



RULES GOVERNING PROFICIENCY TESTING PROVIDERS

1 SCOPE

- a) This document details the requirements of becoming a Proficiency Testing (PT) provider and the rules under which PT providers shall operate, for the purpose of undertaking PT at APAS Recognised Manufacturing Units (RMU) that do/do not have AS ISO/IEC 17025 accreditation.
- b) This document is prepared in a manner compliant with the requirements of AS/NZS ISO/IEC 17065.
- c) APAS® is a registered trademark owned by CSIRO, the Scheme Owner, and protected under applicable laws. Use of the trademark or the Certification Scheme is prohibited unless prior approval in writing is obtained from CSIRO via the APAS Secretariat.

2 AUTHORITY AND RESPONSIBILITY

- a) The Executive Officer (EO) - APAS is responsible for:
 - i. the content of this document, and
 - ii. for ensuring conformance to the rules when processing an application / re-application to become / remain a recognised PT provider, and
 - iii. for ensuring conformance to the rules by all recognised PT providers

3 DEFINITIONS AND ACRONYMS

3.1 Definitions

The definition of terms used in this document and in the Certification Scheme can be found in APAS document AP-D001. In addition, the following definitions within this document shall apply:

- a) **Certification Scheme:** The Certification system related to specified products (Paint and Non-Paint Products) to which the same specified requirements, specific rules and procedures apply. APAS is the applicable Certification Scheme.
- b) **Client:** The organisation responsible to the Certification Body (APAS) for ensuring that certification requirements, including product requirements, are fulfilled. The Client nominates a person(s) directly responsible (APAS Signatory) within its organisation, and to communicate directly with the Certification Scheme (APAS).
- c) **Recognised Manufacturing Unit (RMU):** A company voluntarily choosing to participate in the Certification Scheme (APAS) whereby its manufacturing facilities have been assessed in accordance with AP-D177 for supply of products certified to APAS Specifications. The RMU forms part of the Client. Historically referred to as the Supplier.
- d) **Scheme Owner:** The organisation responsible for developing and maintaining the certification scheme. CSIRO is the APAS Scheme Owner.
- e) **Secretariat:** The organisation that provides administrative support and other resources necessary to keep the Certification Scheme functioning. The Secretariat is vested in CSIRO.

3.2 Acronyms

APAC	Asia Pacific Accreditation Cooperation
APAS	Australian Paint Approval Scheme
APLAC	Asia Pacific Laboratory Accreditation Cooperation
ATAP	APAS Technical Advisory Panel
CSIRO	Commonwealth Scientific and Industrial Research Organisation
EO	Executive Officer – APAS
IEC	International Electrotechnical Commission
ISO	International Organisation for Standardisation
PT	Proficiency Testing
RMU	Recognised Manufacturing Unit

4 REFERENCED DOCUMENTS

- a) The following standards are referenced in this document:
 - i. **AS ISO/IEC 17025** – General requirements for the competence of testing and calibration laboratories
 - ii. **ISO/IEC 17043** - Conformity Assessment - General Requirements for Proficiency Testing
 - iii. **AS/NZS ISO/IEC 17065** - Conformity assessment: Requirements for bodies certifying products, processes and services

These documents may be purchased through the Reference Standards Australia website:

<https://www.standards.org.au/>

- b) The following APAS documents are referenced in this document:
 - i. AP-D001 Rules Governing How APAS® Operates
 - ii. AP-D004 Rules Governing Appeals and Complaint Handling
 - iii. AP-D114 Rules Governing APAS® Recognition as a Testing Authority
 - iv. AP-D177 Rules Governing How Product Manufacturers Participate in APAS®
 - v. AP-F015 Initial Application for APAS® Recognition of Proficiency Testing Program

All APAS documents (except AP-F015) are available for download from the APAS website:

<https://vs.csiro.au/apas/documents/>

5 BACKGROUND

- a) APAS previously ensured technical competence among the RMU community by mandating AS ISO/IEC 17025 accreditation for all laboratories involved in product development and / or quality control testing of APAS certified products.
- b) When this requirement was relaxed, an alternative means of demonstrating technical competence had to be implemented, and a program of proficiency testing was set in place.



