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

**Title: ExTAG/698A/CD Draft ExTAG Decision Sheet –** **Whether the non-metallic external fans of rotating electric machines are subjected to ultraviolet light resistance test.**

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

**INTRODUCTION**

This document, ExTAG/698A/CD, *Draft ExTAG Decision Sheet –* *Whether the non-metallic external fans of rotating electric machines are subjected to ultraviolet light resistance test* has been prepared by CNEx, CN, and is issued for consideration by ExTAG.

This revised version of the document has been prepared taking into account comments received on ExTAG/698/CD, contained in ExTAG/703/CC.

In accordance with OD 035 this document is issued for a six week comment period.

Please submit comments on this new Draft DS using the comments table, a separate document, by –

**2023 06 26**

to

[**Christine Kane**](mailto:christine.kane@iecex.com)

**ExTAG Secretariat**

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COLLECTION OF IECEx / ExTAG DECISION

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| Standard:  IEC 60079-0 (Ed 7) | **Clause:**  7.3, 17.2.2 | **Draft Decision Sheet:** |
| **Subject:**   * Whether the non-metallic external fans of rotating electric machines are subjected to ultraviolet light resistance test   **Status of document:**  **Draft** | **Key words:**   * Resistance to ultraviolet light * Materials for external fans | Date: 2023 04 26 **Originator of proposal:** CNEx  **TC/SC involved: IEC/**TC31 WG 22 |
| **Background**  For Group II or Group III rotating electric machines, where not otherwise protected against exposure to UV light, a test of resistance of the material to ultraviolet light shall be carried out if the enclosure or parts of the enclosure, upon which the type of protection depends, are made of non-metallic materials.  The external fan impeller, fan hoods, and ventilation screens manufactured from non-metallic materials shall comply with Clause 7. A typical fan hood design that commonly used is shown as below:    **Question**  For Group II or Group III rotating electric machines, is a fan made of non-metallic material and protected by the fan hood required to be subjected to the test for resistance to UV light?  **Answer**  For Group II or Group III rotating electric machines, clause 17.2.1 of IEC 60079-0:2017 stipulates that the degree of protection (IP) of the vent for rotating electric machines is at least IP20 at the air inlet and IP10 at the air outlet. The non-metallic external fan of the rotating electric machines is protected by a fan hood, and the mesh of the fan hoods meets the requirements of IP20. Generally, only the air inlet side could be potentially exposed to light(with the ingress of protection IP20 at worst). Therefore, the external fan will not directly exposed to ultraviolet light, and the test for resistance to UV light is not required. | | |