



Appliance Advisor

Issue 1: 2019

Household dishwashers - New 11th edition of UL's safety standard UL 749

By Darrin Conlon – Director of Principal Engineers for Appliances, HVAC/R and Lighting

With the publication of any new edition of a UL safety Standard, users of the Standard typically have a few questions: What are the major changes? How will these changes be implemented? When do they go into effective? It is the intent of this article to answer these important questions.

Major changes to UL 749 – the standard for safety for household dishwashers:

The new 11th Edition of UL 749 was published on November 30, 2018. This new edition includes 14 new and revised requirements. The major changes to this Standard are as follows:



1. Dishwasher controls washing test

A Washing Test was added as new clause 15.11 to assess the risk of shock that could result from cleaning around knobs, switches and buttons on the dishwasher's control panel.

2. Resistance to overvoltage test

A Resistance to Overvoltage Test was added as new clause 17.5 to address the risks associated with an open neutral condition. This new test is intended to evaluate the robustness of a dishwasher to overvoltage conditions up to 220V.

3. Dishwasher Lampholder Endurance

A Lampholder Endurance Test was added as new Clause 17.6 to assess the risk of electric shock that may occur from exposed live parts as a result of an overheated lampholder. This test is applicable to dishwashers provided with lamps to illuminate the washing compartment

4. Glass used as an enclosure

Requirements for glass parts used as part of a dishwasher's enclosure have been added to Clauses 19.2.10 – 19.2.14.

Also in this issue

Page 2

- **UL 749 implementation and effective date**
- * **Spotlight: Letter From Domenico**

Page 3

- **Public Workshops**
- **Standard 2728A – Outline of investigation for Pellet Fuel Burning Cooking Appliances**

Page 4

- **UL Works With Industry to Propose an Effective Date Extension for UL 60335-2-40**
- **Spotlight : New Industry Video**
- **Spotlight : Recognized Plastics Material Identification**

Page 5

- **GMA Corner**

Page 9

- **Standards Corner**

[continued on page 2 >](#)

5. Heating element requirements

New requirements were added to Clauses 22.5.2 and 22.5.3 to address dishwashers that use in-line heating elements, where the element is not submersed in water, but rather is externally wrapped around the water pipe to heat the water while water flows through the pipe (similar in function as an instantaneous water heater) Sometimes these heating elements are part of the water circulating pump assembly and not in contact with water. Since these types of in-line heating elements are not submersed in water, compliance with the relevant requirements of UL 499, and the thermal endurance test in UL 1030, are considered to cover the safety attributes needed for use in household dishwashers. Therefore, heating elements (both sheathed and non-sheathed) that are not in contact with the water, can either comply with UL 1030, or UL 499 with the addition of compliance with the UL 1030 Thermal Endurance Test.

6. Appliances shipped from the factory without an outer enclosure installed

Clause 7.2.17 specifies marking requirements for appliances that are shipped from the factory without side or back panels, and Clause 8.1.1 requires a similar instruction. Presently, some dishwashers are shipped without the kick (toe) panel installed to allow access to the field wiring terminals for proper field wiring installation. This also prevents damaging the kick panel when removed for field wiring installation. These two clauses were revised to require the same type of marking and instruction for dishwashers that are shipped with the kick panel omitted.

UL 749 implementation and effective date:

Based on the nature of the new and revised requirements with respect to safety, **Action is Required** by all manufacturers to bring all UL 749

Certified Household Dishwashers into compliance with the requirements specified in the new 11th Edition of UL 749 by the effective date of **March 18, 2022**.

The **Summary of Requirements** for the 11th Edition of UL 749 is accessible via the following link:

Industry File Review

After clicking on the above link, you can use the “Effective Date Information and Summary of Requirements” section on the left-hand side of the webpage to search by standard number to locate the applicable documents.

