication.
c) For enquiries about Membership, please consult the relevant documents on the APAS web site or contact the Executive Officer.

2. BACKGROUND

a) APAS Document D001 should be read to obtain a broad overview of the Australian Paint Approval Scheme (APAS).
b) Manufacturers who wish to participate in APAS within Australia should consult APAS documents D177.
c) APAS approval to this specification may be gained by compliance with the requirements detailed in this specification and those in document D192.

3. DESCRIPTION & GUIDE FOR USERS

3.1 General product description

a) Products approved under this specification are finishing paints for the exterior of buildings that can be applied with or without thinning with water. They are typically available from stock in a manufacturer's colour range (MCR) as illustrated on a colour card with colours of lesser opacity marked.
b) Products approved under sub-classes 0280/1, 2 & 3 of this specification are designed for application by brush, roller or spray to primed or sealed surfaces in accordance with manufacturer's directions.
c) Products approved under sub-classes 0280/4 & 5 of this specification are Direct to Substrate (DTS) products designed for application by brush, roller or spray to unprimed surfaces. Check with manufacturer's directions.
d) Typically, these products are applied to a dry film thickness of 25 - 50 μm per coat. Handling time is typically less than 6 hours.

3.2 Technical basis of specification

a) This specification is based on respective parts of Australian Standard AS 3730 as indicated below.

3.3. Sub-classes & equivalence

This specification is divided into the following sub-classes;

- 0280/1 – Gloss finish
- 0280/2 – Semi-gloss finish
- 0280/3 – Low gloss or matt finish
- 0280/4 – Heavily pigmented gloss DTS finish
- 0280/5 – Heavily pigmented low gloss DTS finish

<table>
<thead>
<tr>
<th>APAS Sub-class</th>
<th>AS 3730</th>
<th>PRN</th>
</tr>
</thead>
<tbody>
<tr>
<td>0280/1</td>
<td>AS3730.10</td>
<td>B9</td>
</tr>
<tr>
<td>0280/2</td>
<td>AS3730.9</td>
<td>B8</td>
</tr>
<tr>
<td>0280/3</td>
<td>AS3730.8</td>
<td>B7</td>
</tr>
<tr>
<td>0280/4</td>
<td>AS3730.16</td>
<td>NE</td>
</tr>
<tr>
<td>0280/5</td>
<td>AS3730.16</td>
<td>NE</td>
</tr>
</tbody>
</table>

NE = no equivalent

4. REFERENCED DOCUMENTS

This specification makes reference to the following documents;

- AS/NZS 1580 Paints and related materials – methods of test
- AS/NZS 2311 Guide to the painting of buildings
- AS/NZS 3730 Guide to the properties of paints for buildings.

Australian standards are available on-line from SAI-Global at http://www.sai-global.com.au


- APAS Document AP-D001 How APAS Operates
- APAS Document AP-D177 How paint manufacturers participate in APAS
- APAS Document AP-D192 The APAS Product Approval System

All APAS Documents may be downloaded from the APAS web site located at: http://www.apas.gov.au
5. COMPOSITIONAL REQUIREMENTS

5.1 Binder

a) Although the type of binder is not restricted by this specification, binder types with a history of satisfactory performance include emulsion acrylics, either full acrylics or acrylic blends. Of primary importance is the compliance with the properties listed in Table 1 below.

b) Other binder types may be considered depending on their compliance with the requirements established below.

5.2 Pigmentation

a) Pigmentation shall be non-toxic and anti-corrosive and comply with the requirements of the Uniform Paint Standard.

b) Of primary importance is the choice of pigmentation shall result in compliance with the technical requirements detailed in Table 1 below.

5.3 Volatiles

a) The volatile portion shall principally be comprised of water.

b) For VOC content restrictions refer Table 1 below and APAS Document D181.

5.4 Colour

a) Products approved under this specification are normally available in a wide range of colours the manufacturer’s colour range or MCR – refer the manufacturer’s data sheet for details.

6. PRODUCT APPROVAL REQUIREMENTS

6.1 General

a) The product and its application shall comply with all requirements of APAS Document D192 during the application process and the life of the approval.

6.2 Technical

a) The product shall comply with all requirements detailed in Table 1 below.

6.3 Safety & environmental

a) The product shall comply with all requirements of clause 6.3 & 6.4 of APAS Document D192.

b) The manufacturer’s Material Safety Data Sheet (MSDS) must be studied closely prior to using the product and complied with during use of the product.

