# STANDARDS UPDATE NOTICE (SUN)
# ISSUED: May 12, 2023

## STANDARD INFORMATION

**Standard:** UL 61010-2-011
**Standard ID:** Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-011: Particular Requirements for Refrigerating Equipment [UL 61010-2-011:2021 Ed.2]
**Previous Standard ID:** Safety Requirements for Electrical Equipment For Measurement, Control, And Laboratory Use - Part 2-011: Particular Requirements For Refrigerating Equipment [UL 61010-2-011:2017 Ed.1]

## EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

**Effective Date:** **May 13, 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 Reports not updated to this version by the effective date above will be withdrawn.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:**

- Revised marking requirements for flammable refrigerants
- Addition of requirements for mechanical stress
- New requirements for leakage and rupture at high pressure

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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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.* |
| | | |
| 5 | Info | **Marking and documentation** |
| 5.4.102 | | **Additional instructions for equipment that uses FLAMMABLE REFRIGERANT**<br><br>For equipment that uses FLAMMABLE REFRIGERANT, the instructions shall include information pertaining to the handling, servicing and disposal of the equipment.<br><br>The instructions for equipment which uses a FLAMMABLE REFRIGERANT shall include the substance of the following warnings as necessary:<br><br>– WARNING: ~~Keep all ventilation openings in the enclosure or, in the structure for building-in, clear of obstruction~~. <u>Ensure all ventilation openings are not obstructed.</u> |
| 8 | Info | **Resistance to mechanical stresses** |
| 8DV.1 | | ***New clause added;***<br><br>Refrigerant tubing on a refrigerator employing a flammable refrigerant shall be protected or enclosed to avoid mechanical damage and damage that could occur during moving of the product. |
| 8DV.1.1 | | ***New clause added;***<br><br>Refrigerant tubing located within the confines of the cabinet and tubing that does not protrude from the compressor compartment are considered to be protected from mechanical damage. |
| 8DV.1.2 | | ***New clause added;***<br><br>static condenser coil mounted on the outside of a refrigerator is considered to be protected against mechanical damage if it complies with all of the following:<br><br>– The return bends of the condenser are covered such that they cannot be grasped or handled during moving of the product. The return bends are considered to be adequately covered if they cannot be grasped with the jointed test finger (see Figure B.2) applied with a force of 20 N.<br>– The other edges of the condenser are covered or secured to prevent damage during moving of the product. They are considered adequately secured if they meet the pull force requirements of 8DV.3 without deformation of the tubing or loosening of the condenser from the refrigerator. |

| CLAUSE | VERDICT | COMMENT |
|---|---|---|
| | | – All other tubing in the condenser is adequately protected by the fill wire. The tubing is considered adequately protected if any single tube cannot be grasped with the jointed test finger (see Figure B.2) applied with a force of 20 N. |
| 8DV.3 | | ***New clause added;***<br><br>A static evaporator coil mounted as shelving on the inside of a storage compartment is considered to be protected against mechanical damage if it complies with all of the following:<br><br>– The shelf shall comply with 8DV.3 and 7.5.3 with no permanent deformation or damage resulting in a refrigerant leak, kinked refrigerant tubing, or loosening of the tubing from the refrigerator.<br>– The tubing shall comply with the scratch test of 11.7.104.4. |
| 8DV.2 | | ***New clause added;***<br><br>All joints in a refrigeration system containing a FLAMMABLE REFRIGERANT shall be brazed or welded. Joining methods other than brazing or welding that have been evaluated with respect to corrosion resistance, mechanical stress, leak rates, and similar methods shall be considered to comply. |
| 8DV.3 | | ***New clause added;***<br><br>A force is applied without jerks for 10 s in the most unfavourable direction to parts likely to be weak. The force is as follows:<br><br>– if the shape of the part is such that the fingertips cannot easily slip off, 50 N;<br>– if the projection of the part that is gripped is less than 10 mm in the direction of removal, 30 N.<br><br>The pull force is applied by a suitable means, such as a suction cup, so that the test results are not affected. While the force is being applied, the test finger of Figure B.2 is inserted in any aperture or joint with a force of 10 N. The finger is then slid sideways with a force of 10 N but is not twisted or used as a lever. |
| 11 | Info | **Protection against HAZARDS from fluids and solid foreign objects** |
| 11.7 | Info | **Fluid pressure and leakage** |
| 11.7.102 | | **Leakage and rupture at high pressure** |
| 11.7.102.2DV | | ***New clause added;***<br><br>The test value shall be determined as the higher of the following 3:<br><br>5 times the pressure under normal use [see 11.7.101 a)]<br>3 times the pressure under transportation [see 11.7.101 d)]<br>3 times the pressure under single fault condition [see 11.7.101 b) and c)] |