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RESTRAINT OF FLAME PROPAGATION ALONG BUNCHED ELECTRICAL WIRES OR CABLES

1. SCOPE AND DEFINITIONS

1.1 Scope

1.1.1 This document sets out the general operating procedures and performance, quality assurance and training requirements for the Certifire Australia Scheme for restraint of flame propagation along bunched electrical wires or cables. This can be achieved by the use of special cable sheathing materials or coatings to modify the performance of the systems.

1.1.2 Reference should also be made to the following Certifire Schedules:

1. Certifire Australia procedures & regulations CA001
2. Certifire Australia Quality Assessment Schedule (QAS) for Manufacturers/Suppliers and Installers CA002

1.2 Definitions

Certifire Schedule - A document setting out requirements and procedures of the Certifire Australia Schemes.

Certifire Specification - A form of words for nominating the Certifire Schemes for building projects.

Certifire Scheme - A third party certification scheme for the purpose of listing suppliers and contractors which comply with the relevant Certifire Schedules.

B.C.A. - The current edition of the Building Code of Australia.

Appraisal - In the context of the Certifire Scheme an appraisal is an assessment of a system against the requirements of the appropriate Certifire Schedules

Restraint of flame propagation - The ability of a bunched cable system (with or without coatings) to prevent charring at a height exceeding 2.5m above the bottom edge of the burner when tested in accordance with AS1660.5.1-1993 or IEC Technical Report 332.3:1992.

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2. GENERAL OPERATING PROCEDURES

2.1 Introduction

2.1.1 The ability of a cable or cable/coating system to restrict combustion propagation is dependent upon many factors. Typically these include variations in the compositions, volume and distribution of materials/components manufacture/application procedures and cable configurations.

2.1.2 The effectiveness of a system can be reduced by inadequate durability, poor maintenance or the use in unsuitable applications (e.g. coatings suitable for a single wire or cable only applied to a bunch of wires or cables).

2.1.3 The objective of the Certifire Australia Scheme is to increase the likelihood that bunched electrical wires or cables when installed in the field would be capable of achieving the nominated performance levels. This is to be achieved through:

1. The independent appraisal of products in a consistent manner against clearly defined performance requirements;
2. The appraisal of the competency and capability of fire protection contractors to install fire protection systems correctly against documented standards;
3. The definition of minimum quality assurance requirements for product suppliers and fire protection contractors, and independent auditing of companies to monitor on-going compliance with these requirements;
4. The preparation of certificates defining the performance of fire protection systems or the capabilities of fire protection contractors in a consistent manner;
5. Clear unambiguous labelling requirements for systems supplied and installed in accordance with the scheme;

2.1.4 It is recognised that the size and type of project and geographic location of a site can influence the selection of an appropriate Certifire specification.

2.1.5 For most major building and other projects in Australia the standard Certifire specification should be nominated which requires Certifire listed products to be installed and maintained by Certifire listed contractors. This provides coverage by the Certifire Scheme in the supply and installation phases in a cost-effective manner and enables the installation to carry a Certifire label. An example of the Certifire label for electrical wire/cable coating systems is shown in Appendix 1.

Note: For cables which provide the necessary levels of restraint of flame propagation without the need for a coating, product only certification may be sufficient provided the installation is performed by registered electrician.

2.1.6 Other options under the Certifire scheme are:

1. Product only certification, and
2. Independent site inspection

It should be recognised that product only certification does not provide any control over site installations and therefore should only be specified when installation by a Certifire contractor is impractical. Independent site inspection, if used in conjunction with a Certifire contractor, can provide additional control but also adds significantly to costs with only a marginal increase in quality control during the installation phase since an inspector will be unlikely to be on site at all times and cannot therefore verify all details.

Independent site inspection will not be cost-effective for most applications.

- 2.1.7 The methods for appraisal systems are given in section 3, the quality assurance level requirements for the manufacturers and suppliers are given in section 4, the competency/training levels required for key personnel of a fire protection contracting organisation installing and maintaining coatings are given in section 5, and the quality assessment requirements for these fire protection contractors are given in section 6.

2.2 Compliance with Building Regulations

- 2.2.1 It is the intention that the Certifire scheme will complement relevant building regulations by ensuring systems are in place to demonstrate compliance with relevant regulations.

