

Subject 844

August 18, 2017

SUMMARY OF TOPICS

The following changes in requirements to the Standard for Luminaires for Use in Hazardous (Classified) Locations, UL 844, are being proposed:

1. New Section 29A to include an alternative Dust-Penetration Test.

2. Revisions to 37.5 to permit gasketed serviceable joints in luminaires.

STP BALLOTS AND ALL COMMENTS DUE: SEPTEMBER 18, 2017

UL's goal is to have no interest category comprise more than one-third of the STP membership balance. To improve the current balance for STP 844, UL is looking for participants in the (Supply Chain, Commercial/Industrial User, General, AHJ, Government, Testing and Standards) interest categories. Definitions for these interest categories are available on the Standards STP Internet site:

<http://ulstandards.ul.com/develop-standards/participation/interest-categories/>

If you are interested in applying for STP 844 membership or are aware of potential candidates for this STP, please contact the STP Project Manager, Vickie.T.Hinton@ul.com.

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown ~~lined-out~~.

1. New Section 29A to include an alternative Dust-Penetration Test.

RATIONALE

Proposal submitted by: Don Ankele, UL LLC

The proposed revision is an update to the current requirements.

The alternative Dust-Penetration Test is at the request of industry to include talc dust ingress testing as an alternative to magnesium and grain dust penetration testing given in Section 29A.

As stated in 29A.1, the joint requirements of Section 12 remain. Only the dust test method changes to that found in UL 60079-31 where a positive pressure of 0.4 kPa is applied to the enclosure to mimic the expansion of air inside of a warm electrical enclosure prior to a 0.4 kPa depression during the 8 hour talc exposure.

As this is an additional option to Section 29, there is no impact on currently certified equipment.

PROPOSAL

New Section 29A is proposed as follows:

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29A Dust-Penetration Test

29A.1 A luminaire enclosure having joints in compliance with 12.1 – 12.7 shall be permitted to be subjected to the test of 29A.2 following any Aging Tests of 11.1.12 item c) or Section 37, as are applicable.

29A.2 The luminaire enclosure shall first be subjected to the Pressure Test of 29A.3 followed by the Dust Exclusion Test of 29A.4.

29A.3 Pressure Test - A positive internal pressure of at least 4 ± 0.4 kPa shall be applied to the luminaire enclosure for 60^{+10}_0 s. Any breathing or draining device may be sealed for this test if the pressure cannot be maintained. Any seals of the breathing or draining device shall be removed and the sample shall be subjected to the Dust Exclusion Test in the condition it is in after the completion of this test.

29A.4 Following the Pressure Test of 29A.3, the Dust Exclusion Test shall be performed in accordance with ANSI/IEC 60529 for IP 6X, except that the level of depression shall be increased to at least 4 kPa for a period of at least 8 h. There shall be no entrance of the dust into the luminaire enclosure as determined by visual examination following the test.

2. Revisions to 37.5 to permit gasketed serviceable joints in luminaires.

RATIONALE

Proposal submitted by: Don Ankele, UL LLC

The proposed revision is to permit gasketed serviceable joints in luminaires having constructions where polymeric optics which are made from low temperature materials. To determine the suitability of the gasketed joint, the luminaire is opened and re-closed after aging and prior to the Dust Penetration Test.

There is no impact on currently certified equipment.

PROPOSAL

37.5 Prior to the test of SA5.3, diffusers, globes, refractors, lenses and similar optics that are made from polymeric material shall be permitted to be subjected to short term-aging using the formula found in SA5.3 when all of the following applies:

- a) The polymeric material which forms the optic portion shall conform with the Standard for Polymeric Materials – Long Term Property Evaluations, UL 746B with an established RTI value, and used within this rating;
- b) The polymeric material which forms the optic portion forms a part of a gasketed metal to polymeric joint;
- c) ~~The joint is not intended to be a serviceable joint;~~
- d) Air temperature is conducted measuring the lens internal service temperature, in addition to all gasket internal service temperatures; and