

**COLLECTION OF THE CTL DECISIONS  
DECISION SHEET**

<b>Standard(s):</b> IEC 60065:1998, 6 <sup>th</sup> ed.	<b>Sub clause(s):</b> 8.8	<b>Sheet No:</b> 393
<b>Subject:</b> Test of non-separable thin sheet material	<b>Key words:</b> - Thin sheet material	Decision taken at the 39 <sup>th</sup> meeting 2002
<p><b>Question:</b></p> <p>Current technology is utilising non-separable thin sheet insulation within transformers for supplementary and /or reinforced insulation. How should such non-separable insulation be assessed for suitability in these applications?</p> <p><b>Rationale:</b></p> <p>There are non-separable thin sheet foils on the market used in wound components, which cannot be tested according to the requirements and test-method in the existing standard. The current published requirements in the standard do not adequately address the use on non-separable thin sheet insulation. A proposal was made by TC92-WG1 on how this matter can be handled.</p> <p><b>Decision:</b></p> <p>The following proposal shall be used until the new edition is published.</p> <p>The following amendment to the standard will be published to address this issue:</p> <p><b>add to clause 8.8</b> For requirements for non-separable thin sheet insulation in two or more layers, see 8.xx</p> <p><b>add new clause 8.xx</b></p> <p><b>8.xx Requirements for non-separable thin sheet insulation in two or more layers</b></p> <p>Three separate test specimens of the sheet of 70 mm width shall be supplied by the manufacturer. The test is carried out by fixing a specimen on a mandrel made of steel, nickel plated, or brass with smooth surface finish as shown in figure x. A metal foil (aluminium or copper) 0,035 mm ± 0,005 mm thick shall be placed close to the surface of the specimen and submitted to a pull of 1 N. The metal foil shall be so positioned that its edges are 20 mm away from the edge of the specimen and, when the mandrel is in its final position, it covers the edges upon which the specimen is lying by at least 10 mm. The specimen is submitted to a pull of 150 N at its free end by an appropriate clamping device. The specimen shall be slowly rotated forwards and backwards three times by 230° without jerks. If the specimen breaks at the clamping device during the rotation, the test is repeated. If one or more specimens break at any other place, the test is not fulfilled. While the mandrel is in its final position, within the minute following the final positioning, a test voltage of 1,5 times the value specified in table 5 is applied, as described in 10.3.2, between the mandrel and the metal foil. No flashover or breakdown shall occur during the test, corona effects and similar phenomena being disregarded.</p> <p><b>add new Figure x (Figure 6 of IEC 61558-1)</b></p> <p><b>Rationale:</b></p> <p>The test on thin foil according to the transformer standard IEC 61558-1 is considered to cover this kind of thin sheet sufficiently.</p> <p><b>Actions:</b></p> <p>The above amendment is proposed to be introduced in amendment 1 to IEC 60065, 7th edition.</p> <p><b>Remarks:</b></p> <p>The above is taken from document 92/82/INF, Page 4</p>		