- 2.2.2 The Building Code of Australia 1996 (BCA 96) allows building solutions which comply with the deemed-to-satisfy provisions, are equivalent to the deemed-to-satisfy provisions, or comply with the nominated performance requirements.

The deemed-to-satisfy provisions prescribe, among other things, fire resistance levels (FRLs) and smoke resistance properties required by certain construction elements in buildings. Certifire certificates can be used to check compliance with those provisions. However, when a building solution is to be assessed for either equivalence to the deemed-to-satisfy provisions, or for compliance with the performance requirements, data from Certifire certificates will need to be considered on a case-by-case basis.

- 2.2.3 If the building regulations and Certifire scheme documents conflict, the building regulations must take priority but the manufacturer or fire protection contractor must notify Certifire in writing of any variations from the scope of their certification required by the regulations.

- 2.2.4 In some instances the regulatory authority having jurisdiction may permit the installation of systems which lie outside the scope of the current Certifire listing. Under these circumstances the contractor must:

- a) Not attach a Certifire label, or
- b) If a Certifire label is to be applied, supply written proof to Certifire from the relevant regulatory authorities that the installation is 'approved' together with an appropriate fee to Certifire. Certifire will then maintain a file on the project so that any queries in the future can be answered.

- 2.2.5 Currently the Building Regulations do not call up AS1660.5.1-1993 but the Standard is commonly applied in the power generation and distribution industry.

2.3 Labelling and Log Books

- 2.3.1 The use of Certifire labels is strictly controlled to enable the status of an installation to be clearly identified.

- 2.3.2 The packaging of component parts and materials that form part of a Certifire listed system can incorporate the Certifire logo as indicated in Appendix 2 providing the scope of the appropriate Certifire certificates is clearly defined in the instructions supplied. The components of a system cannot be labelled prior to installation.
- 2.3.3 An installation can be labelled with a Certifire label if the installation complies with a current Certifire certificate and it has been installed by a Certifire listed fire protection contractor within the scope of the contractor's certification.
- 2.3.4 The Certifire labels are available from Certifire Pty. Ltd. in numbered batches. The Fire Protection Contractor shall keep a register of the location of all Certifire labels that have been attached to installations.
- 2.3.5 A log book listing all relevant bunched electrical wires/cables installations must be supplied by the fire protection contractor to the building owner or representative. A copy must be retained by the fire protection contractor for a minimum of ten years. The log book shall include the following details for each protected member:
1. Cable location (e.g. electrical riser shaft No. 2 floors G-12)
 2. Cable reference
 3. Cable designation (e.g. 25mm² 4-core PVC/PVC Cu armoured)
 4. Minimum required coating thickness (if used)
 5. Description of coatings used
 6. Category of system.
- 2.3.6 Copies of the Certifire Schedules and certificates relevant to the installation shall be attached to the log book. Members of the Certifire Scheme are granted permission to copy Certifire schedules specifically for this purpose.

3. CERTIFIRE REQUIREMENTS FOR INTUMESCENT COATINGS FOR BUNCHED ELECTRICAL WIRES OR CABLES

3.1 Building Regulations and Standards

- 3.1.1 The current Building Code of Australia, including Amendment No. 7, does not have specific requirements on combustion propagation properties of electrical wires or cables. The reference to AS1530.3-1989 in the current BCA applies to the simultaneous determination of ignitability, flame propagation, heat release and smoke release on building materials only.
- 3.1.2 The Standards which are applicable to determine the combustion propagation properties of bunched electrical wires or cables are AS1660.5.1-1993 "Test methods for electrical cables, cords and conductors Method 5.1: Fire tests - Tests on bunched cables" and IEC 332: Part 3: 1992 "Tests on electrical cables under fire conditions: Tests on bunched wires or cables".
- 3.1.3 Appraisals shall be performed by registered testing authorities using the methods defined in the standards in 3.1.2 above.

3.2 Fire Testing

- 3.2.1 Appraisals will be based on information derived from tests carried out in accordance AS1660.5.1-1993 or IEC 332: Part 3: 1992.
- 3.2.2 The appraisals will be based on test data from a testing authority
1. Registered by the National Association of Testing Authorities (NATA) to test in the relevant field, or

2. Registered by an organisation outside Australia recognised by NATA through a mutual recognition agreement.

3.2.3 It is not necessarily the intention that all tests are required to be repeated as new editions of AS1660.5.1 or IEC 332: Part 3 are released. In many cases it may be acceptable for evidence from tests used to extend the range of application to evaluate formulation changes, or other reasons, to also provide confirmatory data. It is important that Certifire is notified during the planning stages of such a test to ensure the test data will be acceptable.

