CNBOP-PIB STANDARDS

FIRE PROTECTION

EDITION 2

Principles of Grouping Emergency Lighting Luminaires for the Purpose of the Admittance Process

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1. FOREWORD

This document defines the rules for grouping luminaires for emergency lighting for the purpose of the processes of product admittance. In these processes, a sample selected for laboratory testing must be representative of a particular group of emergency luminaires that is the subject of the admittance process. In order to be able to select a representative sample for testing, luminaires listed on the certificate of admittance should have similar design and technical parameters. Therefore, when grouping luminaires in the admittance processes, it is necessary to apply the grouping rules described in this document.

We hope that the rules for combining emergency luminaires into series of types will be helpful and will contribute to the resolution of any doubts about the classification of these products. The intention of the authors is to define the principles of grouping luminaires and resulting in better cooperation with CNBOP-PIB clients in the ongoing processes of admittance of these products.

The new edition of the standard updates the legal standards for issuing certificates of admittance for emergency lighting luminaires. The clarity of the publication has been improved by correcting repetitive and unclear entries. The guidelines for grouping luminaires detail the rules for the division of luminaires by construction and class against electric shock, as well as the degree of protection of the enclosure. A new type has been added to the classification for the light source used – OLED type.

2. REGULATIONS FOR CERTIFICATES OF ADMITTANCE

In accordance with Article 7 (1) of the Act of 24 August 1991 on fire protection (Polish Journal of Laws: Dz. U. z 2021 r. poz. 869, zm.: Dz. U. z 2021 r. poz. 2490), products that serve to ensure public safety or to protect health and life and property, which are put into use in fire protection units and used by these units for alarming about a fire or other danger and for carrying out rescue operations, as well as products that are portable firefighting equipment, may be used only after they have been admitted for use. Based on the statutory authorization described above, the Regulation of the Minister of Internal Affairs and Administration of 20 June 2007 on the list of products serving to ensure public safety or protection of health and life and property, as well as the rules for issuing admittance for use of such products was published (Polish Journal of Laws: Dz. U. Nr 143, poz. 1002), which was subsequently amended by the Regulation of the Minister of Internal Affairs and Administration of 27 April 2010, amending the Regulation on the list of products serving to ensure public safety or protection of health and life and property, as well as the rules for issuing admittance for use of such products (Polish Journal of Laws: Dz. U. Nr 85, poz. 553, as amended). Section 13.2 of this regulation identifies luminaires

for emergency lighting as products that are subject to the admittance for use. According to PN-EN 60598-2-22:2015, an emergency luminaire is any luminaire intended for use, during a power failure of the primary lighting equipment, which may be centrally powered or have its own power supply.

Emergency lighting systems are used, among other things, for rescue and firefighting operations, in particular, to conduct effective evacuation from a building in an emergency situation (fire, explosion, etc.). Therefore, luminaires for emergency lighting included in these systems should be reliable devices that meet the requirements of the dedicated standard, which is confirmed by a certificate of admittance.

3. CLASSIFICATION OF EMERGENCY LIGHTING

According to PN-EN 60598-2-22:2015, emergency lighting is any lighting used when the power supply to the primary lighting fails. The scope of this lighting includes:

- **emergency escape lighting**: that part of emergency lighting that provides illumination for the safety of people leaving an area or attempting to terminate a dangerous process before vacating an area,
- **standby lighting**: that part of emergency lighting that enables normal activities to continue substantially unchanged,
- **high-risk task-area lighting**: part of emergency lighting provided to ensure the safety of people involved in a potentially dangerous process or situation and to enable proper shut-down procedures for the safety of the operator and occupants of the premises.

4. GROUPING OF EMERGENCY LIGHTING LUMINAIRES WITHIN THE ADMITTANCE PROCESS INTO A SERIES OF TYPES

When grouping luminaires for emergency lighting into a series (family) in the admittance process, CNBOP-PIB applies the requirements of the product standard mentioned above. It also takes into account the design of the luminaires and their characteristic technical parameters, as well as the principles of technical knowledge and many years of experience in assessing compliance and grouping products commonly used in fire protection for its purposes. An important element in the procedure of grouping emergency lighting luminaires into a series is the formal possibility of selecting a representative sample of luminaires for laboratory testing.

