

Domestic Downlight Compliance Guide

Updated August 2012

Preamble

New Zealand Energy Safety (ES) escalated domestic lighting product up into the Supplier Declaration of Conformance regime in December 2006. The purpose of the ES in gazetting changes to compliance regime was to stem the tide of excessively non-compliant product coming into New Zealand from the East and elsewhere, not to intervene in the mainstream lighting industry.

The ES as the Regulator does not have resources to police all products and unfortunately it can't be too highly selective about who is to be targeted. The ES determined the best method of differentiating between target products and non-target products was to identify domestic products available through the Retail and DIY market. It was from this market area that the major non compliance problems are seen.

As there was no explanatory material accompanying the announcement to introduce an SDoC regime in November 2006, the situation was confused, leading to uncertainty and alarm. The Electrical Safety Regulations were revised after a long consultative period during 2008/2009 in order to fit more readily within an internationally recognised trading framework. The result has been that some of the problems raised by the SDoC Regime introduced in 2006 have been clarified. However some points of discussion still exist and it is hoped that these can be ironed out in subsequent revisions to the current Regulations in the near future.

Present Situation

The legal requirements are founded in a number of Regulations found in the NZ Electricity Act 1992 and subsequent Amendments. The Electrical Safety Regulations (Introduced April 1st 2010) relate specifically to the lighting industry as follows:

Reg. 13 requires by law that a product and associated works to be electrically safe and provides a definition of safety.

Reg. 80 sets out the obligations on a supplier and refers to AS/NZS3820 as a means of compliance.

Reg. 81 identifies the acceptable forms in which evidence of compliance with Reg. 80 can be supported.

Reg. 83 mandates the provision of SDoCs for a limited range of articles, and defines the information required to complete a satisfactory SDoC. Ref sub-clause 3 which reads

A supplier declaration of conformity must —

contain a description of the declared medium risk article; and

(b) contain a statement that the article complies with —

(i) the appropriate standard listed in Schedule 4; or

(ii) AS/NZS3820; or

(iii) the Conformity Cooperation Agreement; and

(c) If paragraph (b)(i) or (ii) applies, include a statement of how to obtain a copy of the test report or other document that shows how the article complies with the relevant standard (and that report or other document must be available as described); and

(d) be in the form that is prescribed by the Secretary or, if no form is prescribed, comply with ISO/IEC17050-1.

Reg. 84 defines “Declared Articles”. These are products for which 3rd Party registered laboratory test reports are required BEFORE the product can be offered for sale. [LCNZ & LCA members should note that Chain Lighting Sets, Portable Light Fittings (e.g. mains voltage hand lamps and table lamps and those that are “child appealing”) fall into this category].

The NZ Gazette Notice published by the ES in December 2006 and effective from 1 February 2007 is applicable to products intended for the “domestic or similar” market only and escalates them from voluntary compliance into the higher SDoC requirements covered by Reg. 83.

The Notice very clearly limits the SDoC Regime requirements to High Risk “Declared” Articles and Medium Risk Articles aimed at the domestic market. At present all other products fall into the so-called “low risk” category although no such list actually exists. Low risk products are defined as those that are excluded from the High and Medium Risk Lists. These include all products PRIMARILY intended for the Commercial, Industrial and Exterior use. (See Notes 1 & 2 Page 6)

It is the absence of an SDoC that is the offence under Reg. 83(4), not what is, or is not, covered in the SDoC reference to “any document”

The imposition of SDoC requirements is a Technical Trade Barrier, but allowable under WTO Guidelines.

It is recommended that the New Zealand supplier maintain SDoCs on their website. Current legal definitions of “making documents available” includes posting them in a downloadable form to a website and providing the means to access those documents (e.g. providing a password if required). As there is confusion in the contracting industry at present over what constitutes a compliant SDoC, website access, although not mandatory, will be the easiest method of allaying the installers concerns.

Also note that Reg. 83.3(c) indicates that a Test Report or OTHER DOCUMENT is sufficient evidence of compliance (assuming it is from an accredited source). The requirement imposed by the installer to provide multipage Test Reports (which sometimes contain commercially sensitive information) should be resisted. It is almost certain that the single page Certificate associated with the Test Report will be regarded as a suitable “OTHER DOCUMENT” and be sufficient for the purposes of attachment to the SDoC. This has yet to be clarified, but we are given to understand this is the case.

