STANDARDS UPDATE NOTICE (SUN)
ISSUED: March 25, 2026

STANDARD INFORMATION - CSA C22.2#60079-0:2019 ED.4

Standard: CSA C22.2 No. 60079-0
Standard ID:
Explosive Atmospheres - Part 0: Equipment - General Requirements [CSA C22.2#60079-0:2019 Ed.4]
Previous Standard ID:
Explosive Atmospheres - Part 0: Equipment - General Requirements [CSA C22.2#60079-0:2015 Ed.3+U1]
Explosive Atmospheres - Part 0: Equipment - General Requirements [CSA C22.2#60079-0:2015 Ed.3]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **May 1, 2027**

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 Reports not updated to this version by the effective date above will be withdrawn.

All products certified to CSA C22.2 No. 60079-0 must be certified to the 4th edition prior to the effective date.

Overview of Changes:

October 2015 (3rd edition):
- Revision of test to determine capacitance of accessible metal parts
- Addition of requirements for ventilating fans
- Addition of test requirements for arc-quenching test on plugs and sockets
- Additional requirements for cell voltages
- Revision of test for the measurement of capacitance, revision of maximum capacitance

April 2018 (3rd edition plus Update 1):
- Addition of requirements for markings and instructions

February 2019 (4th edition):
- Addition of requirements for adhesives are used to secure gaskets
- Addition of requirements for tests to require a 4kV DC test
- Added limitation for external surfaces of >65% copper
- Addition of requirements for EPL Dc and Dc
- Additional instruction material for electric machines
- Additional instruction material for cable glands
- Addition of requirements for new cell types

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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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.

STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		Additions to existing requirements are <u>underlined</u> and deletions are shown ~~lined out~~ below.
		The following changes reflect the October 2015 (3rd edition) revision
7	Info	**Non-metallic enclosures and non-metallic parts of enclosures**
7.5		***New clause added;*** Accessible, metal parts with a resistance to earth of more than 1 GΩ could be susceptible to electrostatic charges that could become a source of ignition and shall be tested in accordance with the test method in 26.14. If the measured capacitance of each metal part exceeds the value shown in Table 9, the equipment shall be marked "X" in accordance with item e) of 29.3 and the specific condition of use shall specify the value of capacitance determined to allow the user to determine suitability in the specific application.
Table 9		***New table added;*** **Maximum capacitance of unearthed metal parts** See standard for details.
17	Info	**Supplementary requirements for rotating machines**
17.1	Info	**Ventilation**
17.1.5		***New section added;*** **Ventilating fans** This section contains requirements for ventilating fans (see standard for details).
20	Info	**Supplementary requirements for plugs, socket outlets and connectors**
20.2		It is not necessary for plugs and socket outlets of EPL Gb to comply with the requirements of 20.1 if all of the following conditions are met: – the part which remains energized is a socket outlet; – there is a delay time for the separation of the plug and socket outlet such that the rated current flow ceases so no arc will occur on separation; – the plug and socket outlet remain flameproof in accordance with IEC 60079-1 during the arc-quenching period <u>while opening a circuit of the rated voltage, rated current, and for a.c. circuits, a power factor of 0,4 to 0,5;</u> – the contacts remaining energized after separation are protected according to one of the specific types of protection listed in Clause 1.

CLAUSE	VERDICT	COMMENT
23	Info	**Equipment incorporating cells and batteries**
Table 12		**Secondary cells** Requirements for Nickel-iron and Lithium have been modified, see standard for details.
26	Info	
26.14		***New section added;*** **Measurement of capacitance** This section contains requirements for measurement of capacitance (see standard for details).
26.15		***New clause added;*** **Verification of ratings of ventilating fans** The fan shall be supplied with the rated voltage and with the specified back pressure, if any. The maximum power, current and rotating speed shall be measured and shall comply with the rated values of the fan. The rated values of the motor and any other electrical parts of the fan, shall not be exceeded.
		The following changes reflect the April 2018 3rd (3rd edition plus Update 1) revision
29	Info	**Marking**
29.1A		***New clause added;*** **Optional additional marking** Optional additional marking may include the appropriate Class, Division, Group, and Temperature Class marking based on the permitted installation of that type of protection according to CSA C22.1. If this optional Class, Division, Group, and Temperature Class marking is applied, the ambient temperature range shall be marked on the product Note: As the default ambient temperature range in this Standard is different than that of Division-based products, the ambient temperature range is required to reduce the likelihood of misapplication. Optional additional marking to include equivalent Class, Division, or Group shall not be permitted for cable glands.

