



ADVISORY NOTE

AP-AN001



Floor Coatings for Building Interiors (APAS Specification AP-S0209)

This advisory note provides background information on the development history of a flooring specification and on the evaluation and verification of evidence of conformity for products applied to various flooring substrates in public buildings for the protection and/or decoration of the substrate.

Background

In 1994 the Queensland State Government was faced with an WHS issue that forced the closing of a school following reports of alleged illness among some pupils and staff. The cause was traced to the emission of chemicals from a floor coating that had been applied some weeks earlier during school vacation.

This resulted in a Queensland State Government ban on the use of seamless flooring products in its buildings until 1998 when an assessment protocol for both the evaluation of supplied products and an accreditation requirement for application contractors (SOA450/EPA450) was developed and implemented by the Queensland Department of Public Works. In September 2010, this pre-qualification arrangement was transferred to the Australian Paint Approval Scheme (APAS), a 3rd party conformity assessment and material prequalification scheme under CSIRO, for the surface coating products, and the Painting Contractors Certification Program (PCCP), for painting contractors. APAS is an Endorsed Scheme under the Joint Accreditation System of Australia and New Zealand (JAS-ANZ).

The purpose of this APAS specification is to document the requirements for specialist low surface emitting coatings for the interiors of public buildings, not only in Queensland but throughout Australasia.

Products approved under this specification are those that produce a seamless protective and/or decorative coating finish for various flooring substrates encountered in interiors of normal buildings, typically schools, hospitals and aged care facilities.

Where adequate natural ventilation for extended periods of time is not practical or feasible, a decision to only use low surface-emitting coatings may be required in order to minimise any risk of adverse health reactions in the building occupants.

APAS Specification [AP-S0209](#) enables tender and painting specification writers to call for pre-qualified complying products. Products are defined as either being solvent-based or solvent free (sub-class AP-2090/1) or water-based (sub-class AP-S0209/2). Low surface emitting products complying with APAS Technical Document [AP-T002](#) (used to determine the amount of Total Volatile Organic Compounds (TVOCs) likely to be released from a curing coating) have a suffix of L to the sub-class i.e., AP-S0209/2L.

Criteria for Certification

Recognised Manufacturing Units (RMUs), who have obtained recognition and certification in line with the requirements of APAS document [AP-D174](#) and [AP-D177](#), can seek certification of their products to APAS Specification AP-S0209. Their products must comply with AP-S0209 specification requirements and the rules of certification (APAS document [AP-D192](#)) for the life of the product certification.



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As part of the product submission process, the RMU must supply evidence of conformity in the form of test reports to the requirements of Table 1 of APAS specification AP-S0209. These requirements include:

- Wet Paint Properties – Preliminary Examination (AS/NZS 1580.103.1) , Reincorporation (AS/NZS 1580.211.2) & Application (AS/NZS 1580.205 application mode specific to end use).
- Dry Film Properties – Surface Dry (AS/NZS 1580.401.1), Hard Dry (AS 1580.401.6), Product Finish (AS 1580.603.1), Total Volatile Organic Compounds¹ (AP-T002), Critical Radiant Flux² (Appendix B of AP-S0209 & AS ISO 9239.1), Maximum Smoke Development Rate³ (Appendix B of AP-S0209 & AS ISO 9239.1), Abrasion (Appendix C of AP-S0209, AS 1580.403.2 & AS 2001.2.28), Impact Resistance (Appendix D of AP-S0209, Method B of AS 1580.406.1 and ASTM D2794) and Dry Slip Resistance (Appendix E of AP-S0209, Appendix B of AS 4586 and HB 197).

NOTE

- 1 Product is tested to in line with APAS Technical Document AP-T002.
- 2 Application of product is to be determined by the requirements of NCC 2019 Amendment 1, Volume 1, Specification C1.10 Fire Hazard Properties **or** NCC 2022, Volume 1, Specification 7, clause S7C3 & Table S7C3. APAS conformity assessment does not cover fire hazard properties.
- 3 Product are either classified as **suitable** or **not suitable** for use in buildings not fitted with a sprinkler system complying with NCC 2019 Amendment 1, Volume 1, Specification E1.5 **or** NCC 2022, Volume 1, Section E, Part E1, clauses E1D4 to E1D13 and Specification 17. To be classed as suitable and to conform to AP-S0209, the Maximum Smoke Development Rate must be ≤ 750%-minutes. Refer to NCC 2019 Amendment 1, Volume 1, Specification C1.10 Fire Hazard Properties **or** NCC 2022 Volume 1, Section C, clause C2D11 and Specification 7 for further information. APAS conformity assessment does not cover fire hazard properties.

Criteria for Testing Authorities

Evidence of conformity to the laboratory testing requirements of AP-S0209 can be sought from a CSIRO Recognised Competent Laboratory (CRCL). The criteria for recognition as a CRCL is detailed in APAS document [AP-D114](#).

APAS recognises certain laboratories as having the skills, experience, staff and general technical competence to carry out specific testing for APAS certification. Typically, for products seeking certification to AP-S0209, this type of testing is conducted by an independent testing agency such as the following:

CETEC Pty. Ltd.
2/27 Normanby Road
Notting Hill VIC 3168
T: +61 3 9544 9111
E: info@cetec.com.au

CSIRO Materials Durability & Coatings Lab
71 Normanby Road
Clayton VIC 3169
(sample deliveries to Gate 3)
T: +61 3 9545 8774
E: money.arora@csiro.au

Certified Product List

All products that have been evaluated for conformance and have been found to comply to the APAS specification are issued with a Certificate of Conformance and are listed on the [Certified APAS Products](#) section of the [APAS website](#). This list is fully searchable and is fluidly updated.

Issuing Authorities

Trudy Lennon-Bowers
Executive Office
Australian Paint Approval Scheme (APAS)
CSIRO Verification Services

Tracey Gramlick
Deputy Director
CSIRO Infrastructure Technologies