

STANDARD INFORMATION

Standard: UL 73

Standard ID: Motor-Operated Appliances [UL 73:2011 Ed.10+R:31Mar2020]

Previous Standard ID: Motor-Operated Appliances [UL 73:2011 Ed.10+R:08Aug2018]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **March 31, 2022**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard.

Overview of Changes: Revised UV requirements to address insect and rodent control equipment. Specific details of new/updated requirements are found in table below.

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
21A	Info	Lamps that Emit Ultraviolet (UV) Radiation
21A.1		<p>Insect and rodent-control equipment shall not employ lamps designed to emit ultraviolet (UV) radiation generating wavelengths less than 250 nm. <u>Incidental UV radiation in wavelengths less than 250 nm is allowed provided that the radiation does not exceed an absolute irradiance level greater than 1% of that generated in the 300-400 nm bands. Care shall be taken in measuring spectral irradiance at wavelengths below 300 nm to exclude instrument noise, which may give an erroneous indication of UV-C radiation. See 66A.5 for proper measurements and good laboratory practice.</u></p>
41A	Info	Protection from Overexposure to Ultraviolet (UV) Radiation
41A.1		<p>Insect and rodent-control equipment shall be investigated for emission of ultraviolet (UV) radiation in accordance with the Ultraviolet Irradiance Test, Section 66A. The emission of UV shall not exceed an Effective radiance value of 0.1 $\mu\text{W}/\text{cm}^2$ when measured at the general use distance and an Effective Irradiance value of 3 microwatt/cm^2 when measured at the relamping/servicing distance of <u>16.85 inches (0.43 m) in Table 66A.1.</u></p> <p><u>Exception No. 1: Products exclusively identified for the use with lamps rated "Exempt Risk Group", ANSI/IESNA RP-27.1, are considered to comply with this requirement without test.</u></p> <p><u>Exception No. 2: Products generating UV in excess of 3 microwatt/cm^2 when measured at the relamping/servicing distance, are acceptable if the product cannot be operated continuously during relamping or servicing in accordance with 41A.2, and need to be subjected to the 0.1 $\mu\text{W}/\text{cm}^2$ limit at 'general use' distance only.</u></p> <p><u>Exception No.3: Products designed to mount onto the wall and to emit ultraviolet radiation (UV) radiation in an entirely upwards direction only, such as a sconce type unit are to be exempt from the 'general use' test, if they are constructed from metal or a polymeric material that comply with the requirements in 7.17. Any UV barrier or decorative cover providing UV deflection shall be permanently attached if it prevents ultraviolet (UV) radiation being emitted anywhere other than upwards. The unit must be mounted so that the distance from the floor to the opening at the top where the ultraviolet (UV) light is emitted is a minimum of 7 ft. The mounting height must be marked on the unit and visible before installation. The mounting height shall also be stated in the installation instructions.</u></p>



CLAUSE	VERDICT	COMMENT
41A.2		Interlocks used to minimize risk of overexposure to ultraviolet (UV) radiation in accordance with the Exception No. 2 of 41A.1 shall be reliable, see 41A.3. The actuator of an interlock shall be located so the unintentional operation is unlikely and it is not able to be defeated with the articulated probe of Figure 11.1. <u>The interlock shall be reliable, substantial and not easily defeated by improper disassembly or reassembly of the equipment.</u>
66A	Info	Ultraviolet Irradiance Test
66A.1		Emissions of ultraviolet (UV) radiation from the Insect and rodent-control equipment shall be evaluated in accordance with the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values and Biological Indices. <u>The test shall be conducted in accordance with 66A.2 and shall comply with the requirements in 41A.1.</u>
66A.2		Testing shall be performed in the condition(s) most likely to result in the highest emission levels, including removal or adjustment of guards or operating settings. The test shall be performed using a new lamp, or integral radiation source, representative of the maximum emission capability, including user replacement parts. <u>The measurement device shall be placed at the distance specified in Table 66A.1 for the fixed or location dedicated or wall/ceiling- hung type specified or at a lesser distance if requested by the manufacturer. The measurement shall be made as close to the equipment for other portable types. The effective irradiance value shall comply with the requirements of 41A.1.</u> <u>Exception: When provided with installation instructions in accordance with 75A.2, the measurement device may be placed at the maximum general use distance indicated in Table 66A.1 for the type specified or at a lesser distance if requested by the manufacturer.</u>
		<i>New Table added;</i>
Table 66A.1		Equipment type and general use distance measurement See standard for details.
	Info	MARKING
70	Info	Details
70.11	Info	Markings for insect and rodent-control equipment which emit ultraviolet (UV) radiation
70.11.3		Markings shall indicate to the user the proper method of lamp replacement. For user replaceable lamps, the permitted replacement lamps by <u>manufacturer's name</u> , and part number shall be marked <u>visible near the lamp during servicing</u> and shall be repeated in the instruction manual. Lamps intended for service replacement only shall be clearly marked to indicate the need for equipment with servicing <u>by qualified servicing personnel only.</u>



CLAUSE	VERDICT	COMMENT
70.11.5.1		Insect and rodent-control equipment intending to comply with <u>Exception No. 3 of 41A.1</u> , shall be provided with the following marking or its equivalent "CAUTION – Risk of UV exposure. <u>Ensure product is mounted at H distance high from floor.</u> " H is the mounting height. <u>The marking shall be visible before installation and shall be repeated in installation instructions.</u>
75	Info	Instructions for Insect and Rodent-Control Equipment Generating Ultraviolet Radiation <i>New clause added;</i>
75A.3.1		Insect and rodent-control equipment intended for permanent installation, mounted in a dedicated area (fixed equipment) such as the wall of a building structure, or hung to dedicated area (portable equipment), which emit ultraviolet (UV) radiation shall be provided with the following instructions or its equivalent "CAUTION – Risk of UV exposure. Ensure product is installed such that no continuous human activity is likely to be performed within X distance of the unit while illuminated." X is the general use distance of Table 66A.1. The instruction shall be included in the Important Safety Instructions.