



**AS 7240.5 AND AS 7240.7 EVALUATION FOR CONFORMITY
RECOGNITION/REFERENCE TO EN 54-5 AND EN 54-7 EVALUATIONS**

1. BACKGROUND

This guide note has been prepared to provide a general background to the process involved when evaluating EN 54 compliant detectors to the requirements of AS 7240. These include EN 54-5 / AS 7240.5-2004 heat detectors and EN 54-7 / AS 7240.7-2004 smoke detectors.

With regard to detectors, the AS 7240 standards are a modified version of ISO 7240, which are in turn similar to EN 54. Compliance to EN 54 (parts 5 or 7) provides evidence of conformity to the majority of the requirements of AS 7240 (parts 5 or 7). However, before submission, customers should make themselves aware of the differences between the two series of standards, and any implications for their specific products.

This document summarises the differences between standards, and outlines requirements for evaluation.

The full scope and requirements of evaluation, necessary to provide relevant evidence of conformity for a particular product, will be determined through the application process.

2. SUMMARY OF MAJOR DIFFERENCES

The AS 7240 detector standards have differing requirements to EN 54 in a number of areas;

- Indicator visibility is to be evaluated for conformance under specific lighting conditions,
- Additional level of data to be provided to the testing authority,
- Additional reporting requirements,
- Additional product marking requirements.

3. EVALUATION TASKS REQUIRED

The following summarises the evaluation tasks;

- Confirm intellectual property rights for all submitted articles (test reports, product samples, manuals, circuit diagrams, etc).
- Confirm credentials and accreditation of the testing authority providing EN 54 reports (see detail in section 5 below).
- Validation and authentication of EN 54 reports.
- Verification that the submitted product samples and documentation match the product described in the EN 54 report.
- Clause by clause evaluation to the requirements of AS 7240 using EN 54 reports as evidence.
- Evaluation of documentation (including operator and installation manuals) to the requirements of AS 7240.
- Review marking and labelling to the requirements of AS 7240.

In addition to the desk based evaluation, a number of physical tests will be carried out;

- Indicator visibility assessment to the requirements of AS 2362.25-2004.
- Laboratory assessment of twelve samples for sensitivity to the Reproducibility requirements (clause 5.8 of AS 7240.5-2004 or clause 5.4 of AS 7240.7-2004, as relevant).

The sensitivity testing verifies that the capability of a detector aligns with that previously reported during EN 54 conformity evaluation and establishes a baseline as may be required for purposes of surveillance or re-certification.

It is a requirement under AS 1670.1 that detectors are assessed as being compatible with their associated control and indicating equipment. Guide note GN-002 details the requirements of this compatibility assessment. If requested by the customer, submitted detectors can be assessed for compatibility during the conformity evaluation. This is not a requirement of the AS 7240 detector

standards, but removes the requirement for additional compatibility testing at a later date. Following successful completion of the evaluation, a report is prepared for each product.

4. SAMPLES REQUIRED FOR EVALUATION

The following samples are required for evaluation;

- 12 samples of the detector as it will be available in Australia. These are used for sensitivity testing and indicator visibility assessment.
- At least one of the above samples is to be labelled as they will be supplied into Australia.
- Suitable control and indicating equipment to permit sensitivity and indicator visibility assessment. Note – for conventional type detectors, a General Purpose Indicating Panel (GPIP) may be suitable. Before proceeding this must be verified.

5. DOCUMENTATION REQUIRED FOR EVALUATION

The following documents are required for evaluation;

- Operators/User manual
- Installation/Commissioning manual
- Technical/Maintenance manual
- Circuit Schematics
- Printed Circuit Board layouts
- Parts list or bill of materials
- Appropriately accredited EN 54-5 and/or EN54-7 Test Report (in English language).

With specific regard to the submitted EN 54 report(s), the Building Code of Australia requires that reports are issued by a Registered Testing Authority. This is defined as an authority registered by the National Association of Testing Authorities (NATA) in Australia, or an organisation outside of Australia recognised by NATA through a Mutual Recognition Agreement. For a detailed list of organisations, please visit the NATA website (<http://www.nata.com.au>).

6. COMMON OVERSIGHTS AND ERRORS

The evaluation of EN 54 detectors based on international laboratory reports can often be delayed due to simple oversights or errors in the submission. The following lists some of the common mistakes to avoid;

- Drawing and document versions do not match those listed in the supplied EN 54 compliance report. It is important to verify that the products being submitted for Australia match the detailed description given in the associated test report. Differences in the physical product and/or documentation (including changes to the revision/issue numbers) will need to be investigated.
- Marking of the sample does not match the requirements of the Australian Standard. AS 7240 is very specific in the marking labelling requirements; please review the submitted product against the requirements before submission.
- For ionisation type detectors, AS 7240 does not define any labelling requirement to warn that the device contains radioactive material. However, there are specific Australian requirements for the marking of ionisation detectors which must be met for the import of these products into Australia (refer to <http://www.arpansa.gov.au> for details).
- Reports provided are not from appropriately accredited testing authorities. Check the accreditation on the report against the list on the NATA website.
- Laboratory reports can be incomplete, or refer to other reports as a basis of compliance. When submitting EN 54 reports, please ensure that copies of any referenced reports are also included.

7. SUMMARY

The introduction of the AS 7240 suite of standards is increasing the amount of conformity evaluation based on testing carried out by laboratories outside of Australia.

When based on external test evidence, conformity evaluation includes a combination of desk based research and physical testing. The test laboratory requires submission of product samples, along with detailed documentation, and suitable control and indicating equipment to evaluate the products.

Reports submitted as external evidence of compliance to EN 54 should be in English language, and from a suitably accredited testing authority. Additional documentation and technical information is required in order to verify the submitted product relates to the test reports.

For any questions or additional information, please contact CSIRO - Fire Systems and Acoustics or visit the CSIRO Verification Services - ActivFire web site at <http://www.ActivFire.gov.au>