Safer Gas for a Safer Future

By UL

To speak to a knowledgeable UL team member about how to meet the new GAR requirements, please contact UL by visiting http://contact.ul.com/contact-ul-appliances.

In 1993, as part of an effort to improve the safety of gas appliances entering the European market, the Gas Appliance Directive (GAD) was introduced. This directive applied to manufacturers of appliances that burn gaseous fuels for cooking, heating, producing hot water, refrigerating, lighting or washing and helped establish a clear path for market entry into Europe. As a next step, the GAD was established formally as the Gas Appliance Regulation (GAR), on April 21, 2018. This change represents an important shift in the way gas equipment will be regulated by the European Union (EU).

As with the GAD, the GAR applies to manufacturers of equipment and accessories that burn gaseous fuels and helps ensure that these products are as safe as possible before reaching the market, but there are differences to keep in mind.

From GAD to GAR: Key Changes to Note

In the EU, directives are agreed to at the federal level but each member nation is free to determine how to best meet the targets and requirements. A regulation, however, does not allow for this variability or flexibility and it must be applied in its entirety by each member nation. With this in mind, the recent transition to GAR means that the status of the requirements has been changed from national law to EU law, which introduces some substantial changes to the steps required to enter the EU market, including:

- A risk assessment must be performed for all covered products. Manufacturers must document the assessment and clearly factor in both foreseeable and improper use. The hazards presented by certain appliances may be unique but, with regards to gaseous fuels, manufacturers should consider explosion, fire, hot surface temperature, suffocation and poisoning due to both combustion gases and food and/or water contamination.
- Manufacturers must use the findings from this assessment and attempt to eliminate the risk or reduce the danger while also implementing safeguards and alerting the customers of these risks.
- Manufacturers and notified bodies bear the responsibility of verifying that certified products meet the evolving "state of the art" requirements.

It is also important to note that

EN standards for gas appliances introduce some unique European elements, such as terminology, the nomenclature for the designation of the apparatus and a larger number of test gases designed to better reflect the composition of those fuels typically used in various EU countries.

A Guide to Help You Remain Prepared

The evolution from GAD to GAR demonstrates two important aspects of compliance. First, it is clear that the EU remains committed to safety and will likely continue to determine the best way to help ensure that only the safest products make it to market. Second, it illustrates why it is important to remain aware of updates and changes within the regulatory landscape as requirements evolve with the industry.

One of the easiest ways to stay

up-to-date with changing regulations while also working to support your goals of remaining compliant and meet all relevant requirements is by engaging a knowledgeable third party, such as UL, to help guide you through the process. At UL, gas appliances and equipment are generally tested using two main testing stations. These stations can be used both independently or simultaneously, and all proceedings are controlled by an electronic system that allows the laboratory technicians to select the most suitable gas for the test.

A ventilation control supports the safety of all laboratory technicians and monitors the air quality in the test zone. The laboratory facilities use equipment tested up to 70 kW fueled by the complete range of applicable European and American gases. Depending on the testing need, the equipment uses a cylinder with the correct gas mixture, or creates the appropriate gas combination with a mixer. This mixture is then measured by a gas chromatograph that allows for the assessment of the most important physical characteristics: density, specific weight, calorific value, and Wobbe index.

UL's laboratories are designed to be flexible to accommodate different conditions and tests – including thermal input, efficiency, temperature control, combustion analysis under various conditions and structure resistance – for multiple standards. Currently, UL is equipped to test gas appliances in accordance with the standards of various markets around the world, including:

- Europe: EN 30 (stove, hob, domestic oven); EN 203 (catering appliances, ovens, fryers); EN 484 – EN 497 – EN 498 (outdoor appliances, barbecues); EN 298 (automatic control system for gas burners); EN 13611 (safety and control devices for gas burners and gas appliances); EN 12067-2 (control of gas/air ratios in gas burners and gas appliances)

- America and Canada: ANSI Z21.1-2016; CSA 1.1- 2016 (domestic gas cooking appliances); ANSI Z83.11-2016; CSA 1.8-2016 (gas catering service appliances)
- The Middle East: SASO 167-168 (domestic cooking appliances); GSO 1049-1050

These facilities are ISO 17025 accredited by IAS, and are designed to help customers achieve the CE mark in conformity with the GAR.

Certified Quality

In September 2017, UL was accredited as a Notified Body (NB) for gas appliances, becoming a market reference point for all manufacturers looking for a guide to help them navigate market access requirements for gas appliances. Global labs and regional expertise help offer timely service and decreased time to market.