Where significant changes to a test methodology occur which necessitate further testing of existing Certifire systems a 'grace period' of 12 months will be permitted which will only be extended if further delays are justifiable. The 'grace period' does not apply to systems which have been demonstrated not to comply with the current Certifire specifications.

3.3 Variations from the tested prototypes

3.3.1 The appraisal will define the field of application for the system based on one or more fire tests.

3.3.2 The procedures given in the standards/publication listed in clause 3.1.2 shall be used to evaluate the effects of the following parameters:

1. Designs of cables
2. Thickness of coatings
3. Spacing between cables
4. Number of cable layers
5. Ventilation available in the field

3.3.3 An opinion/assessment from a registered testing authority is required for variations to parameters other than those listed above.

3.4 Appraisals

3.4.1 Three alternative methods are available for the preparation of an appraisal for each system. These are given below.

3.4.2 The simplest appraisal will be that based on a prototype test. The test data, and a specification of the test assembly, manufacturers installation instructions, and physical test data if appropriate is submitted to Certifire for appraisal and preparation of a certificate.

3.4.3 A manufacturer may submit a range of tests and opinions/assessments for variations from the tested prototype from registered testing authorities meeting the requirements of this schedule. The assessments/opinions must comply with the requirements of the documents listed in clause 3.1.2.

In addition, specifications of the prototypes and variations together with manufacturer's installation instructions must be submitted with supplementary test data if appropriate.

Certifire will then prepare an appraisal and certificate for each system.

3.4.4 A manufacturer may obtain an appraisal against the relevant Certifire standards by a registered testing authority as defined in clause 3.2 of this schedule. The appraisal, together with all supporting data, must be submitted for review by Certifire and a certificate for each system will be issued if the appraisal complies with the appropriate Certifire Schedules.

3.5 Installation

- 3.5.1 Coatings shall be applied in accordance with the same manner as that employed in conducting the fire tests on which the Certifire certificate is based.
- 3.5.2 Cables shall be supported and bundled in accordance with the method of test.

3.6 Serviceability

- 3.6.1 The certificate shall include data on the durability/serviceability of a system. As a minimum this shall include resistance to water/weather.

The certificate shall describe the test methods used and report results obtained.

If no data is available the certificate shall state, for example, "No data is available under the category of resistance to water/weather".
- 3.6.2 A statement will be included on each certificate that the system should be selected to suit the particular

4. CERTIFIRE QUALITY ASSURANCE REQUIREMENTS FOR BUNCHED ELECTRICAL WIRES OR CABLES

4.1 General Requirements

- 4.1.1 In addition to the requirements of this schedule, the Manufacturer must operate a quality system which complies with either:
 - a) AS3902 (ISO9002), or
 - b) Certifire - Quality Assessment Schedule CA002

Note: It will eventually become a requirement for all manufacturers to comply with AS3902 and the Certifire Quality Assessment schedule will be phased out. The time of the phase out will be determined by the relevant sub-committee and Certifire Advisory Panel.

- 4.1.2 The quality system will be initially audited by Certifire. Annual audits are to be carried out by Certifire or by a JASANZ accredited independent organisation that will exchange information with Certifire where an AS3902 quality system is in operation.
- 4.1.3 Additional audits required to investigate complaints against a manufacturer are to be carried out by Certifire.

4.2 Specific Requirements

General

- 4.2.1 A quality system for a manufacturer or supplier of cables or coatings must specifically address the requirements given in the remainder of this section.

Specifications and instructions for manufacture

- 4.2.2 The quality system shall include documented specifications and manufacturing instructions.
- 4.2.3 These specifications must be clearly referenced to:
 - a) The tested prototype, and
 - b) Where relevant any permissible variations supported by assessments from registered testing authorities, and
 - c) The Certifire certificate

- 4.2.4 The specification must accurately describe:
- a) All materials used in the manufacture
 - b) Ordering details
 - c) Methods of storage
 - d) Tests and inspections and procedures in case of non-compliance
- 4.2.5 It is preferred that all materials are supplied and manufactured by companies under third party quality assurance schemes. However it is realised that in many instances this may be impractical. Under these circumstances greater emphasis shall be placed on sampling and testing materials.

