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

**TITLE: Compilation of comments and observations on -** **ExTAG/718A/CD** **Draft ExTAG Decision Sheet – Thermal conductivity of dust**

**Circulated to: ExTAG – IECEx Testing and Assessment Group**

**INTRODUCTION**

This document contains the compilation of comments, as well as observations from the originators UL Solutions, US, received on ExTAG/718A/CD Draft ExTAG Decision Sheet – Thermal conductivity of dust.

Following a review of the comments received by the Originator, in consultation with the IEC TC 31 WG 22 Convener and ExTAG Officers, Decision Sheet ExTAG DS 2024/001 was finalised and has now been published.

***Please inform the Secretariat immediately of any omissions or errors at-***

***Christine Kane***

***ExTAG Secretariat***

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| **ExCB/****ExTL** | **Clause/ Sub-clause** | **Paragraph Figure/****Table** | **Type of****comment****General/****technical/****editorial** | **COMMENTS** | **Proposed change** | **Observation****(to be completed by the originator)** |
| --- | --- | --- | --- | --- | --- | --- |
| **CCCMT****CN** |  |  | **General** | **Agree** |  | **Noted.** |
| **CNEX-Global BV****NL** | **-** | **-** | **Ge** | **As this DS allows many different types of product to act as insulation layer around the product, it is clear that thermal tests done by different ExTLs risk not being repeatable.****The test reports of a thermal test done with glass beads, might not be acceptable to an ExCB which is using cocoa powder for their own thermal tests.****The WG22 and WG28 should find consensus on max. 2 products, which are similar in material (like wheat flour and cocoa flour), that is universally available and thus can be used by all ExTLs.** | **Withdraw this DS.** | **Not accepted.****TC 31 WG22 and WG28 have both accepted this draft ExTAG DS and there was no discussion on a max. of two products.** |
| **DNV****NO** |  |  |  | **We have no comments** |  | **Noted.** |
| **EMT****GB**  | **-** | **-** | **-** | **Element support the DS.** | **None.** | **Noted.** |
| **FME****GB** | Answer 1 |  | Ed | Modify to remove the reference to the seventh paragraph of 26.5.1.3 of the 8th edition CDV.  | Modify as shown:No, because there is no unified standard for measuring the thermal conductivity of dust, verification is not required at this time if the dust used falls under one of the types specified in Note 2. The CDV for IEC 60079-0, Ed. 8.0 will clarify this in ~~the seventh paragraph of~~ Clause 26.5.1.3 by moving the thermal conductivity specification to NOTE 3. | **Accepted.** |
| **FME****GB** | Answer 2 |  | Te | It is not permissible for a DS to introduce requirements which change a standard. The use of the word ‘shall’ when referring to replacement of organic dusts makes this a requirement to change the dust after 10 tests.We understand that this is text taken from the draft IEC 60079-0 Ed 8, however this is a document which has yet not been voted on by national committees.  | Modify as shown;Dusts used for this test include wood flour, cocoa powder, diatomaceous earth, calcium silicate, glass beads, expandable polystyrene beads**. It is recommended that o**rganic dusts ~~shall be~~ **are** replaced after 10 tests due to the property changes resulting from the heating. | **Accepted.** |
| **FTZU****CZ** |  |  | **G** | **We agree with this draft ExTAG Decision Sheet.** |  | **Noted.** |
| **LCIE****FR** | **Answer 1** |  | **TE** | **We understand that Note 3 in its terms “The tests dust shown…” will refer precisely to the type of dust stated above in the body of clause 26.5.1.3 of future IEC 60079-0 Ed. 8.0 (here, in the Answer 2 of the Draft DS).****This seems to remove any alternative.** | **We propose to add the following text to Note 3:****« Other test dusts can be accepted when the manufacturer’s specifications of the dust indicate a thermal conductivity of no more than 0,10 W/(m×K) measured at (100 ± 5) ºC.”** | **Not accepted.****The Note 3 text is from the CDV of IEC 60079-0, Ed. 8.0, 31/1781/CDV, and cannot be revised by IECEx ExTAG. A comment on the CDV needs to be submitted to TC 31 WG22.****It is allowed to use other dusts when the manufacturer’s specifications of the dust indicate a thermal conductivity of no more than 0,10 W/(m×K) measured at (100 ± 5) ºC in Ed. 7.0.** |
