



Guidance Notes for Safety Critical Components / Materials

These guidance notes are intended to explain what information is required to show that a safety critical component holds suitable approval.

Documentary evidence is required for each safety critical part, component or material.

For IEC & EN Investigations

Shall be in the form of a current test certificate / test report to a relevant IEC / EN standard.

Document(s) shall be in English, shall be legible and shall be from a suitably accredited test laboratory (e.g. TÜV SÜD, VDE).

Test certificates must be current (some have expiry dates) and must detail all relevant information i.e. some certificates are made up of multiple pages, all should be supplied.

Test standards must be current. You can check the validity of EN standards on the Official Journal (OJ) of the European Union: <http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/low-voltage/>

If the test certificate does not give all the required details, then a copy of the test report may be required. This is generally the case with power supply units where more detailed information is required i.e. maximum rated ambient, classification of outputs, method of mains isolation.

Self-declaration (e.g. component marking, manufacturer's datasheets) may also be accepted. However, the responsibility that the component is suitably approved remains with you (this would be stated in any test report issued).

Where "third party certification" of your product is sought self-declaration cannot be accepted.

Many of the leading certification bodies have on line certification databases, see "Product Safety Certification Databases" section below. This is the easiest way to check the approval status of particular components.

Class X and Class Y capacitors (discrete or within filters) must comply with IEC 60384-14 3rd Ed.

For mains switches / circuit breakers the approval documentation must clearly state the voltage and current ratings.

Where transformers, motors or inductors are to be assessed then we require details of the thermal classification of the winding wire as follows:

Class and maximum allowed temperature (°C) under normal operating conditions.

Class 105 material (A)	100°C
Class 120 material (E)	115°C
Class 130 material (B)	120°C
Class 155 material (F)	140°C
Class 180 material (H)	165°C
Class 200 material	180°C
Class 220 material	200°C
Class 250 material	225°C

If no formal evidence is provided we will assume Class 105.



For NRTL / SCC Projects for North America

All safety critical components must have current UL or NRTL recognition / listing.

Many of the leading certification bodies have on line certification databases, see “Product Safety Certification Databases” section below. This is the easiest way to check the approval status of particular components.

Flammability of Materials

Refers to plastic or non-metallic materials used in the construction of the equipment.

Compliance may be based on self-declaration (see below) and / or suitable documentary evidence of compliance with the UL 94 standard (or equivalent) for flammability.

For self-declaration (e.g. component marking, manufacturer’s datasheets) the responsibility that the material is suitably approved remains with you (this would be stated in any test report issued).

Where “Third Party Certification” of your product is sought self-declaration cannot be accepted.

For the suitability of the materials used to be assessed the following information is required:

- i) Name of the company that holds the UL approval (usually manufacturer)
- ii) Name and part number of the material (e.g. Lexan, LX437)
- iii) The UL File Number (e.g. E143678)
- iv) The flammability rating (e.g. V-1, V-2, HB, HF2).

The easiest method of obtaining the information is to obtain a copy of the UL Listing (Yellow) Card. This can be obtained from the approval holder, the manufacturer of the material, or from UL’s website <http://www.ul.com/database/>.

Product Safety Certification Databases

Click on the links below for each Certification Body to access the certification database:

[TÜV SÜD](#)

[VDE](#)

[CSA](#)

[UL](#)

[Intertek \(S and ENEC Mark\)](#)

[Intertek \(Listed Products\)](#)

[Intertek \(ASTA & BEAB\)](#)

[TÜV Rheinland](#)

[ÖVE](#)

[ENEC](#)