If you have questions regarding the above, if you desire training, or if you would like to open a Preliminary Investigation project to learn more about these changes and how they may impact your UL Certified Household Dishwashers, contact Darrin Conlon at (631) 546-2872 or Darrin.Conlon@ul.com.

Spotlight: Letter From Domenico

UL continues to evolve with the appliances industry.

We are broadening our scope and providing new solutions to the changing needs of the industry for safety and beyond, including performance and reliability. An expanded portfolio of services and

expert staff enables UL to be your single-source solution partner for your regulatory and compliance needs, including customization of your projects and specialty services.

Easy access to the Global Market is driving strategy as the industry evolves toward global platforms. UL is able to provide you a wide spectrum of market access solutions. Most recently, UL became the first

third-party lab globally authorized by EOS to conduct testing according to the Egyptian Energy Efficiency and performance standards. Read more about how we can help you access the Arab Republic of Egypt in this issue! Stay tuned on the next steps in our global journey.

Domenico Chicco
Global Commercial Leader –
Appliances Industry

Upcoming education & training for the appliance industry

At UL's Knowledge Solutions, our goal is to help you develop safe, useful products that meet and exceed your customers' needs. Here you will find dozens of training courses taught by qualified instructors, both public workshops and online e-learning courses.

Public Workshops

Designing for Compliances to UL 60730: Automatic Electrical Controls for Household and Similar Use

3/26/19 Northbrook, IL

Safety of Household and Similar Electrical Appliances; General Requirements, IEC 60335-1, 5th Edition

5/22/2019 Northbrook, IL

Online e-Learning Courses

Available Anytime, Anywhere

Comparison of UL 60335-2-34, 4th Edition with UL 60335-2-34, 6th Edition

Diagnosing HVAC Lighting and Electrical Surge Failures

Energy Star[®] Requirements

To view a COMPLETE list of our public workshops and online courses, please visit UL.com/appliancestraining

Standard 2728A – outline of investigation for pellet fuel burning cooking appliances

By Jonathan Brania – Principal Engineer, Foodservice Sanitation + Gas & Wood-Fired Cooking Appliances + Chimneys and Associated Venting

After a brief hiatus, UL reissued its Outline of Investigation for Pellet Fuel Burning Cooking Appliances as UL 2728A. The outline covers forced or natural draft, automatic feed, pellet fuel-burning cooking appliances rated 120 V or less for outdoor residential use and 250 V or less for commercial use. The outline provides minimum requirements for the design, construction and performance of appliances that use pellet fuel combustion for cooking. The pellets

are often formed from sawdust or other wood particulates.

A key update for the document from the previous iteration relates to the use of interlocks to protect against unintended injury related to moving parts. Interlocks must now meet applicable requirements of UL 60730-1, Standard for Automatic Electrical Controls, Part 1: General Requirements, and UL 60730-2-12, Automatic Electrical Controls, Part 2: Particular Requirements for Electrically Operated Door Locks. In addition, combustion tests that were part of the previous outline have been removed from the document.

To purchase a copy of UL 2728A, visit <https://www.shopulstandards.com>. For more information about UL 2728A or to request a quote for evaluation, contact hvacquote@ul.com.



UL works with industry to propose an effective date extension for UL 60335-2-40

By Gary Johnson, Engineering Manager HVAC/R

In February 2019 UL issued a bulletin to advise subscribers of an effective date extension proposal for UL 60335-2-40, Household And Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers.

UL Standard 1995 and CSA Standard C22.2 No. 236 are currently scheduled to sunset on November 16, 2022 and November 30, 2022, respectively. The bulletin proposes the effective date be moved to January 1, 2024. Upon withdrawal of these standards, the latest versions of the bi-national UL/CSA Standard 60335-2-40 will become effective. Furthermore, new Listings or changes after January 1, 2024 will be mandated to use UL/CSA 60335-2-40. The intent of this proposal is to allow manufacturers the additional time necessary to prepare their products for compliance. This effective date change also better aligns with the Department of Energy (DOE) who has published new requirements that will take effect within the similar timeframe and also the California Air Resources Board (CARB) who has adopted legislation that prohibits the use of high-GWP HFCs refrigerants for USE and ULE equipment effective January 1, 2023 and chillers effective January 1, 2024.

