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**CNBOP-PIB STANDARDS**

**FIRE PROTECTION**

**GENERAL RULES FOR CLASSIFYING**

**LUMINAIRES IN EMERGENCY**

**LIGHTING SYSTEMS**



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## Introduction

We provide you with the following document in the hope that the general rules for classifying luminaires in emergency lighting systems described herein, as part of the admittance process, into families will help and contribute to dispel any doubts as to the classification, as well as effective dissemination of the principles and thus will improve cooperation with our applicants in the process of their admittance.

### 1. General concept of emergency lighting application

According to art. 7 par. 1 of the Act of 24 August 1991 on Fire Protection (Journal of Laws 2009 No. 178, item 1380, as amended), products used for ensuring public safety or protecting health, life and property, introduced into use in fire protection units and used by those units to alarm of a fire or another type of hazard and for the execution of rescue operations, as well as products used as handy extinguishing equipment may be used only upon obtaining admittance for use.

Emergency lighting systems, without a doubt, as fire-fighting equipment are used to conduct rescue and extinguishing operations, in particular for an effective evacuation of a building in an emergency (fire, explosion, etc.). According to § 2 par. 1 point 9 of the Act of the Minister of Interior and Administration Regulation of 7 June 2010 on the fire protection of buildings as well as other structures and areas (Journal of Laws No. 109, item 719), emergency lighting systems are regarded as fire protection equipment. It should be noted that the provisions for using emergency lighting are defined in § 181 of technical and building regulation in the rank of a regulation of the Minister of Infrastructure of 12 April 2002 on technical requirements for buildings and their location (Journal of Laws No. 75, item 690, as amended).

Based on statutory authorization resulting from art. 7 of the Act of 24 August 1991 on Fire Protection (Journal of Laws 2009 No. 178, item 1380, as amended), Regulation of 20 June 2007 on the list of products used for ensuring public safety or protecting health, life and property, and the principles of issuing admittance to use these products was published by the Minister of Internal Affairs and Administration (Journal of Laws No. 143, item 1002) which was subsequently amended by the Regulation of the Minister of Internal Affairs and Administration, dated 27 April 2010, amending the Regulation in terms of the list of products used for ensuring public safety or protecting health, life and property, and the principles of issuing admittance to use these products (Journal of Laws No. 85, item 553).

Emergency luminaires, according to standard PN-EN 60598-2-22 is *each luminary intended for use during power failures of basic lighting devices that can be centrally powered with batteries or have its own power supply*.

Thus, if a luminary serves as an emergency luminary, it shall be subjected to the process of admittance for use in fire protection, for compliance with paragraph 13.2 of the Appendix to the Regulation of the Minister of Internal Affairs and Administration, dated 27 April 2010, amending the Regulation in terms of the list of products used for ensuring public safety or protecting health, life and property, and the principles of issuing admittance to use these products (Journal of Laws No. 85, item 553). Luminaries for emergency lighting should meet the requirements of *PN-EN 60598 Particular requirements – Luminaires for emergency lighting*.

## 2. General division of emergency lighting

According to PN-EN 60598-2-22, emergency lighting can be divided into:

- evacuation lighting: emergency lighting for safe evacuation from the premises or enabling the completion of the potentially dangerous process;
- auxiliary lighting: emergency lighting enabling the continuation of normal operations in a basically unchanged way;
- lighting of high risk areas: emergency lighting for providing safety for people exposed to a dangerous process or in a potentially dangerous situation, as well as enabling proper completion of the operations in a safe manner for a person and other people within the premise.

## 3. Classification of emergency lighting into families within the process of admittance

Classification of luminaires for emergency lighting into families as part of the process of admittance takes into consideration primarily the technical parameters of the product as well as follows the standards of the product in that respect, submitted test results for the model samples of the product or product category made by an authorized testing laboratory as well as the principles of technical knowledge and great experience in the field of conformity assessment and classification of products commonly used in fire protection. An essential element in the classification procedure of luminaires for emergency lighting into families is the formal possibility of transferring research results to a family of luminaires. It should be emphasized that the key points in further description of the families of luminaires in the certificate of admittance by CNBOP-PIB are laboratory test results for representative samples of the product or group of products. The difficulty in classifying the products into families requires technical accuracy of this classification and taking into account accordingly the economic interest of the applicant.

Using the basic principles mentioned above, CNBOP-PIB classifies luminaires for emergency lighting according to family for the purpose of the process of admittance and the issuance of a certificate of admittance for this particular family.