Market Requirements for SDoCs

Product Origin	Market	Requirement
NZ	NZ	SDoC
NZ	Aust.	No SDoC Some Australian States have started to introduce an SDoC Regime. It is expected that this will become the norm in most States within 24 months.
OZ	NZ	SDoC
China and elsewhere	NZ	SDoC
China and elsewhere	Aust.	No SDoC Some Australian States have started to introduce an SDoC Regime. It is expected that this will become the norm in most States within 24 months.

The SDoC is the start of a paper trail and its absence could allow transgressors to escape due process.

An SDoC is a statement by a supplier that:-

- Records the name of the supplier
- What the product is by name, range or catalogue number
- What information the supplier has to support their declaration that the product meets the Standard.

These categories have been described as “the Who”, “the What” and “the How”.

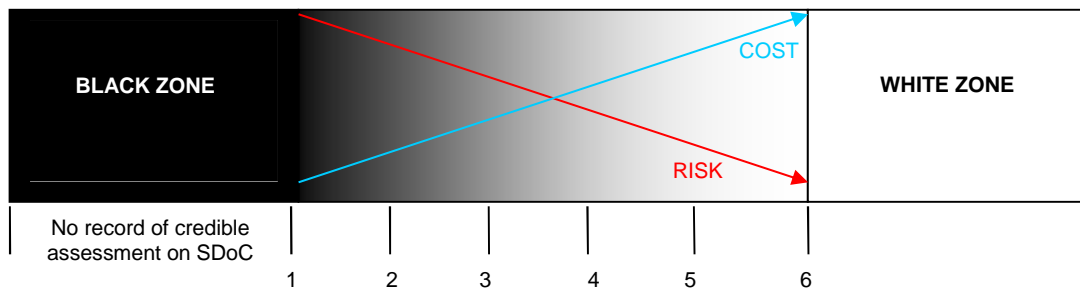
The more detailed the information recorded under Items 2 & 3, the easier any confusion will be resolved under audit conditions. Although not recommended, an SDoC with minimal details covering product type and compliance evaluation methods (the “What” and the “How”) is still a compliant SDoC.

A sample SDoC is attached showing the basic details that are required.

AS/NZS60598 is not a MANDATORY Standard. It is an alternative (and far more comprehensive) Standard to AS/NZS3820. Compliance with AS/NZS60598 would be a “deemed to comply” position for AS/NZS3820 – Basic Electrical Safety.

AS/NZS60598 is the appropriate Standard to which members should be working in order to achieve a satisfactory compliance level. The degree of value/cost the manufacturer puts into the assessment of the product will be balanced by the degree of risk of non-compliance the supplier is prepared to accept.

For instance a supplier may select to only assess product against AS/NZS 60598.1 Section 13 “flammability” based on limited tests. If this is stated on the SDoC, it provides a valid response to “the how” compliance was achieved. You as a responsible person may not think this is adequate and will be free to have more stringent evaluation or tests recorded.



ALTERNATIVELY

We have chosen to list six levels of documentary evidence:-

- 1) Take your product to a consultant who professes to know something about safety of equipment. Qualifications and experience of consultant will be of interest to auditors.
- 2) Take your product to a facilitator who is accredited in equipment safety (Such a scheme is not yet available but under consideration).
- 3) Obtain an overseas Test Report to IEC or EN 60598
- 4) Obtain an overseas Test Report to IEC or EN 60598 from an IEECB test house with a CB certificate from the country's National Certification Body
- 5) Follow up on 3 or 4 by having AS/NZS differences checked at a local Test House. Sometimes referred to as ISO system 1a.
- 6) Obtain a Certificate from your local Test House based on them checking 3 to 5 or conducting full testing themselves. Sometimes referred to as ISO system 1b.

These definitions are not intended to limit the assessment processes, but are given in order that the supplier can assess its own resources and gauge cost versus risk management exposure against the processes used prior to completing the SDoC.

Using a low evidence level on an SDoC is not an offence, however the risk of being asked to produce positive proof of compliance increases as the operational level moves down the scale.

Products whose SDoC shows no record of credible compliance assessment will fall into the unknown "BLACK ZONE". These products have the highest risk of being found non-compliant if challenged.

If the ES believes the product is unsafe they will prosecute suppliers in the Black Zone under Reg. 13.

