

# UL 1058

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## Halogenated Agent Extinguishing System Units

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UL Standard for Safety for Halogenated Agent Extinguishing System Units, UL 1058

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Revisions of this Standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements. Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

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## INTRODUCTION

### 1 Scope

1.1 These requirements cover the construction and operation of halogenated agent fire extinguishing system units intended to be installed, inspected, tested, and maintained in accordance with the Standard for Halon 1301 Fire Extinguishing Systems, NFPA 12A and with the Standard for Halon 1211 Fire Extinguishing Systems, NFPA 12B.

1.2 These requirements also cover halogenated automatic extinguisher units that do not have a manual means of operation, and are intended to be used in accordance with the manufacturer's installation instructions. Automatic extinguisher units are not intended:

- a) For use as a general substitute for preengineered or engineered halon extinguishing system units; or
- b) For protection of fire risks larger than those specified in the manufacturer's instructions for a single unit by using multiple units.

1.3 A product that contains features, characteristics, components, materials, or systems new or different from those in use when the standard was developed, and that involves a risk of fire, electric shock, or injury to persons shall be evaluated using the appropriate additional component and end-product requirements as determined necessary to maintain the level of safety for the user of the product as originally anticipated by the intent of this standard.

### 2 General

2.1 If a value for measurement is followed by a value in other units in parentheses, the second value may be only approximate. The first stated value is the requirement.

2.2 Where these requirements reference "extinguishing system unit," the requirements also apply to automatic extinguisher units unless specifically noted otherwise.

### 3 Glossary

3.1 For the purpose of these requirements, the following definitions apply.

3.2 AUTOMATIC EXTINGUISHER UNIT – A unit that:

- a) Has no manual means of actuation and discharges extinguishing agent upon thermal actuation; and
- b) Is intended for use in normally unoccupied spaces.

3.3 CYLINDER/VALVE ASSEMBLY – A container that incorporates a valve and which provides storage of the extinguishing agent and expellant (if applicable) until the valve is actuated. When actuated, the valve releases the agent into the distribution network of the extinguishing system.

3.4 DISCHARGE NOZZLE – A device that is used to uniformly distribute the extinguishing agent:

- a) Over a specific area; or
- b) Within a specific volume; or both.

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

3.6 ENGINEERED SYSTEM – A system that requires individual calculation and design, in accordance with the extinguishing system unit manufacturer's instructions, to determine the flow rates, nozzle pressures, quantities of halon, and number and types of nozzles for effective extinguishing agent distribution and fire coverage.

3.7 EXPELLANT GAS – Dry nitrogen used to facilitate the discharge of the extinguishing agent at low temperatures.

3.8 EXTINGUISHING SYSTEM UNIT – Identified components that can be assembled into a system for the discharge of an extinguishing agent through fixed piping and nozzles for the purpose of extinguishing fires.

3.9 HALON 1211 (BROMOCHLORODI-FLUOROMETHANE,  $\text{CBrClF}_2$ ) – A colorless, faintly sweet-smelling, and electrically nonconductive gas used as an extinguishing agent.

3.10 HALON 1301 (BROMOTRIFLUORO-METHANE,  $\text{CBrF}_3$ ) – A colorless, practically odorless, and electrically nonconductive gas used as an extinguishing agent.

3.11 MANUAL MEANS OF ACTUATION – A means of system actuation in which the system operator initiates system discharge, either mechanically or electrically.

3.12 MASTER VALVE – A discharge valve that upon automatic or manual actuation operates other valves or devices in an extinguishing system.

3.13 OPERABLE PRESSURE RANGE – The pressure range corresponding to the pressures in the storage container at the specified minimum and maximum temperatures for which the extinguishing system unit is intended to be operable.

3.14 OPERATING PRESSURE – The pressure in a fully charged storage container at 70°F (21°C).

3.15 PREENGINEERED SYSTEM – A system that is tested in accordance with the limitations prescribed by the manufacturer for maximum and minimum pipe lengths, accessories, number of fittings, number and types of nozzles and nozzle placement, maximum areas, volumes, or both areas and volumes of protection.

3.16 PROOF TEST PRESSURE – The factory test pressure of each cylinder used to evaluate cylinder leakage and construction integrity. For Department of Transportation (DOT) approved cylinders, the factory test pressure is specified in the appropriate DOT specification. For ASME vessels, the factory test pressure is specified in Section VIII, Pressure Vessels, of the 1992 ANSI/ASME Boiler and Pressure Vessel Code. For non-DOT cylinders and non-ASME cylinders, the factory test pressure is three times the cylinder operating pressure at 70°F (21°C).

3.17 SELECTOR (DIRECTIONAL) VALVE – A device that is installed in the piping of an extinguishing system and that directs the flow of extinguishing agent to the appropriate protected volume. This valve is used only when more than one volume is being protected by a single extinguishing system.

3.18 TOTAL FLOODING SYSTEM – A system consisting of a supply of Halon 1301 or Halon 1211, arranged to discharge halon into the intended protected volume and to fill that volume to an effective halon concentration.