

STANDARD INFORMATION

Standard: UL 2225

Standard ID: Cables and Cable-Fittings for Use in Hazardous (Classified) Locations [UL 2225:2013 Ed.4+R:11Apr2022]

Previous Standard ID: Cables and Cable-Fittings for Use in Hazardous (Classified) Locations [UL 2225:2013 Ed.4+R:02Nov2020]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **April 11, 2024**

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 Reports not updated to this version by the effective date above will be withdrawn.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 explosion tests. Specific details of new/revise 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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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>
23	Info	Explosion Tests
23.3		<p>Explosionproof <u>and flameproof</u> cable sealing fittings and cord connectors are to be subjected to a series of tests in the presence of specific gas- or vapor-air mixtures over the range of flammable or explosive concentrations to determine the maximum explosion-pressure effects of the gas- or vapor-air mixture over the test range specified in Table 23.1 and the maximum propagation effects of the gas- or vapor-air mixture as specified in either Table 23.2 (when tested according to 23.10 – 23.13) or Table 23.3 (when tested according to 23.15).</p> <p>For explosionproof cable fittings specified and marked for use at ambient temperatures lower than minus 25°C (minus 13°F) or for flameproof cable fittings specified and marked for use at ambient temperatures lower than minus 20°C (minus 4°F), the Explosion Tests shall be determined by one of the following methods:</p> <p>a) The Explosion Tests shall be performed at the minimum ambient specified, ±5°C (±9°F). When the ambient specified is such that common materials within the Group are not flammable, a test temperature shall be specified that represents the minimum temperature at which the test gasses shown in Table 23.3 remain gasses; or</p> <p>b) For explosionproof cable fittings for use in Group A, B, C or D classified locations, rated less than minus 25°C (minus 13°F) but not less than minus 50°C (minus 58°F) or flameproof cable fittings for use in Groups IIA, IIB or IIC classified locations, rated less than minus 20°C (minus 4°F) but not less than minus 50°C (minus 58°F), the equipment shall be permitted to alternatively be subjected to the Hydrostatic Pressure Test in accordance with 24.4 and 24.5; or</p> <p><u>c) Whenever lengths of conduit are not required as part of the test setup described in 23.6, the reference pressure shall be permitted at room ambient temperature (Ta) using the defined test mixture(s), but at increased pressure. The absolute pressure of the test mixture (P) shall be calculated by the following formula, using Ta in °C:</u></p> $P = 100 \left[\frac{293}{(T_{a, \text{ min}} + 273)} \right] \text{ (kPa)}$ <p style="text-align: center;">or</p> $P = 14.6959 \left[\frac{293}{(T_{a, \text{ min}} + 273)} \right] \text{ (psi)}$



CLAUSE	VERDICT	COMMENT
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New clause added;

23.7

For explosionproof and flameproof fittings specified for use at ambient temperatures greater than 60°C (140°F), the explosion tests shall be performed under one of the following conditions:

- a) At a temperature not less than the specified maximum ambient temperature; or
- b) At normal ambient temperature using the defined test mixture at increased pressure according to the factors in Table 23.4; or
- c) At normal atmospheric pressure and temperature, but with the test gap increased by the factors noted in Table 23.4.

New table added;

Test factors to increase pressure or joint test gap

Table 23.4

Temperature up to °C	Groups A & B Group IIB plus Hydrogen Group IIC 27.5% H ₂ 7.5% C ₂ H ₂	Group C Group IIB 37% H ₂	Group D Group IIA 55% H ₂
60	1.00	1.00	1.00
70	1.11	1.04	1.05
80	1.13	1.05	1.06
90	1.15	1.06	1.07
100	1.16	1.06	1.08
110	1.18	1.07	1.09
120	1.20	1.08	1.10
130	1.22	1.09	1.11