CLAUSE	VERDICT	COMMENT
29.3		***New clause added;*** [Replace Item d) with the following] d) the name or mark of the certificate issuer and the certificate reference in the following form: the last two figures of the year of the certificate followed by "CA" followed by a unique character reference;
30	Info	**Instructions**
30.1		***New clause added;*** **General** [Add the following bulleted item and note to the list] • when the optional additional marking of Clause 29.1A is employed, specific instructions for maintaining the type of protection in the Division installation. Note 1A: For example, a flameproof "d" enclosure alternatively marked for Class I, Division 2, requires the installation of a flameproof conduit seal or flameproof cable gland at each entry to maintain the type of protection flameproof "d".
		The following changes reflect the February 2019 (4th edition) revision
5	Info	**Temperatures**
5.3	Info	**Maximum surface temperature**
5.3.2.3	Info	**Maximum surface temperature for EPL Db**
5.3.2.3.2		***New clause added;*** [Delete Items a) and b) and Notes 1 and 2] [Replace Item c) with the following] c) The maximum surface temperature for EPL Db is determined by the maximum surface temperature with respect to a layer of dust with a specified orientation of the equipment. If one or more specific orientations are given in the instructions, tests shall be carried out according to Clause 26.5.1 with a layer of dust on the surfaces on which the dust can accumulate, for each orientation.
6	Info	**Requirements for all equipment**
6.5		Where the degree of protection provided by the enclosure depends on a gasketed joint which is intended to be opened during installation or in normal operation, gaskets shall be attached or secured to one of the mating faces to prevent loss,

CLAUSE	VERDICT	COMMENT
		damage or incorrect assembly. The gasket material shall not itself adhere to the other joint face. When the joint is opened and re-closed prior to the tests for degree of protection by enclosure, it shall be verified that the gasket material remains attached or secured and has not adhered to the other joint face. (See 26.4.1.2). If an adhesive is used to secure the gasket, the adhesive shall comply with the requirements for cements given in 7.1.2.4 and used within its COT.
7	Info	**Non-metallic enclosures and non-metallic parts of enclosures**
7.4	Info	**Electrostatic charges on external non-metallic materials**
7.4.2		**Avoidance of a build-up of electrostatic charge for Group I or Group II** 7.4.2DV DR Modification of Clause 7.4.2 to replace with the following: Equipment is intended to be designed so that under normal conditions of use, danger of ignition due to electrostatic charges on external surfaces of enclosures is avoided. This shall be satisfied by employing one or more of the following techniques: c) by limitation of the thickness of a non-metallic layer bonded to conductive or dissipative surfaces, which is connected to earth with a connection resistance of less than 1 GΩ. For the purposes of this standard, dissipative surfaces are those complying with the requirements of 7.4.2 a). The thickness of the non-metallic layer shall not exceed the values shown in Table 9 or the breakdown voltage shall be ≤4 kV DC (measured across the thickness of the insulating material according to the method described in IEC 60243-1 with the additional requirements of IEC 60243-2 for DC testing);
8	Info	**Metallic enclosures and metallic parts of enclosures**
8.5		***New clause added;*** **Copper Alloys** Where intended for use in atmospheres containing acetylene, enclosures of equipment and enclosures of Ex components for external mounting, if constructed of copper or copper alloys: • shall be coated with tin, nickel, or by other coatings; or • shall have the maximum copper content of the alloy limited to 65 %. Cable glands as defined in Annex A, Blanking Elements, Thread Adapters, and bushings are not considered an enclosure surface requiring coating or copper content restriction.