In New Zealand, test certificates or test report details shown on the SDoC to the 3rd Party "WHITE ZONE" compliance level would equate with AS/NZS3820 compliance and will likely absolve the supplier of any liability. If formal 3rd party certification to AS/NZS3280 is provided the Regulator is responsible.

NOTE: This is not the case in Australia. The same 3rd party test certificates will not necessarily protect the supplier from prosecution even if the test report shows full compliance to the standard.

It is unlikely that the Regulator would expect IEC Level 5 Compliance type documentation from reputable suppliers, but a mutually acceptable industry Code of Practice would be a useful tool to establish guidelines for the future.

The CoP could address (but not be limited to):-

- Plain language version of the requirements of the Regulator (with examples if necessary).
- Supplier's obligations (with examples if necessary).
- Product labelling/marketing for demonstrating a declaration of compliance.
- The installer's need for installation compliance.

It is the installer's responsibility to ensure all material used carries acceptable compliance documentation. The installer is therefore expected to request copies of SDoCs from suppliers. If, in the installer's judgement, the product does not meet requirements, he is entitled to challenge the information contained in the SDoC. If he installs it and causes damage, he will be held legally responsible for installing unsafe product.

The actual level of satisfactory demonstration of compliance can only be determined in the courts. There is little legal precedence in this area but a court will consider the intent of the legislation which was introduced to address non-compliance problems.

It is therefore the supplier's individual responsibility to make judgement on the potential risk based on the methodology used for assessment and recorded on the SDoC.

Background Information

In New Zealand the incidence of electrical safety breaches i.e. electrocutions, is reducing, but the incidence of thermal problems i.e. fires, is increasing. Only a very small proportion of these are related to lighting equipment but using AS/NZS60598 addresses both aspects of the problem as far as light fittings are concerned, as this standard targets thermal requirements over and above IEC 60598. See AS/NZS60598 Section 13. It should be noted that the differences between AS/NZS60598 and its parent, IEC60598, are within WTO guidelines for variations, and do not constitute a TTB.

It is very likely that when the number of non-compliant reporting incidents drops, and our supplier countries/companies learn we are not a soft touch on safety and quality, the compliance levels may be relaxed. This process could take 5 years, but it is the policy of the ESS to get as many products on the lowest level of scrutiny as possible and have self-certification as an accepted and un-abused procedure as soon as possible. The message being that if the privilege of self-certification is abused, the industry will be constantly under surveillance.

The background and the philosophy behind the NZ Government's internal directives to its departments is worth understanding. China and ASEAN are at the very top of the trading priorities, NZ is the first western country to have an FTA with China. An Australia/China FTA will follow soon after. NZ is also working at a technical trading/compliance level with ASEAN Countries who are also working with China, so an ASEAN/China/NZ trading partnership is also very likely. India and Japan are also likely to join the same trading group in the medium term, creating an even larger market using the same technical standards throughout. This must include nationally consistent requirements and in the medium/long term both Australia and NZ are aiming for total International Harmonisation within WTO guidelines.

Amendments & Notes

1. Although not yet included, a wider range of Lighting Equipment including Commercial and Industrial luminaires will almost certainly be added to the Medium Risk Category in the near future. (Note Added June 2011)
2. It is also likely that the Regulator will take more interest in the functional safety of Lighting Equipment intended to be installed as part of the safety systems in the workplace and public spaces where lighting equipment would normally be installed. For example this could result in the closer scrutiny of products indicated to be in compliance with Emergency Lighting or Roadway Lighting Standards where injury or death could result from the failure of lighting equipment to achieve the designed level of safety. (Note Added June 2011)
3. The NZ Wiring Rules (AS/NZS3000) were amended September 2011 (Amendment A). Significant changes were made to the requirements for domestic downlights. (Note Added August 2012)

Appendices

A: Sample SDoC

Reference Documents

MINISTRY OF ECONOMIC DEVELOPMENT

Energy Safety Department

A GUIDE TO SUPPLYING SAFE ELECTRICAL AND GAS PRODUCTS

For manufacturers, importers, suppliers, retailers and all traders of electrical and gas appliances and fittings.

<http://www.med.govt.nz/energysafety/documents/about/publications/publications-for-industry/compliance-guides/guide-to-safe-electrical-gas-products.pdf/view>