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- c) APAS now requires that laboratories:
- With** AS ISO/IEC 17025 accreditation: participate in one (1) PT program every two (2) years, as per the requirements of maintaining their ongoing accreditation once achieved.
 - Without** AS ISO/IEC 17025 accreditation: participate in at least two (2) PT programs per year, except as per clause 5 e) below.
- d) Every effort by the PT provider must be made to ensure Clients receive samples to suit their testing equipment and capability i.e., Protective Coatings test samples sent to Clients who manufacture Protective Coatings products etc.
- e) Where the nature of the product(s) and the tests applied by the PT provider does not suit the capacity of the RMU (not applicable to their manufactured product range) the RMU shall develop, document and maintain alternative means for demonstrating technical compliance in a manner similar to an external PT provider i.e., Proficiency Testing to be carried out not less than twice per calendar year. Test methods shall be chosen from clause 8, Appendix A, and test results and statistical analysis (where applicable) shall be kept. For further information, refer to APAS document AP-D114.
- Flooring, Specialty etc) are prepared and distributed for testing.
- e) The Applicant shall have the capability and capacity to conduct two (2) PT programs per calendar year for those Clients without AS ISO/IEC 17025 accreditation (where applicable) and one (1) PT program every two (2) years for those with AS ISO/IEC 17025 accreditation, as per clause 5 c).
- f) Each PT program shall consist of four (4) surface coating material tests chosen at random from the list in clause 8, Appendix A below. The tests chosen must be applicable to the material sample sent to the Client under test. An exception to the number of tests may occur with some surface coating materials, for example Cold Applied Plastic and Thermoplastic pavement marking materials, that have limited laboratory tests.
- g) Tests chosen shall not be part of the program more than two (2) consecutive times. An exception may occur if the surface coating material type has limited laboratory tests, refer to clause 6.1 f) above.
- h) The format and content of reports to participants shall be agreed between APAS and the Applicant prior to the granting of recognition.
- i) The report format shall have the capability of maintaining participant confidentiality. Individual participant reports shall only identify their own results and the overall industry result (average).
- j) The EO shall establish and maintain a listing of organisations and their contact details who do/do not have AS ISO/IEC 17025 accreditation and are required to demonstrate technical competence. A copy of the list shall be provided to the PT provider whenever it is changed.
- k) Program participants are located in Australia and overseas. The Applicant's processes and procedures shall be able to accommodate international participants – postage and handling.

6 RULES

6.1 Criteria for Recognition

- a) Applicants shall be at the discretion of the CSIRO Secretariat, and shall be either:
- Externally accredited against the requirements of ISO/IEC 17043 or,
 - A high-profile organisation such as a laboratory, industry association or professional/technical/education body, active wholly or partly in the coatings industry.

NOTE: Historically, Applicants who were suitably qualified for admittance to at least Associate Membership of APLAC (a cooperation of accreditation bodies in the Asia Pacific region that accredit testing, calibration and inspection services) were also acceptable. With the merger of APLAC and the Pacific Accreditation Cooperation (PAC) in January 2019 (forming Asia Pacific Accreditation Cooperation – APAC), the provision that previously allowed Associate Membership was removed, limiting membership to accreditation and certification bodies only.

- b) A body currently recognised under Clause 6.1 a) i. is Proficiency Testing Australia (pta).
- c) Bodies currently recognised under Clause 6.1 a) ii. are the Surface Coatings Association Australia (SCAA) and the New Zealand Paint Manufacturers Association (Paintman).
- d) Applicants shall have the capability to ensure consistently homogeneous samples of surface coating materials of all different types (Architectural, Decorative, Road Marking, Protective Coating,

6.2 Process for Recognition

- a) The Applicant shall make an application to APAS using APAS form AP-F015. This form is available from the EO.
- b) All supporting evidence demonstrating conformance to either of the elements of clause 6.1 a) shall be provided with the application.
- c) In addition to clause 6.2 b), the following evidence shall also be provided:
- A copy of the procedure to be used to generate uniform, homogenous samples for testing.
 - Details of target timelines from sample request, to sample delivery, to receipt of testing results, to final report generation.
 - A copy of the process to be used to analyse the incoming results. The process shall include statistical analyses of the results including the calculation of z-scores.
 - A copy of a sample final report.