CNBOP-PIB classifies products according to family based on:

1. standard PN-EN 60598-2-22 Part 2-22. Particular requirements – luminaires for emergency lighting (referred to in point 13.2 of the Regulation of the Minister of Internal Affairs and Administration, dated 20 June 2007, on the list of products used for ensuring public safety or protecting health, life and property, and the principles of issuing admittance to use these products (Journal of Laws No. 143, item 1002, Journal of Laws No.85, item 553),
2. technical parameters of particular products, and
3. test results of representative sample for a group of products.

In order to classify luminaires for emergency lighting into one family, the admittance body takes into account specific technical parameters of a product, i.e. in particular:

- methods of production,
- production materials,

- construction of the product,
- others, according to properties.

In order to classify luminaires for emergency lighting into one family, CNBOP-PIB applies the rules for classifying luminaires in emergency lighting specified in Annex T of Polish Standard PN-EN 60598-1, referred to in standard PN-EN 60598-2-22.

In general terms, luminaires of similar construction should be treated as a group or family when they are:

1. in conformity with the same Part 2 of the applied standard;
2. equipped with lamps (source of light) of the same physical characteristics:
  - incandescent light bulbs, incl. halogens,
  - fluorescent lamps,
  - discharge lamps,
  - LEDs;
3. of the same class of protection against electric shock;
4. of the same IP number (*Ingress Protection*)

**Therefore, for purposes of their processes, CNBOP-PIB divides luminaires for emergency lighting primarily due to:**

- **construction of luminaires (including similar shapes and dimensions, the use of uniquely identified components of electronic circuits),**
- **applied source of light (incandescent bulbs, fluorescent or discharge lamps, or LED),**
- **class of protection against electric shock (Class I or II or III)**

**ATTENTION!**

CNBOP-PIB identifies classes of protection against electric shock for luminaires for emergency lighting classified within the same family. CNBOP-PIB allows the placement of a family of luminaires on a single certificate of admittance, which have been assigned different classes of protection against electric shock. This approach, while maintaining total technical accuracy, has far-reaching economic justification for issuing one and not many certificates of admittance for the same family. The same class of protection against electric shock for luminaires for emergency lighting classified within the same family (series) is clearly described and differentiated for particular types of luminaires on the certificate of admittance.

- **class of protection against ingress of external factors (IP). The marking consists of the letters IP and two digits: the first indicates protection against the ingress of solid matters and the second indicates protection against water penetration.**

**ATTENTION!**

CNBOP-PIB allows the placement of a family of luminaires with different degrees of tightness on a single certificate of admittance, if it results only from applying or not applying a different sealing material. At the same time, this conversion may not result in changes of other parameters of the luminaires.

#### 4. Recapitulation

In conclusion, it should be emphasized that CNBOP-PIB, within the process of admittance, carries out the classification of luminaires for emergency lighting into a family for the purposes of the process of admittance. These actions cover not only technical and formal requirements, but also economic interests of the applicant. It should be remembered that unarguably each family of luminaires, while applying the rules described above, demands individual examination. Finally, several formal important aspects made during this classification should be remembered. *A group of luminaires should be manufactured by the same manufacturer and in the same quality management system.* Different types within the same family should be substantially compatible in terms of used materials and technology. It is recommended for the manufacturer and the testing body to cooperate in order to select a sample, as the sample being tested represents the least favourable (most complex) combination of components in terms of compliance, thereby it is not necessary to test all possible configurations of the luminaires. Tests are carried out for properly identified sample of the product or group of products representing a defined family, extensively described in the technical documentation of the product submitted to CNBOP-PIB, as well as a result of the process of admittance on the certificate of admittance issued by CNBOP-PIB.

It should be emphasized, however, that due to a large variety of luminaires the possibility to classify them into a certain group / family is each time determined by CNBOP-PIB through a detailed analysis of the documentation of products subject to the process of admittance / extension of admittance. If, as a result of the analysis, differences in luminaires are indicated making it impossible to issue a certificate of admittance within one process of admittance, CNBOP-PIB reserves the right to establish and enforce necessary changes to be introduced in a group of products while stating in writing the reasons why these products cannot be a subject of only one single process of admittance.

The classification rules adopted above are a compromise between the demands of formal technical requirements, technical factors, principles of technical knowledge and economic interests of the applicants.