Third Party Suppliers

- 4.2.6 Many systems are manufactured from raw materials whose properties may vary considerably and significantly affect the performance of the cable system. It is therefore important that the Quality system monitors the sources and critical parameters of all materials to ensure that raw materials when compounded or synthesised will meet fully the requirements of the performance specification of each product.
- 4.2.7 The manufacturing instructions shall describe all processes in detail together with inspection procedures. Manufacturing tolerances must be specified together with corrective actions if appropriate and rejection criteria.

Record system

- 4.2.8 The quality system shall be such that each batch is identified by a unique number. A record should be kept of the batch number of materials supplied to third parties.
- 4.2.9 All materials used in the manufacture of a batch and inspections and tests during manufacture shall be identified on a file relating to the batch. Where materials are manufactured by a third party to a specification, a certificate of conformance must be obtained and a sample of each batch should be checked and tested following documented procedures.
- 4.2.10 The file on each batch must be retained for a minimum of ten years and be readily identified from the batch numbers marked on the components.

Packaging and instruction

- 4.2.11 The product packaging must be clearly marked with the product designation, batch number and storage conditions. The Certifire mark may be included in accordance with section 2.3 of this document. Details of the packaging must be submitted to Certifire for approval.
- 4.2.12 Fully documented instructions for the correct installation and use of a product shall be included with each sale. These instructions must be submitted to Certifire and will be referenced in the Certifire certificate.
- 4.2.13 Certifire must be notified prior to any modifications of the packaging or installation instructions and details must be submitted to Certifire for verification prior to publication and that any modifications required by Certifire are incorporated.

Technical services

- 4.2.14 There shall be documented procedures for consulting with and providing advice to customers on the performance and appropriate use of products.

- 4.2.15 The documented procedures shall clearly define the minimum training/competency level requirements for technical advisers and identify the staff members having satisfied these requirements.

Note: A technical adviser should be able to satisfy the competency levels nominated in Section 5 for an installation inspector.

5. COMPETENCY/TRAINING REQUIREMENTS FOR FIRE PROTECTION CONTRACTING ORGANISATION

5.1 General Requirements

- 5.1.1. This section defines the minimum training required by personnel involved in the installation and maintenance for bunched electrical wires or cables with respect to the restraint of flame propagation along bunched electrical wires or cables.
- 5.1.2 Competency based training methods are adopted with provision to recognise prior learning.
- 5.1.3 Methods for the assessment of the competencies are given together with training requirements where appropriate. It should be noted that a level of competency can be attained by:
- a) prior knowledge
 - b) on-the-job training/in-house training
 - c) formal training seminars
 - d) a combination of any of the above

5.2 Key Personnel

- 5.2.1 The key personnel involved in the installation of cable and/or coating systems are defined below:

The Project Reviewer/Estimator

- 5.2.2 The project reviewer/estimator may perform the following tasks:
1. review the initial specifications/drawings and where appropriate visit the site and identify required systems
 2. select appropriate coating(s) or systems from test reports/Certifire certificates identifying critical details, required thicknesses and any potential non-compliances
 3. check the proposed systems against the requirements of the project, and the appropriate Certifire certificate taking appropriate actions if non-compliances are identified
 4. order materials and prepare work instructions

Installer

- 5.2.3 The installer may perform the following tasks:
1. check materials are undamaged, perform any required tests and comply with the requirements of work instructions
 2. install a system or carry out maintenance work recording batch numbers, carrying out tests/checks as appropriate and identify any variations from the work instructions

The Inspector

- 5.2.4 The inspector may perform the following tasks:

1. Supervise installation
2. Check the final installation/carry out maintenance inspections
3. Attach the Certifire label
4. Complete the log book

5.3 Competency Requirements and Assessment Criteria

5.3.1 The key personnel described in section 5.2 shall demonstrate to the satisfaction of Certifire their competency to perform the critical tasks listed below.

5.3.2 The methods of assessment to be adopted by Certifire are summarised below.

5.3.3 The project reviewer/estimator

5.3.3.1 Outcome 1: Identify relevant requirements of the project, select the appropriate system from test reports, assessments and Certifire certificates, describe design requirements and check the system is suitable for its application.