Questions may be directed to **Gary Johnson** (Engineering Manager) or **Brian Rodgers** (PDE).

Spotlight: New industry video

Learn how UL helps you build consumer trust – view our new industry video [here!](#)

Spotlight: Recognized Plastics Material Identification (RPMI)

RPMI helps ensure safety and quality control by verifying the correct recognized material is used for a specified application, avoiding potential product failures and recalls. It is designed to help:

- Secure the integrity of the supply chain by confirming incoming Recognized Plastics for safety and quality control.
- Identify potentially mixed-up plastics.
- Identify potential formulation changes due to additives or blending with other plastics.

[Click here to learn more >](#)



GMA Corner

Indonesia – SNI Certification scope expansion for household appliances

By: Aslan Asri, Indonesia Global Market Access

UL’s Indonesia location expanded capacity in SNI certification, most significantly for household appliances, as part of the capacity building carried out by UL globally and in support of the Indonesian government program for safety and consumer protection.

The additional scope includes:

Products	SNI Standard	International Standard
Air Conditioning	SNI IEC 603352-40:2009	IEC 603352-40
Refrigerators	SNI IEC 603352-24:2009	IEC 603352-24
Washing Machines	SNI IEC 60335-2-7:2009	IEC 603352-7
Electric Fans	SNI 7609: 2011	IEC 603352-80
Audio Video (Television)	SNI 04-6253-2003	IEC 60065

In-country testing is needed for SNI certification. UL can now offer clients a one-stop solution service from testing to SNI certificate issuance by partnering with laboratories that have been accredited to the SNI scope.

It is important to note that for end-products that seek SNI certification, the plug and cable must also be SNI certified, and UL’s Indonesia laboratory has been a designated SNI certification organization for plug, cable and socket outlets for 2 years.

UL also offers services to obtain Energy Efficiency Labels from an appointed certification body as well as license and registration with Ministry of Energy and Mineral Resources, particularly for lamps and air conditioners.

How UL can help:

UL’s Indonesia laboratory helps both domestic and foreign manufacturers obtain SNI certification in a hassle-free process by helping overseas manufacturers overcome several challenges, including an inadequate understanding of requirements and regulations, language barriers and difficulties in remaining informed about market changes that occur. Finally, we can provide the same assistance to domestic industries seeking access to the global market.

By working with UL to address global market access requirements, manufacturers can leverage UL experts, services, and facilities around the world to achieve manufacturing goals in expanding marketing.





Saudi Arabia, SABER - SASO CoC reintroduced for all product categories except for gas appliances

New Technical Regulations soon to be introduced.

By Federico Picco - Saudi Regulatory Program Expert

The new SABER system introduced this January Saudi Standards, Metrology and Quality Organization (SASO) which should have replaced the SASO Certificate of Conformity scheme has been temporarily suspended by SASO.

SASO announced that Conformity Assessment Bodies are once again allowed to issue the “old” SASO CoCs for product categories in scope of their accreditations.

Only Gas appliances which fall under the scope of the “Technical Regulation for Gas Appliances and their Accessories” are mandatorily to be registered and certified (product certificate and shipment certificate) via SABER system.

SASO also announced that products in the scopes of the following Technical Regulations will mandatorily require product certification and shipment certification via SABER system for Saudi Market Access, **starting April 1st, 2019:**

1. Gulf Technical Regulations for Children’s Play
2. Gulf Technical Regulation for low voltage electrical equipment and equipment
3. Technical Regulations for Lubricating Oils

SASO still endorses the use of SABER system whenever possible, confirming that shipment certificates issued via SABER will be prioritized for customs clearance.

How UL can help

UL is authorized by SASO to issues SASO Certificates of Conformity.

