

Are You Ready?

# EU RoHS DIRECTIVE UPDATE FOR ELECTRICAL PRODUCTS

The newest update to the EU RoHS Directive 2011/65/EU, known as "RoHS 2" has added another four substances to the original list of six. Intertek's suite of RoHS compliance services provides comprehensive solutions to meet your electronic and electrical equipment product requirements.



## Overview and Comparisons

The original RoHS, known as Directive 2002/95/EC, was published in the European Union (EU) in 2002 and restricts the use of six hazardous materials found in electrical and electronic products (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, and polybrominated diphenyl ethers). The scope of the directive covered 8 product categories (1-7; 10). All applicable products in the EU market since July 1, 2006 must pass RoHS compliance.

The RoHS 2 directive (2011/65/EU) is an evolution of the original directive 2002/95/EU which became law on 21 July 2011 and took effect on 2 January 2013. While the list of chemicals listed in the original directive did not change, the scope of products expanded to add categories 8 and 9. Another key development is the addition of product category 11, a catch-all for electronic and electrical equipment. Category 11 impacts wires, cables, and associated connectors used for internal and external purposes. Since RoHS 2 incorporates a CE marking directive, additional record keeping requirements became mandatory to demonstrate compliance.

In 2015, the EU Commission published Directive 2015/863 to amend Annex II of RoHS 2. Coming into effect on 22 July 2019, this amendment added four phthalates to the list of restricted substances. These new substances (known as substances of very high concern and regulated under REACH) are Bis(2-ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP), and Diisobutyl phthalate (DIBP).

## RoHS Substances

EU RoHS specifies maximum concentration levels in any homogeneous material for the following 10 substances.

Original 6 substances (2011/65/EU):

1. Lead(Pb) : 0.1% / 1000 ppm
2. Mercury: 0.1% / 1000 ppm
3. Cadmium(Cd): 0.01% / 100 ppm
4. Hexavalent chromium (Cr6+): 0.1% / 1000 ppm
5. Polybrominated Biphenyls (PBB): 0.1 % / 1000 ppm
6. Polybrominated Diphenyl Ethers (PBDE): 0.1 % / 1000 ppm

Additional 4 substances ((EU) 2015/863):

7. Bis(2-Ethylhexyl) phthalate (DEHP): max 0.1% / 1000 ppm
8. Benzyl butyl phthalate (BBP): max 0.1% / 1000 ppm
9. Dibutyl phthalate (DBP): max 0.1% / 1000 ppm
10. Diisobutyl phthalate (DIBP): max 0.1% / 1000 ppm

## Who is Affected?

RoHS impacts the entire electronics industry. Any business that places electronic products, sub-assemblies or components onto the EU market must comply with the RoHS requirements. Accordingly, new products manufactured in the Union, and all products and components imported from third countries, must meet the provisions of the applicable Union harmonisation legislation when made available for the first time on the Union market.

**\*Note:** medical devices and/or monitoring and control tools will have an additional 2 years to fully comply with the phthalate restrictions.

## Recommended Next Steps for Manufacturers

Electronics manufacturers will be required to keep records to prove compliance, and they must hold onto these records for a minimum of 10 years.

## What is needed to support your CE Technical file?

- Quality Management Systems to support Design, supplier qualification and manufacturing to mitigate risk
- Due Diligence that supports compliance documentation for all components and materials in the finished product
- Conformity Assessment to identify remaining risk and risk mitigation strategies for high risk suppliers and materials/components

## How We Can Help

### Our Solutions:

- RoHS Technical File Documentation Support
- RoHS Consulting
- RoHS Bill of Material (BoM) Assessments
- RoHS Compliance Assurance
- RoHS Testing
- RoHS XRF Screening
- CE Mark Compliance Support
- RoHS Education and Training

## The Intertek Advantage

Intertek is a leading Total Quality Assurance provider to industries worldwide. Our network of more than 1,000 laboratories and offices and over 44,000 people in more than 100 countries, delivers innovative and bespoke Assurance, Testing, Inspection and Certification solutions for our customers' operations and supply chains. Intertek Total Quality Assurance expertise, delivered consistently with precision, pace and passion, enabling our customers to power ahead safely.

**Total Quality. Assured.**