Assessment criterion:

- a) For a given application specify the category required by the project
- b) Identify relevant Certifire certificates and/or test data for suitable systems
- c) Calculate required coating thicknesses and significant design requirements as appropriate

5.3.3.2 Outcome 2: Compare a specification with the requirements of Certifire certificates and identify non-compliances.

Assessment criterion:

- a) For a specification and nominated Certifire certificate list any variations and non-compliances with the requirements of the project and Certifire certificate.

5.3.3.3 Outcome 3: Propose a suitable course of action for a specification which does not comply with the requirements of a Certifire certificate.

Assessment criterion:

- a) For a non-compliant system identify alternative courses of action.

5.3.3.4 Outcome 4: Produce work instructions for the installer and/or orders for materials.

Assessment criterion:

- a) For a given application prepare work instructions and/or orders. (Note: Proforma forms can be used)
- b) Prepare labelled sketches of typical installations if necessary, and/or specify material thicknesses.

5.3.3.5 Outcome 5: Interpret engineering drawings and specifications.

Assessment criterion:

- a) From typical engineering drawings and specifications interpret the information available and identify a suitable system which complies with the requirements of the project and the Certifire scheme.

5.3.4 **Inspector**

5.3.4.1 Outcome 1: Identify relevant requirements of the project and Certifire certificates for an installation.

Assessment criterion:

- a) For a given installation list the relevant requirements of the project and Certifire certificate applicable to the installation

5.3.4.2 Outcome 2: Inspect installations for compliance with the Certifire certificate, and evidence of deterioration.

Assessment criterion:

- a) For a typical installation carry out an inspection and provide a written statement identifying any non-compliances, etc.

5.3.4.3 Outcome 3: Propose a suitable course of action for an installation which does not comply with the Certifire certificate and/or the project.

Assessment criterion:

- a) For a non-compliant system identify suitable rectification works and describe how to implement the courses of action

5.3.4.4 Outcome 4: Complete log book details.

Assessment criterion:

- a) For a typical project prepare a log book incorporating as a minimum the information listed in clause 2.3 of this Schedule. The log book must also have provision for recording maintenance inspections. Pro- forma sheets may be used.

5.3.5 **Installer**

5.3.5.1 Outcome 1: Interpret installation instructions.

5.3.5.2 Outcome 2: Perform an installation in accordance with instructions. Assessment criteria for Outcomes 1 and 2:

Based on written instructions, install a fire protection system following the instructions and the requirements of the project and the relevant Certifire certificate.

Note: Some installers may install only a limited range of systems. Under these circumstances, compliance with the competency standards need only be demonstrated for the relevant systems.

5.3.5.3 Outcome 3: Measure the applied thickness of a coating.

5.3.5.4 Outcome 4: Identify variations from installation instructions, the requirements of the project and the Certifire certificates, taking appropriate action. Assessment criterion:

- a) For a given installation identify any variations from installation instructions and/or the requirements of the project and Certifire certificates and describe suitable actions.

5.4 **Assessment of Training and Competency**

5.4.1 Evidence of the training and competency of key personnel shall be provided prior to the initial audit. This can take the form of examples of work, or results from assessments from training programmes. The roles of all members of staff must be defined in a Quality Manual for the organisation together with training requirements.

- 5.4.2 The information will be reviewed by Certifire. The initial audit will assess the competency of key staff members, using the criteria given in section 3 of this schedule.
- 5.4.3 The audit will also assess the suitability of current training methods for the applicant company.

6. CERTIFIRE QUALITY ASSURANCE REQUIREMENTS FOR FIRE PROTECTION CONTRACTORS

6.1 General Requirements

- 6.1.1 The contractor must operate a quality system which complies with:

- a) AS3902 (ISO9002), or
- b) Certifire Quality Assessment Schedule CA002

Note: It may become a requirement for all installers to comply with AS3902. The timing and decision to phase out the Certifire schedule CA002 will be determined by the relevant Certifire technical sub-committee and Certifire Advisory Panel.

- 6.1.2 The quality system will be initially audited by Certifire. Annual audits are to be carried out by Certifire or by a JASANZ accredited independent organisation that will exchange information with Certifire where an AS3902 quality system is in operation.
- 6.1.3 Additional audits required to investigate complaints against a manufacturer are to be carried out by Certifire.