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- d) The EO shall review all elements of the application, including the format of the final report, to ensure the Applicant will provide the technical rigour, scientific accuracy and meaningful results that are appropriate to APAS.
- e) The EO shall resolve with the applicant any errors or omissions that will not prevent the application from proceeding.
- f) The application may be referred to the APAS Technical Advisory Panel (ATAP) for adjudication if deemed necessary, and appropriate by the EO.
- g) Where the EO and the Applicant are unable to resolve all issues identified in clause 6.2 e) above, the EO shall advise the Applicant that the application has been unsuccessful and shall include reason(s) for arriving at this decision.
- h) Where the EO is satisfied that all the application criteria have been met, the EO shall advise the Applicant in writing that their PT program is now recognised by APAS. A Certificate of Proficiency Testing Recognition shall be issued with an expiry date two (2) years from the date of Recognition.

6.3 Process for Re-Recognition

- a) Prior to the expiry of the current Certificate of Proficiency Testing Recognition, the PT provider shall contact the EO advising whether they intend to seek re-recognition for their PT program.
- b) Where the PT provider opts to continue with their recognition, they shall provide a statement whether their program has undergone any changes to content, procedures or reporting.
- c) When a Recognised PT provider is considering any changes to the program, APAS shall be advised in writing of the nature and the impact of the proposed changes. The onus is on the service provider to notify APAS **prior to** any changes being implemented.
- d) The EO shall assess the nature and impact of the proposed changes and, provided they do not detract

from the accuracy or quality of the PT program outputs, shall accept the revised program and advise the service provider in writing.

6.4 Program Rules

- a) The PT provider shall decide on the tests for the next program in accordance with clauses 6.1 e) to 6.1 g) inclusive.
- b) The PT provider shall invite each participant on the APAS listing of organisations and their contact details who do/do not have AS ISO/IEC 17025 accreditation to participate in the next round of testing.
- c) Test samples shall be despatched to each RMU who accepts the invitation by the PT provider. A **response due** date shall be nominated.
- d) The results shall be collated, statistically analysed, and a report prepared in accordance with clause 6.1 h).
- e) A separate report identifying each participant in the program shall be prepared and submitted to APAS.
- f) The costs of the program shall be borne by the participant organisations, who will be invoiced by the PT provider.

7 COMPLAINTS

- a) APAS recognised Clients (participants in the PT testing) or Applicants (those seeking recognition as a PT provider), may lodge an appeal against a decision made and/or lodge a complaint against the APAS Certification Body, Certification Scheme, Scheme Owner or any of its processes or personnel.
- b) Appeals and complaints shall be subject to the process detailed in APAS document AP-D004.



