

3 UL Battery Standards Added to OSHA's Appropriate Test Standard List for NRTL Safety Testing and Certification

On September 28, 2018 the U.S. Department of Labor completed a 3+ year review of various standards to add to the OSHA program. In total, 22 standards were added, three of which directly relate to batteries.

The 3 battery standards:

- UL 2054 – Standard for Household and Commercial Batteries with scope that includes portable applications such handheld mobile devices and consumer electronics
- UL 2271 – Standard for Batteries for use in Light Electric Vehicle (LEV) Applications with scope that includes personal e-mobility devices, e-bike as well as some types of industrial vehicles
- UL 1973 – Standard for Batteries for use in Stationary, Vehicle Auxiliary Power, and Light Electric Rail (LER) Applications for data centers, IT equipment, and grid-tied energy storage



What is OSHA and NRTL?

- OSHA is the abbreviation for the U.S. Department of Labor's Occupational Safety and Health Administration that is a regulatory agency of the U.S. federal government and is responsible"to assure safe and healthful working conditions for working men and women by setting and enforcing standards" (https://www.osha.gov/about.html).
- In accordance with OSHA's Regulation 29 CFR 1910 Subpart S, electrical equipment used in the workplace must be approved by a Nationally Recognized Testing Laboratory (NRTL). Each NRTL recognized by OSHA must meet requirements of the NRTL program. Under the NRTL program, OSHA recognizes private sector organizations to perform certification for certain products to ensure that they meet the requirements of both the construction and general industry OSHA electrical standards. Each NRTL has a scope of test standards that they are recognized for, and each NRTL uses its own unique registered certification mark(s) to designate product conformance to the applicable product safety test standards.
- OSHA and the NRTLs it recognizes, collaborate to identify electrical products used in the workplace and the appropriate U.S. standards to be used for safety certification of those products in the context of OSHA regulations. As part of that ongoing collaboration, the electrical products under the scope of these three standards were identified as falling under the scope of 29 CFR 1910 Subpart S and these standards were appropriate as the requirements to use to certify these products to under the NRTL program.



Why is the inclusion of these standards important?

With the advancement of science and technology, more and more battery-powered products are being deployed in working environments for both mobile and stationary applications, including but not limited to laptops, tablets, cell phones, handheld tools, medical devices, office equipment, and industrial equipment. In addition, more and more people are using innovative e-mobility solutions such as personal e-scooters for short distance and indoor movement as well as equipment to move industrial materials in work place settings.

The three battery standards added to the NRTL program will advance workplace safety when batteries certified by an NRTL are determined to comply with them. Irrespective of end product standards, the battery systems themselves will need to demonstrate compliance to OSHA appropriate list of test standards to be used in the workplace.

What impact will this decision have?

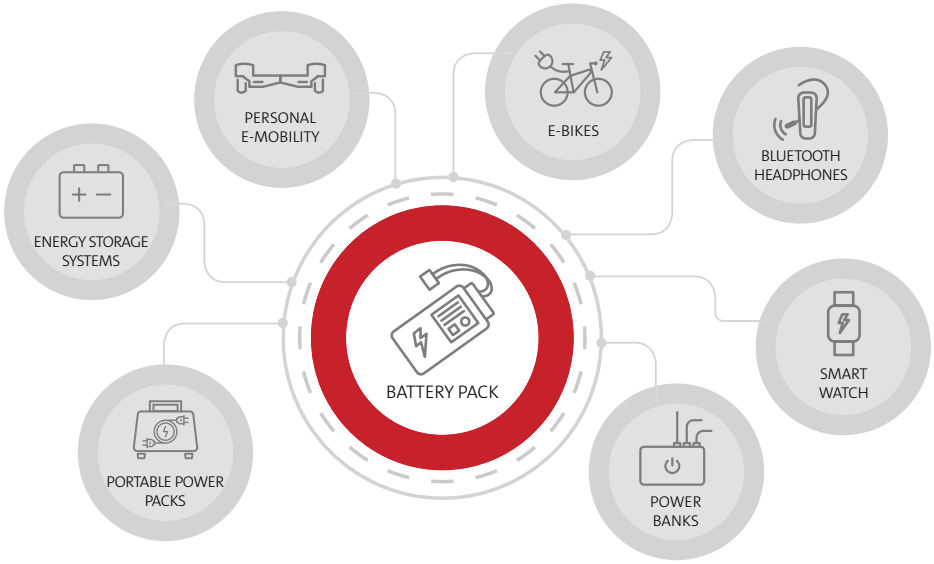
Per 29 CFR Subpart S, all electrical equipment, now including batteries not otherwise covered, are expected to demonstrate compliance to the applicable standards in the NRTL Program's List of Appropriate Test Standards. As a result, batteries falling under the scope of these three standards, if they will be used in a U.S. workplace, must now be certified by a NRTL to an end product standard with battery requirements already covered by an appropriate NRTL Test Standard, or now to one of the battery standards on the list. Businesses, brand-owners, and end-product manufacturers selling to customers in the U.S. should assume their battery and end products will be used in U.S. workplaces and have their batteries certified by a NRTL to the applicable standards. In the absence of a safety certification from a NRTL, the U.S. employer who uses the product in their workplace could be determined in violation of OSHA regulatory requirements*. Therefore, manufacturers should look to design and submit the products they manufacture to a recognized NRTL for certification. Brands should procure products with NRTL certification/approval from manufacturers. Business Owners should also procure from known brands/manufacturers with NRTL certification/approval.

* 29 CFR 1910.399 and the definition for "acceptable" do provide alternatives to NRTL certification under certain circumstances

OSHA maintained website with all National Recognized Test Laboratory standards: https://www.osha.gov/dts/otpca/nrtl/list_standards.html

For more information, or to find out how UL can help meet the latest OSHA mandate, please contact UL at batteries@ul.com or your local UL contact.

More guidance will be forthcoming from OSHA that UL will share once available. Please sign up for our newsletters to stay informed. For portable or consumer light ev battery and product makers please sign up here: https://ctech.ul.com For industrial light ev or stationary battery and product makers please sign up here: https://connect.ul.com/EIO-subscribe.html



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