6.2 Specific Requirements for Installation

- 6.2.1 A quality system for an installation contractor must specifically address the requirements given in the remainder of this section.

Review of tender specifications, enquiries and orders

- 6.2.2 All tender documents and orders shall be reviewed by suitably trained and competent personnel for:
- a) Compliance with Certifire certificates relevant to the installation
 - b) Compliance with the requirements of the project and the BCA
 - c) The ability of the installer to perform the work on time
 - d) The suitability of a system for its particular application
- 6.2.3 The review should include but not necessarily be limited to checks on:
- Cable types and configurations
 - Coating thickness required
 - Access
 - Delivery date/availability of materials
 - The serviceability of the system
- 6.2.4 Written procedures for actions required if a non-compliance is identified shall be provided.

Specifications and Instructions

- 6.2.5 The quality system shall include documented specifications for ordering materials/components, checks for compliance with the specifications, recording batch numbers, storage of materials, etc.
- 6.2.6 The quality system shall require that no claims in relation to Certifire or Certifire membership are made for the installation of systems which do not comply with the requirements of a current Certifire certificate. Documented procedures shall be included defining the use of the Certifire logo and claims of Certifire membership.
- 6.2.7 It is preferred that all materials are supplied and manufactured by companies under third party quality assurance schemes. However it is realised that in many instances this may be impractical.

Under these circumstances greater emphasis shall be placed on inspection.

- 6.2.8 Documented procedures shall be provided for the inspection of materials when delivered to site.
- 6.2.9 Documented procedures shall be provided for the installation and final inspection of the system and labelling.
- 6.2.10 Documented procedures shall define appropriate actions if non-compliances are identified.

Record System

- 6.2.11 The quality system shall be such that each project is identified by a unique number from receipt of an order through to installation and inspection and subsequent maintenance.
- 6.2.12 All material batches used in the installation phase shall be identified on a file relating to the project.
- 6.2.13 Details of all systems installed and subsequent maintenance shall be recorded in a log book and on the project file together with the number/ID of the Certifire labels fixed to each installation.
- 6.2.14 The file must be retained for a minimum of ten years and be readily identified from the project reference.

Maintenance Requirements

- 6.2.15 All fire protection systems require ongoing maintenance and inspection to maintain their performance at a level close to that of the original installation. The integrity of a coating system can be impaired by damages on the surface of the coatings by scratches or impacts of hard objects. The log book shall identify the frequency and scope of inspections required and specify procedures for the notification of building works and immediate reinstatement of coating systems.
- 6.2.16 The requirements for inspection/maintenance will vary with the building use, type of system, project requirements and may be state regulations. Notwithstanding the above it is recommended that for all systems annual inspections shall be required as a minimum and records be kept of these inspections and any works undertaken.

APPENDIX 1

LABELLING AND USE OF THE CERTIFIRE LOGO

A2.1 General

In order for an installation to be labelled with a Certifire label, the system must comply with a Certifire certificate which is current at the time of installation and be installed by a Certifire listed contractor within the scope of the contractor's Certifire certificate.

A2.2 Labelling format

Certifire labels shall be obtained from Certifire Pty. Ltd.

Example of a Certifire label for Structural Fire Protection Systems

	<p>Label Batch No. 001</p> <p>This label has been attached by the Installation contractor to certify that cable systems in this area have been installed by a Certifire listed contractor in accordance with a current Certifire product certificate at the time of installation.</p> <p>See the Log Book for further details.</p>
<p>Contact the building contractor immediately if this system is damaged</p>	

The label size will be 100mm x 50mm.

A2.3 Location

Where practicable the label shall be either:

- mounted adjacent to each cable riser on each level, **OR**
- for horizontal cable runs at 20m centres with a minimum of one label in each enclosure.

A2.4 Labelling methods

Certifire labels may be mechanically fixed or bonded in such a manner that accidental removal would be unlikely to occur.

A2.5 Packaging and Promotional literature

When a Certifire certificate has been issued to a company (manufacturer/supplier and installer) the company is entitled to use the Certifire mark shown below on packaging and/or promotional literature provided:

- The company may only use the mark or claim or imply certification in respect of products or services complying with the relevant performance, training and quality assessment schedules within the scope and limitations given in the certificate(s),
- Copies of all material containing reference to certification and Certifire are submitted to Certifire for verification prior to publication and that any modifications required by Certifire are incorporated.