UL has already 3 NCBs accredited on SABER system: UL LLC (US), UL Demko (EU), UL CCIC (AP).

UL also has Arabic speaking staff who are experts in SASO’s processes, on-line systems and requirements.

UL Gavirate: first Third Party Laboratory outside Egypt authorized by EOS

UL announced that its laboratory in Gavirate (Italy) is the first third-party lab outside Egypt authorized by the Egyptian Organization for Standardization and Quality (EOS) to conduct testing and issue relevant test reports according to Egyptian Energy Efficiency and performance standards.

The UL staff received this recognition to help with the increased need for non-Egyptian manufacturers to have a trusted partner to enter the Egyptian market in a safer, more sustainable way. This recognition involves main household appliances in several categories, including refrigerators, freezers, and fridge-freezers; washing machines and washer-dryers; dishwashers and electrical ovens, all of which represent the core business of UL's highly specialized Gavirate lab.

Recently, the process of accessing the Egyptian market was changed and reorganized. This reorganization occurred for a few key reasons. First, there was a need to better organize the Egyptian market and introduce clear norms and mechanisms for the trading of household appliances and lamps. Second, the EOS wanted to raise consumer awareness of the importance of efficient energy consumption and energy-consuming appliance. Finally, domestic versus imported products needed to be better controlled. For these reasons, the Minister officially released a decree aimed at creating uniformity and standardization in the market-access process.

Below are the key changes introduced by the decree and considered by

appliances manufacturers and importers wishing to introduce products in Egypt:

- Manufacturers are required to submit test reports issued by EOS accredited laboratories according to the applicable Egyptian standards (tests conducted by non-EOS recognized laboratories will no longer be accepted).
- Manufacturers or local importers can apply the EE Label only after approval by EOS and after the relevant energy efficiency license has been issued.
- EOS is the only organization authorized to issue an EE License and the relevant Energy Label.
- Manufacturers, importers and third-party bodies may apply for EE Certification following the EOS procedure.
- Each product can be tracked via the barcode on the label to allow anyone to verify that product has been registered.
- An online database of all certified products, where these products can be found through their barcodes, is available here: <https://eos-eg.net/search/generate>. A new online system will soon allow users to verify a copy of the EE License and of the relevant EE label.

In this scenario, becoming the first third party lab outside Egypt authorized by EOS is a great honour and represents a great opportunity for UL as it is the first European and global laboratory achieving this recognition.

Most importantly, this recognition represents an important benefit for manufacturers who work with UL as

they will be able to complete their safety certification process and obtain the EE Label from one trusted source. Additionally, they will only need to ship samples to one single location of an already well-known laboratory, making the entire process faster and easier than ever. Finally, UL customers will, in most cases, also be able to complete one single certification process to access different countries. So, both manufacturers who enter the Egyptian market for the first time and those who know this market already can find a great partner in UL.



continued on page 8 >

About UL

UL fosters safe living and working conditions for people everywhere through the application of science to solve safety, security and sustainability challenges. The UL Mark engenders trust enabling the safe adoption of innovative new products and technologies. Everyone at UL shares a passion to make the world a safer place. We test, inspect, audit, certify, validate, verify, advise and train and we support these efforts with software solutions for safety and sustainability. To learn more about us, visit UL.com.

Below are the main Egyptian Energy Efficiency and Performance Standards to which the Gavirate lab can conduct tests and issue relevant test reports:

- Standard for household refrigerators, refrigerators-freezers and freezers, ES 3794/2018
- Standard for residential dishwashers, ES 7820/2014
- Standard for household washing machines, ES 4100/2006
- Standard for domestic ovens, ES 8058/2017.

“With this new recognition, we are further expanding our testing and certification capacities in Europe to improve how we serve market demand,” said Domenico Chicco, global business development manager for UL’s Appliances division. “The creation of a European hub to cover all the Energy Efficiency and Performance testing needs of the appliances sector allows us to offer high-performance services to European manufacturers locally and to global ones in general, which simplifies the process by providing testing and certifications from a single source.”