APPENDIX A

COLOURANT ACCEPTANCE TEST METHOD

A1. Scope

a) This method details the test method to be utilised to demonstrate a satisfactory level of colour development through the addition of machine colourants.

A3. Equipment

➢ 500mL of each tinting base in the MCR
➢ A machine colourant tinting system
➢ A sealed cardboard test panel of approx. size 150 x 100mm for each colour

A2 Procedure

a) Selection of colour – The colour shall be selected using the same process as detailed in APAS Document AP-D192 Appendix A clause A3.

i) Where the colourant system is well established in the Australasian marketplace, one colour per tint base as detailed in Table A1.

ii) Where the colourant system is new to the region, sample preparation and colourant testing as per clause A3 a) i) of the above document shall be conducted.

b) Test panels are then prepared as follows;

i) To a sealed cardboard panel apply one coat of test paint (typically by 0.032 wire wound bar coater) and allow to dry (may be forced dry or allowed to dry overnight).

ii) Apply a further coat of test paint to the cardboard panel using the same wire wound coater.

iii) Using a finger with gentle pressure, immediately rub an area of the film about 30mm in diameter in a circular motion until a slight tackiness is detected. Allow the panel to dry overnight.

c) The difference in colour between the two sections on the panel shall not exceed a rating of 1 when assessed using test method AS/NZS 1580.481.1.12.

d) Test panels of dimensions 100 x 150 mm demonstrating the colour acceptance and including details of each colourant included in each panel, are to be supplied to APAS.
7. TABLE 1 – PERFORMANCE PROPERTIES

<table>
<thead>
<tr>
<th>TEST</th>
<th>AS/NZS 1580 METHOD</th>
<th>REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7.1 Wet Paint tests</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General requirements</td>
<td>AS3730.x clause 5</td>
<td>The product shall comply with all the requirement of the appropriate part of AS3730 as detailed in 3.3 above except as modified below. All results shall be reported. Gloss levels of 0280/4 &amp; 0280/5 shall be as nominated below.</td>
</tr>
</tbody>
</table>
| Non volatile content by volume (Volume solids) | 301.2 | 0280/1 - minimum 37%  
0280/2 - minimum 37%  
0280/3 - minimum 30%  
0280/4 & 5 - minimum 35%  
(Volume solids maybe determined theoretically from raw material data except where solid constituents incorporate sealed air voids). |
| Viscosity                | 214.3              | 0.07 - 0.20 Pa.s |
| Odour                    |                    | The paint shall not exhibit any offensive or irritating odour during application or drying and shall be substantially free from odour after air drying for 24 hours. |
| **7.2 Dry Paint film tests** |                    |              |
| Specular gloss           | 602.2              | 0280/1 - >50 Gloss Units (GU)/60°  
0280/2 - >20<50GU/60°  
0280/3 - >5<20GU/60° (low gloss finish) or <10GU/60° (matt finish)  
0280/4 - >50GU/60°  
0280/5 - >5<20GU/60° |
| Resistance to blocking   | 409.3              | 0280/1 only - no blocking. |
| VOC content              |                    | Refer to document D181 for method and limits. |
| Colour acceptance        | Appendix A         | Colour difference ≤1 |
| Resistance to natural weathering | 457.1 | Durability testing shall be performed on both timber¹ and fibrous cement panels. There shall be no integrity failure² after 48 months and the following additional ratings shall apply: |
| Degree of discolouration  | 481.1.2            | ≤2           |
| Degree of chalking        | 481.1.11           | ≤2           |
| Degree of colour change   | 481.1.12           | ≤2           |
| Degree of change in gloss | 481.1.5            | ≤3           |
| Colours at 24 months     |                    | White at 36 months |
| **Note 1:** Timber panels shall be in accordance with AS/NZS 1580.104.1. Where the manufacturer's data sheet stipulates the use of a primer, the system for 0280/1-3 shall be 1 coat APAS 0183 plus 2 coats APAS 0280. For 0280/4 & 5 and products not requiring the use of a primer on timber, system shall be 2 coats of the product. |
| **Note 2:** No integrity failure means the following ratings shall apply; | | |
| Degree of checking at 48 months | 481.1.7 | 0 |
| Degree of cracking at 48 months | 481.1.8 | 0 |
| Degree of blistering at 48 months | 481.1.9 | 0 |
| Degree of flaking & peeling at 48 months | 481.1.10 | 0 |