

STANDARD INFORMATION

Standard: UL 121201 / CSA C22.2 No. 213

Standard ID:

Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations [UL 121201:2017 Ed.9+R:01Apr2021]

Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations [CSA C22.2#213:2017 Ed.3+U1;U2;U3]

Previous Standard ID:

Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations [UL 121201:2017 Ed.9+R:26Aug2019]

Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations [CSA C22.2#213:2017 Ed.3+U1;U2]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **April 5, 2023**

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. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes:

- Revisions to opening of sealed devices
- Revisions to the application of general industrial / ordinary locations requirements
- Revisions to Li ion batteries used in Division 2 portable equipment
- Revisions to the sealed device requirements
- Revisions to the Drop test for portable equipment

Specific details of new/revised 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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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.



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CLAUSE	VERDICT	COMMENT
		<p>Additions to existing requirements are <u>underlined</u> and deletions are shown lined out below.</p>
4	Info	General requirements
4.4	info	Component standards
		<i>New clause added;</i>
4.4.2		All conditions of acceptability associated with the components (sometimes referred to as the schedule of limitations) shall be addressed so as to determine compliance associated with the required risks of fire, electric shock, and injury to persons requirements, in addition to the risks of explosion requirements.
5	Info	Requirements for Class I, Division 2 equipment
5.2	Info	Enclosures
		<i>New clause added;</i>
5.2.2		<p>For portable devices incorporating a Li Ion rechargeable battery, so as to minimize battery failures resulting in the device becoming a source of ignition, one of the following minimum enclosure ratings is required:</p> <p>a) in the United States: IP54 in accordance with NEMA ANSI/IEC 60529 or Type 3 in accordance with UL 50E, along with UL 50.</p> <p>b) in Canada: IP54 in accordance with CAN/CSA C22.2 No. 60529 or Type 3 in accordance with CAN/CSA-C22.2 No. 94.2, along with CAN/CSA-C22.2 No. 94.1.</p>
5.6	Info	Batteries and battery-powered equipment
		<i>New clause added;</i>
5.6.0		<p>Potential adverse conditions that may result from the charging and discharging of batteries in hazardous (classified) locations, and in unclassified locations if so intended, shall be addressed as follows:</p> <p>a) in the United States, in accordance with the applicable ANSI standards (see Clause 4.4.1)</p> <p>b) In Canada, in accordance with the applicable Canadian National standards (see Clause 4.4.1).</p>
13	Info	Evaluation of sealed devices
13.1	Info	Ratings, construction, preconditioning, and test for sealed devices
13.1.5		The sealed device itself, or the sealing and encapsulating material of the sealed device, shall have a continuous operating temperature at least <u>equal to 20K higher</u>



CLAUSE	VERDICT	COMMENT
		<p><u>than</u> the maximum service temperature and equal to the minimum service temperature to which it is exposed.</p> <p><u>Alternatively, the sealed device itself, or the sealing and encapsulating material of the sealed device, may have a continuous operating temperature equal to the maximum and minimum service temperature to which it is exposed if it is subjected to the Temperature aging requirements in this Standard based on the maximum service temperature prior to the air leakage test in Clause 13.2.</u></p> <p><u>Where the sealed device is fixed equipment or an internal part of fixed equipment, and the device is constructed with a separate housing and base that are sealed together, the housing and base of the device need not be considered part of the seal. Where the sealed device is portable equipment or an internal part of portable equipment, and the device is constructed with a separate housing and base that are sealed together, the housing and base of the device shall be considered part of the seal.</u></p>
13.1.8		<p><i>New clause added;</i></p> <p>Sealed devices shall be so constructed that they cannot be opened during normal operation or for any maintenance activities. These requirements apply to the device design, and not just only to when it is operated in a hazardous (classified) location.</p>
16	Info	Drop tests and impact tests
16.2	Info	Drop test for portable equipment
16.2.1		<p><i>New clause added;</i></p> <p>A sample shall be subjected to the following thermal conditioning:</p> <p>a) Seven (7) days at a uniform temperature of at least 10° C (18° F) higher than the maximum temperature of the material measured under worst case normal operating conditions, but not less than 70°C (158°F); and</p> <p>b) directly followed by cooling to the minimum rated ambient temperature.</p> <p>Within 10 minutes of this thermal conditioning, the equipment shall be dropped six times, not more than once on any one equipment surface, from a height of at least 1 m onto a smooth concrete floor. A nonrestrictive guide may be used.</p> <p>There shall be no ejection of the battery (or batteries) and there shall be no damage that invalidates compliance with the requirements in this standard.</p>