Europe – European Product Database for Energy Labeling EPREL

By Elena Andreula – EMEA Regulatory Program Expert

As of January 1, 2019, suppliers (manufacturers, importers and authorized representatives) must register their appliances, which requires an energy label in the European Product Database for Energy Labelling (EPREL), before selling them on the European market.

Article 12 and Annex I of the Regulation 2017/1369/EU specifies product information to be entered in the database.

Prior to registration, suppliers must create a login account. The EPREL guidelines explain how to register as a new supplier and how to upload product models in the database.

The EPREL system is made of two parts:

- A compliance part: A secured database hosted by the European Commission where all data is stored before any product model is placed on the EU market; this database is accessible only to market surveillance authorities.
- A public part: A database that includes relevant public information on product models available on the EU market that can be access by anyone.

Important dates

All new products subject to energy labeling placed on the EU market after **January 1, 2019** must first be registered in the database.

For products placed on the EU market between August 1, 2017 and January 1, 2019, the registration must be completed by **July 1, 2019**.

For products placed on the EU market before August 1, 2017, their registration is made on a **voluntary basis**.

Consumers will be able to search the EPREL database for energy labels and product information sheets beginning the **second quarter of 2019**.

How UL can help you

UL can help you remain compliant and build trust with your customers by delivering reliable third-party testing for appliances. It’s increasingly important for manufacturers to have trusted energy efficiency data, and UL is expertly qualified to help companies demonstrate that their products meet the essential requirements of Energy Labelling Regulation (EU) 2017/1369.

Standards Corner

By Joe Musso, Standards Program Manager

Click here for Standards information
Register for “What’s New” to receive emails twice a month indicating the new published UL Standards, Outlines, and Proposals.

STP 325 – door, drapery, gate, louver, and window operators and systems

– A set of 11 proposals was circulated for ballot Q3 2018. Nine of the topics reached consensus, but with seven topics receiving comments that need to be recirculated. Comment resolution is still active, with recirculation expected Q1 2019.

STP 484 – room air conditioners

– A new proposal topic covering a revision to dielectric strength test requirements was circulated for preliminary STP review January 4, 2019, closing February 4. The proposal received minimal comments and will be balloted in March.

STP 507 - electric fans

– The task group formed to continue work on a proposal submitted from the CPSC to include a new thermal condition performance test for unattended fans continues to make

progress. CPSC is leading the task group, which completed development of a proposal for consideration by the STP and public. The proposal was discussed at the STP 507 Meeting on February 26, 2019, in Clearwater Beach, FL.

STP 749 – household dishwashers

– The new (11th) Edition was published November 20, 2018. The next revision cycle has not been initiated.

STP 858 – household electric ranges

– Two new proposals, including an update to the surface element turn-off requirements and a clarification for the off marking and heat setting requirement, were posted for ballot Q4 2018. Both topics reached consensus, with several comments received on the surface element topic; that topic will need to be recirculated during Q1 2019.

New joint task group being formed!

A joint task group (JTG) is being formed to develop requirements that address the potential hazards

associated with user interface (UI) / actuators / components / sensors that are intended for use on household electric and gas cooktops, either independently or as a system. Using a system approach, the proposed requirements are intended to focus on the interoperability and interaction of these devices with the end-use appliance, so there is not an increased risk of fire when these devices are used with the appliance. Examples of devices include, but are not limited to, after-market appliance controls, voice-operated controls, and remote software updates using the UL 5500 requirements.

STP 923 – microwave cooking appliances

– The revisions intended to address the potential risks associated with handling hot food and beverage items by young children in connection with microwave oven usage were published February 13, 2019. This proposal is the result of a task group that worked diligently to get to this point. A separate revision to add requirements for smart-enabled microwave ovens was published January 3, 2019.

