

STANDARD INFORMATION

Standard: UL Subject 2277

Standard ID:

Outline of Investigation for Flexible Motor Supply Cable and Wind Turbine Tray Cable [UL SUBJECT 2277:2024 Ed.6]

Previous Standard ID:

Outline of Investigation for Flexible Motor Supply Cable and Wind Turbine Tray Cable [UL SUBJECT 2277:2023 Ed.5]

Outline of Investigation for Flexible Motor Supply Cable and Wind Turbine Tray Cable [UL SUBJECT 2277:2018 Ed.4]

Outline of Investigation for Flexible Motor Supply Cable and Wind Turbine Tray Cable [UL SUBJECT 2277:2010 Ed.3]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **December 2, 2026**

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 Reports not updated to this version by the effective date above will be withdrawn.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 must be certified to the 6th edition of UL Subject 2277 prior to the effective date.

Overview of Changes:

4th edition:

- Additional requirements for flexible motor supply cable

5th edition:

- No technical changes

6th edition:

- Revisions to dry temperature rating of Flexible Motor Supply Cable
- Adds -HF and -LSHF markings

Specific details of new/revise requirements are found in table below

Note: If the listing references a Canadian standard, per the Canadian Electrical Code (CSA C22.2#0) Section titled Language of markings, Caution and Warning Markings shall be in English and French.



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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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>
		The following changes reflect the 4th edition:
	Info	PERFORMANCE
7		General
7.2		The dielectric withstand and spark tests voltages shall be in accordance with the requirements for wires rated 1000 or 2000 volts in the Standard for Thermoset-Insulated Wires and Cables, UL 44. <u>Conductors rated 600 volts shall be tested as if the rating is 1000 volts.</u>
7.3		<u>For 1000 volt-rated cables that are not marked with a type designation, the insulated conductors shall meet all performance requirements for conductors rated 90 – 200°C, as applicable, and 600 volts. The conductors shall not be surface printed with any type letter designation.</u> <u>For 1000 volt-rated cables, the insulated conductors shall meet all performance requirements for conductors rated 90°C and 1000 volts.</u> <u>For 2000 volt-rated cables, the insulated conductors shall meet all performance requirements for conductors rated 90°C and 2000 volts.</u>
	Info	MARKINGS
8	Info	Information on or in the Cable
8.1		The information required on the cable shall be the same as in Section 29 of the Standard for Electrical Power and Control Tray Cables with Optional Optical-Fiber Members, UL 1277, including the indication of all optional ratings with the following exceptions: <u>d) Optional – For 1000 volt-rated cables using 1000 volt-rated conductors and for 2000 volt-rated cables using 2000 volt-rated conductors, the type letters of the NEC conductors used followed by the designation 'cdrs', 'condrs' or 'conductors'.</u>



CLAUSE	VERDICT	COMMENT
		The following changes reflect the 5th edition:
	Info	There are no technical changes in the 5th edition.
		The following changes reflect the 6th edition:
	Info	CONSTRUCTION
5	Info	Materials and Dimensions
5.4		Flexible Motor Supply Cable may be a single 22 AWG to 750 kcmil conductor or a jacketed assembly of two or more 22 AWG to 4/0 AWG conductors. Cables rated 2000 volts shall not have conductors smaller than 14 AWG. <u>The conductors shall be copper and in accordance with UL 62, or conductors for flexing service in UL 1063. The thickness of insulation of Flexible Motor Supply Cable rated 2000 volts shall be the same as 2000 volt-rated Type RHW in accordance with UL 44. "ER" is not permitted.</u>
	Info	PERFORMANCE
6	Info	General
		<i>New clause added;</i>
6.4		For 105 °C rated Wind Turbine Tray Cable and Flexible Motor Supply Cable, the tensile and elongation requirements of the jacket shall comply with UL 62 for 105 °C rated materials. The Long-term Insulation Resistance (dry) shall be conducted in accordance with UL 4703 for materials rated over 90 °C dry. The insulation shall comply with the applicable requirements for type RHW-2 in accordance with UL 44. The insulated conductor shall not be marked.
		<i>New clause added;</i>
6.5		For Flexible Motor Supply Cable rated -50 °C or -60 °C, the cable shall be subjected to the cold impact test at the rated cold temperature.



CLAUSE	VERDICT	COMMENT
	Info	MARKINGS
7	Info	Information On or In the Cable
7.1		<p>The information required on the cable shall be the same as in the section Markings, in UL 1277, including the indication of all optional ratings with the following exceptions:</p> <p>e) <u>A Flexible Motor Supply Cable that complies with the cold impact test at -50 or -60 °C shall be marked “minus XXC” or “-XXC”, where XX is the low temperature rating.</u></p> <p>f) <u>The “HF” suffix to designate cable where all of the combustible materials used in the construction (e.g., insulation, fillers, jackets) are halogen-free in accordance with UL 2885.</u></p> <p>g) <u>The “LSHF” suffix to designate the cable that meets the “-HF” requirements and also complies with the requirements for low smoke when tested in accordance with IEC 61034-2.</u></p>