



ExTAG/171/R  
August 2009

**INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) SYSTEM  
FOR CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR  
USE IN EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

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**ExTAG WG11 Report  
Material Data**

ExTAG WG11 met for the first time on Sunday 2008-09-28. Due to the inability of the Convenor to attend the 2009 Melbourne meetings, a meeting of ExTAG WG11 was not held in Melbourne.

**WG11 Membership:**

William Lawrence (US), Convenor  
Thierry Houeix (FR)  
Paul Kelly (US)  
Nick Maloof (CA)  
Gordana Manojlovic (AU)  
Ron Sinclair (GB)  
Risto Sulonen (FI)  
Alexander Zalagin (RU)

**Purpose:**

This Working Group is charged with establishing a suitable process for addressing conformity assessment issues with materials for which the physical properties are not directly under the control of the IECEx Certificate holder.

**Identification of the Problem:**

The working group has identified three specific areas of concern.

1. What “data” identifying the material specifications and properties is acceptable by the ExTL for the ExTR for the type-tested product?
2. What “data” is required to be in the ExTR so that it meets the needs of other ExCBs in providing National certification?



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3. What processes can be put in place for the QAR to ensure the continuing conformity of the material aspects of the product with the documentation, given that the conformity of the materials of construction may be difficult.

**Possible Solutions to the Identified Problems:**

**1a.** The scope of the initial work will be limited to TI/RTI, COT, CTI, and UV. The initial scope of the work is limited to these four properties with the hope of achieving a workable solution.

**Action Required:** ExTAG WG11 to develop a Decision Sheet to address the four identified properties. The development of a Decision Sheet has been a difficult task and another face-to-face meeting is necessary. It is hoped that such a meeting can be scheduled in April 2010 when many of the necessary experts are gathered for IEC TC31 meetings.

**1b.** The text of the material specification requirements in IEC 60079-0, Edition 5, are difficult to enforce. Suggestions were made to improve the text to help ensure that the necessary data is available in the ExTR.

**Action Completed:** These suggestions have been passed to TC31/WG22 and have been incorporated in the draft 6th edition (31/813/CDV).

**1c.** It was noted that the Component Recognition Program for Plastics, operated by US ExTL UL, provided a means for North American Certifiers to confirm continued compliance with material specifications.

**So Noted.**

**1d.** The existing decision sheets for CTI and for UV specify very different processes for essentially the same problem. It is the opinion of ExTAG WG11 that the two decision sheets should be withdrawn until a Decision Sheet addresses the four properties.

**This position was not supported by ExTAG in Paris.**



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**1e.** It may be possible to specify properties for some “generic” materials in a manner similar to that of the US document ANSI/UL 508 for Industrial Control Equipment. The WG was unclear whether this should be a “standard” requirement of IEC 60079-0 or a “Conformity Assessment” requirement of the Scheme.

**Action Required:** ExTAG WG11 to develop a proposal to be submitted to TC31/WG22 for the 7<sup>th</sup> edition of IEC 60079-0. This action will need to be completed by 2016, so there is plenty of time to prepare this material.

**2.** Although it was agreed that confidence in the ExTR was critical to the success of the IECEx System, a means to address the concerns of problem “2” has not been developed.

**3a.** It was agreed that the “place” to address this concern was in OD005. Possible solutions discussed were “finger-printing” techniques such as “oxygen index” and “infrared scans” to allow comparison of continuing production with the samples originally tested.

**3b.** The ExTR is prepared for the “manufacturer” of the product, who also involves a “moulder” who uses raw material provided by a “resin formulator”. Since the material concerns are with the 2nd two parties, some specific text on vendor qualification by the “manufacturer” may be necessary to be added to OD005.

**Action Required:** The Convenor of ExTAG WG11 has had informal discussions with the Convenor of ExMC WG05 (*Assessment and Audit of Manufacturer’s Quality systems*) with respect to a path forward to address these concerns. WG05 will take up this discussion after the publication of the Decision Sheet and the publication of the 6<sup>th</sup> edition of IEC 60079-0.

William G. Lawrence  
Convenor, ExTAG WG11

**Visiting address:**  
Standards Australia Building  
286 Sussex Street  
Sydney NSW 2000  
Australia

**Contact Details:**  
Tel: +61 2 8206 6940  
Fax: +61 2 8206 6272  
E-mail: [chris.agius@iecex.com](mailto:chris.agius@iecex.com)  
<http://www.iecex.com>