UL 1384

Outline of Investigation for Water-Based Automatic Extinguisher Units

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Summary of Topics

The Fourth Issue of the Outline of Investigation for Water-Based Automatic Extinguisher Units, UL 1384, is being issued to include requirements for alternate light and water exposure.

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INTRODUCTION

1 Scope

1.1 These requirements cover the construction and operation of water-based automatic extinguisher units intended for total flooding applications when installed, inspected, tested, and maintained in accordance with the manufacturer's instructions.

1.2 Automatic extinguisher units do not have a manual means of operation, and are not intended for protection of fire risks larger than those specified in the manufacturer's instructions for a single unit by using multiple units.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this outline shall comply with the requirements for that component.

2.2 A component is not required to comply with a specific requirement that:

a) Involves a feature or characteristic not required in the application of the component in the product covered by this outline; or

b) Is superseded by a requirement in this outline.

2.3 A component shall be used in accordance with its rating established for the intended conditions of use.

2.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

3 Units of Measurement

3.1 The metric unit shall be designated as the official unit for purposes of this standard. Where values of measurement are specified in both SI and English units, either unit is used. In cases of dispute, the metric unit shall be used.

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4 Undated References

4.1 Any undated reference to a code or standard appearing in the requirements of this outline shall be interpreted as referring to the latest edition of that code or standard.

5 Glossary

5.1 For the purpose of this outline, the following definitions apply.

5.2 ACTUATOR ASSEMBLY – A pressure vessel pressurized with an inert gas or a liquid and inert gas that includes a valve; or a gas cartridge pressurized with an inert gas that includes a puncture disc, which upon automatic means of actuation, releases pressure resulting in the discharge process.

5.3 AUTOMATIC EXTINGUISHER UNIT – A unit that has no manual means of actuation and discharges extinguishing agent upon thermal actuation, and is intended for use in a normally unoccupied space and is limited to a single protected area.

5.4 CYLINDER/VALVE ASSEMBLY – A container that incorporates a valve and that provides storage of the extinguishing agent and expellant gas until the valve is actuated. For cartridge operated units, this assembly includes the dry chemical storage container and cartridge mechanism. When actuated, the valve releases the agent into the distribution network of the extinguisher unit.

5.5 DISCHARGE NOZZLE – A device that is used to uniformly distribute the extinguishing agent over or into a specific area, or within a specific volume, or both.

5.6 DISCHARGE RATE – The ratio of the quantity of agent discharged from a nozzle to the discharge time measured within ±1 second. When a minimum discharge rate is indicated, reference is made to the minimum quantity of agent discharged and the time measured within ±1 second.

5.7 DISCHARGE TIME – The time interval between the first appearance of extinguishing agent at the nozzle and the time at which the discharge becomes predominantly gaseous.

5.8 EXPELLANT GAS – Dry nitrogen, dry air, or other gas used to facilitate the discharge of the extinguishing agent.

5.9 GAS CARTRIDGE – A container that provides storage for an expellant gas.

5.10 HEPTANE – A commercial grade hydrocarbon used as a test fuel with the following characteristics:

a) Minimum Initial boiling point 88°C (190°F),

b) Maximum Dry point 100°C (212°F), and

c) Specific gravity (60°F/60°F) (15.6°C/15.6°C) 0.69 – 0.73.

5.11 METHOD OF ACTUATION, AUTOMATIC – A means of actuation that results in extinguishing agent discharge without the necessity of human intervention, such as a thermal actuating mechanism.

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