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**NATIONAL STANDARD OF THE
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**Special requirements for fire alarm and evacuation in
hazardous chemicals workplaces - Part 2: Fire emergency
lighting and evacuation indication systems**

危险化学品作业场所火灾报警与避难逃生特殊要求 第2部分：消防应急照明与疏散指示系统

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5.1 General Requirements

5.1.1 Fire emergency lighting fixtures (excluding fire safety sign lights), emergency lighting controllers, centralized emergency lighting power supplies, and emergency lighting power distribution. The enclosure should meet the requirements of the corresponding equipment in GB 17945.

5.1.2 System equipment shall meet the requirements of

5.2 To 5.10, Note

1.The system equipment includes fire emergency lighting fixtures, emergency lighting distribution boxes, emergency lighting centralized power supplies, emergency lighting controllers, and evacuation condition monitoring devices. Note

2.Fire emergency lighting fixtures include fire emergency sign lights (hereinafter referred to as "sign lights") and fire emergency lighting fixtures (hereinafter referred to as "lighting fixtures").

5.2.1 General Requirements

5.2.1.1 The system in indoor areas shall consist of centralized power supply and centralized control type fire emergency lighting fixtures, emergency lighting controllers, and centralized emergency lighting power supply. Source composition.

5.2.1.2 For outdoor areas, the system composition should be selected as follows:

- a) Centralized power supply and centralized control type fire emergency lighting fixtures, emergency lighting controllers, and centralized power supplies for emergency lighting;
- b) Centralized control type fire emergency lighting fixtures, emergency lighting controllers, and emergency lighting distribution boxes;
- c) Centralized power supply and centralized control type fire emergency lighting fixtures, centralized control type fire emergency lighting fixtures, emergency lighting controllers, emergency lighting collection systems Medium power supply and emergency lighting distribution box.

Note. Evacuation condition monitoring devices may be added to the system in outdoor areas as needed.

5.2.2 System Power Supply

5.2.2.1 The main power supply of the system equipment shall be connected to the network of the appropriate voltage level within the system in accordance with the rated voltage level.

5.2.2.2 The system equipment should not use lithium-ion batteries.

5.2.3 System emergency start-up function After receiving the linkage control output signal from the fire alarm linkage controller, the system should control the system to proceed according to the preset logic within 2 seconds. Enter automatic emergency mode and issue audible and visual warnings.

5.2.4 Online component replacement function The system should have the function of online replacement of Type A fire emergency lights, evacuation condition monitoring devices, and batteries. Replacement should not affect non-escaping equipment. Normal operation of the replaced parts.

5.2.5 Wireless Communication Function

5.2.5.1 Emergency lighting controller and emergency lighting centralized power supply, emergency lighting distribution box, fire emergency lighting fixtures, and evacuation condition monitoring device Wireless communication should not be used between them.

5.2.5.2 Emergency lighting controllers shall communicate with each other wirelessly or via wired means. Wireless communication shall meet the following requirements.

- a) Normal communication should occur under conditions that meet the network signal quality specifications stipulated by the producer;
- b) No fault in the system should affect the normal operation of non-faulty parts;
- c) Emergency lighting controllers using wireless communication should have a wireless communication fault indication function. When emergency lighting controllers communicate with each other... When communication is abnormal, the location of the communication error should be indicated.

5.3 Performance requirements for fire emergency lighting fixtures

5.3.1 Fire safety signage and lighting fixtures The markings on fire safety signs and lights shall meet the requirements of GB 13495.1.

5.3.2 Surface brightness of sign lights

5.3.2.1 When the light source of the signage lights in indoor areas is in energy-saving

mode, the surface brightness of the signage lights shall meet the following requirements.

- a) For signage fixtures using only green, yellow, or red graphics, the minimum luminance of the sign surface should not be less than 15 cd/m². The maximum brightness should not exceed 150 cd/m²;
- b) The minimum brightness of the light fixture surface for signs using a combination of white and green or white and red graphics should not be less than [amount missing]. The maximum brightness should not exceed 150 cd/m², and the maximum brightness should be 5 cd/m².

5.3.3 Luminous flux of lighting fixtures

5.3.3.1 The luminous flux of lighting fixtures in indoor areas shall meet the following requirements.

- a) When the light source of a continuous lighting fixture is turned on in an energy-saving mode, the luminous flux of the lighting fixture should not be lower than its nominal energy-saving luminous flux, and should not be less than... At 30lm;
- b) After the light source of the lighting fixture is turned on in an emergency, the luminous flux of the lighting fixture shall not be lower than its nominal emergency luminous flux, and shall not be less than... 100lm.

5.3.3.2 The luminous flux of lighting fixtures in outdoor areas shall meet the following requirements.

- a) When the light source of a continuous lighting fixture is turned on in an energy-saving mode, the luminous flux of the lighting fixture should not be lower than its nominal energy-saving luminous flux, and should not be less than... At 300lm;
- b) After the light source of the lighting fixture is turned on in an emergency, the luminous flux of the lighting fixture shall not be lower than its nominal emergency luminous flux, and shall not be less than... 1000lm.

5.4 Functional Requirements of Emergency Lighting Controller

5.4.1 Contingency Plan Setting Function The emergency lighting controller can set multiple emergency evacuation plans and select the most suitable one based on the following factors.

- a) Location of the fire;
- b) Location of the nearest escape exit;
- c) Environmental data information (where applicable).

5.4.2 Simulate activation of contingency plan function The emergency lighting controller can