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8 APPENDIX A

TEST SELECTION		
AS/NZS	Test Title	Alternative Test Method
1580.102.1	Paints and related materials - Methods of test - Sampling procedure	
1580.103.1 ^{1,3}	Paints and related materials - Methods of test - Examination and preparation of samples for testing	ISO 1513:1992
1580.107.3	Paints and related materials - Methods of test - Determination of wet film thickness by gauge	
1580.108.1	Paints and related materials - Methods of test - Determination of dry film thickness on metallic substrates - Non-destructive methods	
1580.202.1	Paints and related materials - Methods of test - Density	ISO 2811-1; ASTM D 1475-13
1580.202.2	Paints and related materials - Methods of test - Density of water-dispersed paints subject to foaming	
1580.202.4	Paints and related materials - Methods of test - Determination of density by pressure cup	
1580.204.1	Paints and related materials - Methods of test - Fineness of grind	ISO 1524
1580.205.1	Paints and related materials - Methods of test - Application properties - Brushing	
1580.205.2 ^{1,3}	Paints and related materials - Methods of test - Application properties - Conventional spraying	
1580.205.3	Paints and related materials - Methods of test - Application properties - Roller Coating	
1580.205.4 ^{1,3}	Paints and related materials - Methods of test - Application properties - Airless Spraying	
1580.211.1 ^{1,3}	Paints and related materials - Methods of test - Degree of settling	
1580.211.2	Paints and related materials - Methods of test - Ease of manual re-incorporation	
1580.213.2	Paints and related materials - Methods of test - Dry hiding power - Contrast ratio	ISO 6504-3
1580.214.1 ^{1,3}	Paints and related materials - Methods of test - Consistency - Stormer viscometer	ASTM D562-10
1580.214.2	Paints and related materials - Methods of test - Consistency - Flow cup	EN ISO 2431; DIN 53211
1580.214.3	Paints and related materials - Methods of test - Viscosity - Cone-and-plate	ISO 2884-1
1580.214.4	Paints and related materials - Methods of test - Consistency - Rotothinner	
1580.214.5	Paints and related materials - Methods of test - Consistency - Rotational viscometer	DIN 53019 (Part 1); ISO 2555; ASTM D2196
1580.214.6	Paints and related materials - Methods of test - Consistency - ISO Flow Cup	
1580.301.1	Paints and related materials - Methods of test - Non-volatile content by mass	
1580.301.2	Paints and related materials - Methods of test - Non-volatile content by volume (volume solids)	
1580.408.5	Paints and related materials - Methods of test - Adhesion - Pull-off test	
1580.401.1	Paints and related materials - Methods of test - Surface dry condition	
1580.401.3	Paints and related materials - Methods of test - Drying times using a BK-type recorder	ASTM D5895-20; ISO 9117-4
1580.401.5	Paints and related materials - Methods of test - Hard dry condition - Sanding test	
1580.401.6	Paints and related materials - Methods of test - Hard dry condition (mechanical thumb test)	
1580.401.8 ^{1,3}	Paints and related materials - Methods of test - No-pick-up time of road marking paints	
1580.402.1	Paints and related materials - Methods of test - Bend test	ISO 1519:2002
1580.403.1	Paints and related materials - Methods of test - Scratch resistance	
1580.403.2 ²	Paints and related materials - Methods of test - Abrasion resistance	
1580.404.1	Paints and related materials - Methods of test - Recoating properties	
1580.405.1	Paints and related materials - Methods of test - Determination of pencil hardness of paint film	ASTM D3363; ISO 15184
1580.406.1	Paints and related materials - Methods of test - Resistance to impact - Falling weight test (Gardner-type tester)	
1580.408.2	Paints and related materials - Methods of test - Adhesion - Knife test	ISO 2409
1580.408.4	Paints and related materials - Methods of test - Adhesion (crosscut)	
1580.409.1	Paints and related materials - Methods of test - Resistance to mudcracking	



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TEST SELECTION (Cont.)		
AS/NZS	Test Title	Alternative Test Method
1580.409.2	Paints and related materials - Methods of test - Low temperature coalescence	
1580.452.1	Paints and related materials - Methods of test - Resistance to humidity under condensation conditions	
1580.452.2	Paints and related materials - Methods of test - Resistance to corrosion - Salt droplet test	
1580.453.1	Paints and related materials - Methods of test - Resistance to solvent immersion	
1580.456.1	Paints and related materials - Methods of test - Resistance to boiling water	
1580.459.1	Paints and related materials - Methods of test - Resistance to washing	
1580.505.1	Paints and related materials - Methods of test - pH of water-based paints	
1580.455.1	Paints and related materials - Methods of test - Resistance to water at room temperature	
1580.601.1 ^{1,2,3,4}	Paints and related materials - Methods of test - Colour - Visual comparison	
1580.602.2 ^{1,3}	Paints and related materials - Methods of test - Measurement of specular gloss of non-metallic paint films at 20 degrees, 60 degrees and 85 degrees	ISO 2813
1580.603.1	Paints and related materials - Methods of test - Finish - General appearance	
2009 clause 5.2	Glass beads for pavement-marking materials - Foreign Matter	
2009 clause 5.3	Glass beads for pavement-marking materials - Optical quality	
2009 clause 5.4 / Appendix C	Glass beads for pavement-marking materials - Size, Determination of Size Distribution of Glass Beads	
2009 clause 5.5 / Appendix D & E	Glass beads for pavement-marking materials - Shape; Determination of Roundness of Glass Beads by Rolling Performance and Evaluation of Shape of Glass Beads by Optical Examination	
2009 clause 5.6 / Appendix F	Glass beads for pavement-marking materials - Colour; Determination of Colour of Glass Beads	
2009 clause 5.7 / Appendix G	Glass beads for pavement-marking materials - Water resistance; Determination of Water Resistance of Glass Beads	
2009 clause 5.8 / Appendix H	Glass beads for pavement-marking materials - Flow properties; Determination of the Presence of Moisture-proof Coatings	
2009 clause 5.9 / Appendix L	Glass beads for pavement-marking materials - Adhesion coating; Determination of Adhesion Coating on Glass Beads	
2009 clause 5.10 / Appendix I	Glass beads for pavement-marking materials - Refractive index; Determination of Refractive Index of Glass Beads	
2009 clause 5.11 / Appendix N	Glass beads for pavement-marking materials - Heavy metals; Heavy Metals in Glass Beads intended for use in Pavement Marking Materials	
2009 Appendix A	Glass beads for pavement-marking materials - Sampling and Preparation of Glass Beads for Testing	
2009 Appendix M	Glass beads for pavement-marking materials - Retroreflectivity verification of type D-HR beads	
AS 2341.18 ²	Methods of testing bitumen and related roadmaking products - Determination of softening point (ring and ball method)	EN 1871
4049.1 clause 7.1.2 / Appendix D	Paints and related materials - Pavement marking materials - Solvent-borne paint - For use with surface applied glass beads – Fineness of paint	