| **MASC****ZA** | **As per DS** | **N/A** | **Technical** | **It is suggested that a nominal or maximum diameter of dust particles of glass beads be specified, as applicable i.e. 3mm or less glass beads.** | **Additional to Answer 2. Add nominal or maximum diameter of dust particles of glass beads.** | **Not accepted.****TC 31 WG22 and WG28 have both accepted this draft ExTAG DS and have not determined a requirement for the nominal or maximum diameter for glass beads.** |
| **NANIO CCVE (RU)** |  |  | **General** | **We support DS ExTAG/718A/CD with the comment:** **to reword the following sentence: «Dusts used for this test include wood flour, cocoa powder, diatomaceous earth, calcium silicate, glass beads, expandable polystyrene beads»** | **To reword: “ For example, dusts used for this test include wood flour, cocoa powder, diatomaceous earth, calcium silicate, glass beads, expandable polystyrene beads, perlite** | **Not accepted.****The text is from the CDV of IEC 60079-0, Ed. 8.0, 31/1781/CDV, and cannot be revised by IECEx ExTAG. A comment on the CDV needs to be submitted to TC 31 WG22.****It is allowed to use other dusts when the manufacturer’s specifications of the dust indicate a thermal conductivity of no more than 0,10 W/(m×K) measured at (100 ± 5) ºC in Ed. 7.0.** |
| **NCC****BR** | **26.5.1.3****26.5.1.1****6.1.2****6.1.2** |  |  | **We agree** |  | **Noted.** |
| **NEPSI****CN** |  |  | **T** | **We don’t support the revised decision sheet, because the Q&A given in the revised draft DS is obviously changing the requirements specified in IEC 60079-0 Edition 7.0.****According to OD 035, the purpose of development of ExTAG Decision Sheets is to unify the application of IEC/ISO Standards used in the IECEx System and is not intended to modify or "interpret" Standards.**  | **It is recommended to ask TC31/WG22 to issue a Corrigendum or Interpretation Sheet to IEC 60079-0 Ed.7.0 according to their discussion in split, if there is no intention to wait for publication of the next edition of IEC 60079-0 (Ed.8.0).** | **Not accepted.****TC 31 WG22 will be asked if it would be appropriate to issue an interpretation sheet to IEC 60079-0, Ed. 7.0 noting that they accepted this draft ExTAG DS.****This decision provides information for ExCBs/ExTLs on the appropriate dusts for testing since no international standard for thermal conductivity of dusts exists.** |
| **PTB****DE**  | **General**  |  | **general** | **The CDV version of 60079-0 ED 8.0 is not officially issued. Changes cannot be tracked in relation to the draft standard.****The decisions are based on the CDV version of the standard. What would be the procedure if the CDV will not be confirmed, and the final vote will be negative?**  | **Repeat the voting for this DS after the CDV of 60079-0 ED 8.0 has been officially issued or delete the reference to that document.**  | **Accepted.** |
| **QPSCA** |  |  |  | **QPS agrees with the DS and has no comments.** |  | **Noted.** |
| **SIMTARSAU** |  |  |  | No comments from Simtars ExTL. |  | **Noted.** |
| **TC31 WG22** |  |  | ge | Accepted, as discussed in Split | None | **Noted.** |
| **TC31 WG28** |  |  | ge | Support for the DS | None | **Noted.** |
| **TIIS****JP** |  |  | Te | We support the intention of this draft DS, however, the current statements of the draft DS seem to change the requirements. As far as the requirement of thermal conductivity is present in the current standard, ExTL shall check the thermal conductivity of the test dust is appropriate or not.As another approach, we propose to issue ExTAG DS for providing thermal conductivity data so as to omit thermal conductivity verifications in each testing. | The questions and answers are replaced by the followings with evidence data.QuestionAre there any materials whose typical thermal conductivity is well known, hence verification of its thermal conductivity is not necessary?Answer(italic parts are just as an example)The following materials may be used as the test dust without verification of its thermal conductivity*- Glass beads with diameter of \*\*\*µm (thermal conductivity is typically \*\*\* W/(m×K)*) | **Not accepted.****TC 31 WG22 and WG28 have both accepted this draft ExTAG DS. It was not possible to locate an international standard that could be used for the measurement of thermal conductivity of dusts, which necessitated this change in approach.** |
| **ULBR****BR** |  |  | **General** | **ULBR support this draft DS.** |  | **Noted.** |
| **ULD****DK** |  |  | **General** | **UL Demko support this draft DS.** |  | **Noted.** |