[continued on page 10 >](#)



STP 982 – motor-operated household food preparing machines

– A series of 9 new proposal topics was posted for STP ballot in Q3 and Q4 2018. Topics address requirements related to the following:

- Clarification of applicability of self-holding protector abnormal operation test
- Smart enabled machines
- Vacuum blender
- Feed opening accessibility
- Electric knife unintentional operation
- Interlocked blender cover opening equivalent area
- Food processors with momentary contact switch
- Input test
- Soup making blenders

Save the date!

Comments received during STP ballot of the above topics will be discussed at an STP 982 Meeting on April 25, 2019, at UL's Northbrook Office.

STP 1017 - vacuum cleaners, blower cleaners, and household floor finishing machines

- A new revision cycle is underway. Work is ongoing, with the next THC meeting scheduled for March 2019. Once the compiled draft proposals are ready, the next step will be to circulate the document for review by the consensus bodies and public.

STP 2595 – general requirements for battery-powered appliances

– The new (3rd) edition of UL/CSA 2595 has been developed and was circulated for preliminary STP review in 2018. The new edition will integrate, update and clarify a number of requirements related to maximum rated voltages, use of general purpose batteries, general conditions of test requirements, normal charging of lithium-ion systems, power switches and products powered or charged by universal serial bus (USB) power sources. A significant number of comments were received, which are currently being considered by the Technical Harmonization Committee. It is anticipated that the proposed new edition will be posted for ballot in the first quarter of 2019.

STP 60335-2-40 – household and similar electrical appliances – safety – part 2-40: particular requirements for electrical heat pumps, air-conditioners and dehumidifiers

– The international harmonization working group (CANENA 61D Work Group 10) addressed preliminary review comments received on the initial draft of the proposed new (3rd) Edition. Upon completion of that work, the proposed new edition was circulated for STP ballot with a closing date of February 5, 2019. The proposed new edition reached consensus with comments. The working group will now hold a series of meetings to review and address all ballot comments prior to recirculation, likely in Q2 2019.

2019 Tradeshows and Webinars:

Contact UL industry experts if you would like to arrange an in-person meeting at any of the listed tradeshows or if you have any general questions. We're here to help.

National Restaurant Association (NRA) Show 2019

May 18-21 - Chicago, IL

Kitchen & Bath China Show 2019

May 27-30 - Shanghai New International Expo Centre (SNIEC), CN

Webinar: RoHS 2 Directive and the New Requirements for Phthalates in Electrical and Electronic Equipment

June 11, 2019 – 9:30AM (CST)

Recorded Webinars:

Furnace Fan Energy Rating

Furnace fans are among the largest users of electricity in a typical household, consuming nearly 10 percent of an average household's electricity use or about 1000 kWh of electricity per year. In 2014, the US DOE established the first national efficiency standard for furnace fans. The new standard, which will take



effect on July 3, 2019, specifies a maximum Fan Energy Rating (FER) that varies based on the airflow provided by the furnace fan. This webinar will explore the new standard detail the testing used to qualify furnace fans.

[Click here to view the recorded webinar >](#)

NOx Testing

UL is a globally recognized organization that helps manufacturers get their products to market. The California market is densely populated and NOx

emission is becoming a greater concern for this region. For gas-fired products, such as furnaces, boilers and water heaters, it is mandated by South Coast Air Quality Management District that these products operate at low NOx performance levels. Our Toronto Gas Lab is fully equipped to handle this requirement in a timely and economical manner. Please join us as we provide an in-depth discussion on NOx testing and UL's offerings.

[Click here to view the recorded webinar >](#)

 Like UL on facebook

 tweet UL @ULDIALOGUE

 Connect with UL on LinkedIn

 UL Videos on YouTube

Share your insights: appliance.advisor@ul.com
Sign up at: connect.ul.com/ApplianceAdvisor
Find more: UL.com

UL and the UL logo are trademarks of UL LLC © 2019.
2019 issue 1