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TEST SELECTION (Cont.)		
AS/NZS	Test Title	Alternative Test Method
4049.1 clause 7.1.8/ Appendix G Method 1	Paints and related materials - Pavement marking materials - Solvent-borne paint - For use with surface applied glass beads – Luminance of paint	
4049.1 clause 7.1.9/ Appendix E	Paints and related materials - Pavement marking materials - Solvent-borne paint - For use with surface applied glass beads – Resistance to bleeding	
4049.2 clause 5.3 / Appendix F	Paints and related materials - Pavement marking materials – Thermoplastic pavement marking material – For use with surface applied glass beads – Grading of inorganic material	
4049.2 clause 6.2 / Appendix D & G	Paints and related materials - Pavement marking materials – Thermoplastic pavement marking material – For use with surface applied glass beads – Luminance factor	
4049.2 clause 6.3 / Appendix H	Paints and related materials - Pavement marking materials – Thermoplastic pavement marking material – For use with surface applied glass beads – Heat Stability	
4049.2 clause 6.6 / Appendix I	Paints and related materials - Pavement marking materials – Thermoplastic pavement marking material – For use with surface applied glass beads – Flow resistance	
4049.2 clause 6.7 / Appendix J	Paints and related materials - Pavement marking materials – Thermoplastic pavement marking material – For use with surface applied glass beads – Density	
4049.3 clause 6.1.2/ Appendix E	Paints and related materials - Pavement marking materials - Water-borne paint - For use with surface applied glass beads – Fineness of paint	
4049.3 clause 6.1.6/ Appendix F	Paints and related materials - Pavement marking materials - Water-borne paint - For use with surface applied glass beads – Early washout resistance	
4049.3 clause 6.1.9/ Appendix H	Paints and related materials - Pavement marking materials - Water-borne paint - For use with surface applied glass beads – Luminance factor	
4049.4 clause 6.2.1 / Appendix F & H	Paints and related materials - Pavement marking materials – High Performance pavement marking systems – Luminance factor	
APAS document AP- D181, clause 7	Volatile Organic Compounds (VOC) Limits – Determination of VOC content	

NOTE:

- Any modifications to this list shall first be referred to APAS for confirmation
- Tests selected from the above list for PT are dependent on the surface coating material that is the subject of test
Tests applicable to that material will be selected, at random, from the pool of tests

¹ Other AS/NZS tests also applicable to Solvent-borne pavement marking material testing

² Other AS/NZS tests also applicable to Thermoplastic pavement marking material testing

³ Other AS/NZS tests also applicable to Water-borne pavement marking material testing

⁴ Other AS/NZS tests also applicable to Cold Applied Plastic (High Performance pavement marking systems) pavement marking material testing



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9 APPENDIX B

Document History

Status: Current
Version: 7
Date Published: 11-06-2021

Table with 3 columns: Document Version No., Date Published, Summary of Changes. It lists 8 versions of the document from 2016 to 2021, detailing changes such as website updates, formatting, clause realignments, and expanded PT requirements.