CNBOP-PIB groups luminaires for emergency lighting into a series for the purpose of the admittance process and issuance of a certificate of admittance for this series of emergency luminaires on the basis of:

- Annex S of the standard PN-EN 60598-1:2015 Luminaires – General requirements and tests,
- design of luminaires for emergency lighting,
- technical parameters of luminaires for emergency lighting.

According to the provisions of Annex S of PN-EN 60598-1:2015, a series (group or family) of luminaires of similar design should be considered as those which:

- are equipped with lamps (light source) with the same physical properties:
  – incandescent lamps, including halogen lamps,
  – fluorescent lights,
  – discharge lamps,
  – LED;
- have the same class of protection against electric shock,
- have the same IP classification (degree of protection of the enclosure against the ingress of solids and water).

Thus, for the purposes of the carried out admittance processes, CNBOP-PIB divides luminaires for emergency lighting primarily in terms of:

- luminaire design (including design of the enclosure, housing material, design of the light source, and placement of electronics and other components inside the luminaire),
- light source used (incandescent, fluorescent, discharge lamps, LED or OLED),
- class of protection against electric shock (class I or II or III),
- degree of protection against the ingress of dust, solids and moisture (IP).

NOTE

CNBOP-PIB accepts inclusing on a single certificate of admittance a series (groups, families) of luminaires for which different classes of protection against electric shock are specified, provided that the luminaires have the same enclosure design and the material from which the insulating parts and ensuring protection against electric shock are made is the same for different classes of protection.

NOTE

CNBOP-PIB allows luminaires with different degrees of tightness to be listed on a single certificate, if it is due solely to the use or non-use of a different sealing material or sealing elements, among others, such as glands, grommets or covers, which do not significantly affect the construction of the luminaire enclosure. At the same time, these modifications must not cause changes in the other luminaire's luminous or electrical parameters.

5. CONCLUSION

In conclusion, it should be noted that CNBOP-PIB, as part of the admittance process, classifies – groups luminaires for emergency lighting into a series (family). Technical and formal requirements are taken into account in this activity. It should also be remembered that, without a doubt, each group of luminaires requires individual consideration, applying the principles described above. Finally, several formal aspects important during this classification should also be reminded of – namely, the varieties of

luminaires classified in one group should be generally compatible in terms of the used materials and technology. It is also recommended that the sample for type testing be selected in cooperation between the manufacturer and the testing body, as only the sample(s) – the luminaire(s) which are the most representative (most complex) combination of the components in terms of meeting the requirements – are subjected to testing. Due to such an approach it is not necessary to test all possible luminaire configurations. Testing is conducted for properly identified product sample(s) or product group(s) representative of the defined series (family) appropriately described in the technical documentation submitted to CNBOP-PIB for the product in question, as well as as as a result of the admittance process on CNBOP-PIB certificate of admittance.

However, it is worth noting that due to a large variety of luminaires, the possibility of qualifying a luminaire to a group/family is decided by CNBOP-PIB each time through individual analysis of the documentation of products subject to the process of admittance/extension of the scope of the admittance. In a situation where the analysis reveals differences in luminaires that make it impossible to issue the admittance for a group of products within one process, CNBOP-PIB shall inform the applicant of this fact, along with the reasons why the products cannot be subject to the same admittance process.

The classification rules adopted above are an elaborate compromise between formal requirements, technical considerations, principles of technical knowledge and the economic interests of the applicants.

6. LITERATURE

1. Act of 24 August 1991 on fire protection (Polish Journal of Laws: i.e. Dz. U. z 2021 r. poz. 869, zm.: Dz. U. z 2021 r. poz. 2490).
2. Regulation of the Minister of Internal Affairs and Administration of 20 June 2007 on the list of products used to ensure public safety or protection of health and life and property, as well as the rules for issuing admittance for use of these products (Polish Journal of Laws: Dz. U. nr 143 poz. 1002; zm.: Dz. U. z 2010 r. Nr 85, poz. 553 oraz z 2018 r. poz. 984).
3. PN-EN 60598-2-22:2015-01 Luminaires – Particular requirements. Luminaires for emergency lighting.
4. PN-EN 60598-1:2015-04 Luminaires – General requirements and tests.

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