CLAUSE	VERDICT	COMMENT
15	Info	**Connection facilities for earthing or bonding conductors**
15.4		***New clause added;*** **Size of equipotential bonding conductor connection** [Replace this Clause with the following] When provided, the equipotential (EP) bonding connection facilities on the outside of equipment shall provide effective connection of a conductor with a cross-sectional area of at least 4 mm^2. When this connection facility is also intended to serve as the PE connection, the requirements of Table 12 apply, but with a cross-sectional area of at least 4 mm^2.
20.1		**General** 20.1DV DR Modification of Clause 20.1 to replace with the following: These requirements for socket outlets shall also be applied to connectors. Plugs and socket for external field wiring connections: • Between two pieces of electrical equipment by means of a cable or cord assembly involving plugs & sockets on both ends, or • Between premises wiring and a piece of electrical equipment by means of a cable or cord assembly involving a plug and socket on the equipment end.
Table 14		**Secondary cells** *Table modified, see standard for details.*
26	Info	**Type tests**
26.5	Info	**Thermal tests**
26.5.1.3		***New clause added;*** **Maximum surface temperature** [Replace the second-last paragraph with the following] For electrical equipment of Group III, EPL Db, evaluated with a dust layer in accordance with Clause 5.3.2.3.2 c), with the specific orientation(s) as given in the specific conditions of use, the test shall be carried out with the maximum layer the equipment will hold, according to the specified equipment orientation, recognizing that the dust thickness will not be uniform. The dust shall be applied by gently depositing, by use of a sieve or similar method, onto the surface(s), without any further compaction, until no more dust will accumulate. The temperature measurements shall be made using a test dust having a thermal conductivity of no

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		more than 0.10 W/(m × K) measured at (100 ± 5) ºC or with grain, corn, or wheat dust.
29	Info	**Marking**
29.4		***New clause added;*** **Ex marking for explosive gas atmospheres** [In Item b), replace "'pv': pressurization, (for EPL Gb or Gc)" with the following] – "v": ventilation, (for EPL Gb or Gc) – "vc": ventilation, (for EPL Gc) [In Item b), delete the dashed items "sa", "sb", and "sc"]
29.5		***New clause added;*** **Ex marking for explosive dust atmospheres** [In Item b), delete the dashed items "sa", "sb", and "sc"] [Replace the first dashed item in Item d) with the following and delete Note 1] – For EPL Da, the maximum surface temperature shall be shown as a temperature value in degrees Celsius and the unit of measurement °C (e.g., T320 °C). [Replace the second dashed item in Item d) with the following] – For EPL Dc, tested without a layer of dust, the maximum surface temperature shall be shown in degrees Celsius and the unit of measurement °C preceded with the letter "T", (e.g., T90 °C). [Delete the third dashed item in Item d)] [Replace the fourth dashed item in Item d) with the following] – For EPL Db, where appropriate according to Clause 5.3.2.3.2 c), the maximum surface temperature T shall be shown as a temperature value in degrees Celsius and the unit of measurement °C, (e.g., T320 °C).

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30	Info	**Instructions**
30.3		**Electric machines** In addition to the information required according to 30.1, the following additional information shall be prepared for electric machines, as applicable: • speed/torque curves for machines intended to be supplied by a converter; • For motors in Type of Protection "e" that have been type tested with a converter, the rated motor current, Weighted Voltage Total Harmonic Distortion (WTHD), or pulse frequency and DC-Link voltage of the converter used for the type testing to allow the selection of a comparable converter. • guidance for the selection and installation of any necessary overload protection or overtemperature protection of the motor, including guidance for recommended alarm and shutdown levels (including voting logic for multiple sensor inputs), if applicable, for winding and bearing temperature detection. This may be in addition to protection provided by a converter; • bearing lubrication requirements for both commissioning and maintaining; • the permitted axial and radial loading of the shaft; • the thermal expansion of the shaft and the housing under the rated conditions; • any necessary maintenance of the protection provided by the manufacturer against stray circulating currents in the bearings or shafts; • any necessary protection of the bearings from vibration, including during transportation, storage, or standby service; • guidance on maintenance and replacement intervals for bearings based on the operating conditions.
Annex A		***New clause added;*** **Instructions** In addition to the requirements for instructions given in 30.1, the instructions prepared for cable glands shall include at least the following: a) minimum and maximum diameter of the cable of circular cables; b) minimum and maximum dimensions of non-circular and metal-sheathed cables; c) tightening process of the compression element, including the tightening torque; d) for compound-filled glands, details on the installation of the filling compound; e) for compound-filled glands, the maximum diameter over cores of the cable that the gland is intended to accept; and the maximum numbers of cores that can pass through the compound; f) for entries into enclosures: • threaded entries: – thread size and tolerance class; – enclosure material limitations; – enclosure interface sealing method;

CLAUSE	VERDICT	COMMENT
		– maximum surface roughness of the enclosure face for sealing; – thickness range of the enclosure wall; – perpendicularity; – permitted use and location of any earth tags; • clearance holes: – hole dimensions, including tolerance; – enclosure material limitations; – thickness range of the enclosure wall; – enclosure interface sealing method; – maximum surface roughness of the enclosure face for sealing; – perpendicularity; – cable gland securing details; – permitted use and location of any earth tags.