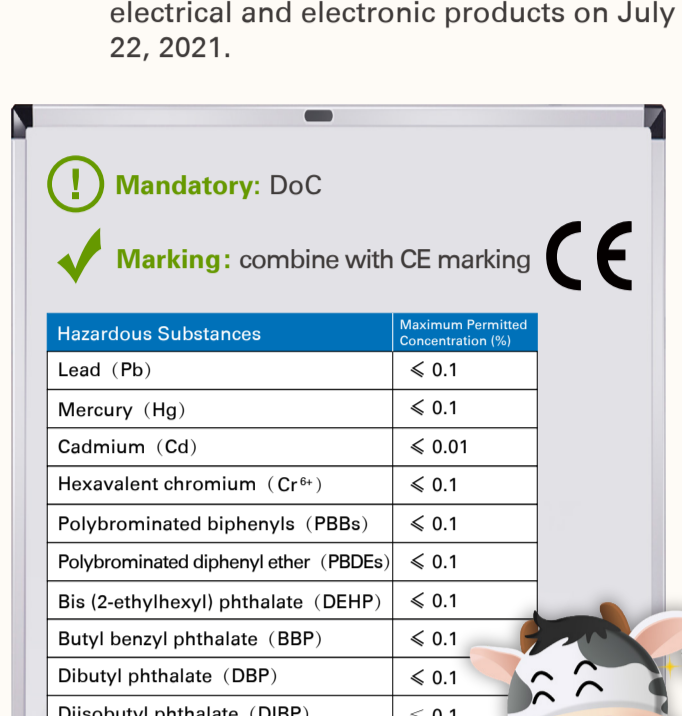


# Go Green! Go RoHS!

## Guide to Entering the Blue Ocean

The EU's Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive restricts the use of hazardous substances in electrical and electronic equipment to protect the environment and public health. With the rise of global environmental awareness, countries /regions all over the world have incorporated RoHS into their specifications.

TÜV Rheinland summarizes the RoHS requirements in various countries/regions, helping you to enter the new blue ocean.



## European Union

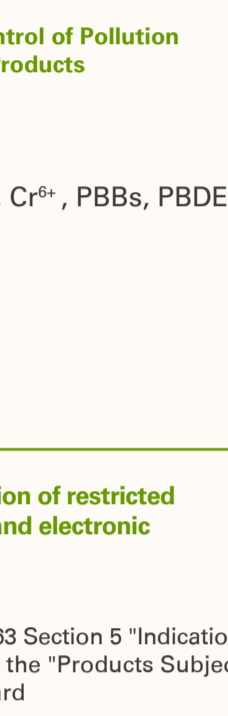
### EU RoHS

Since July 21, 2011, the EU's Restriction of Hazardous Substances in Electrical and Electronic Equipment (2011/65/EU, EU RoHS 2.0) has been in effect, targeting six hazardous substances in electronic and electrical products, including lead, cadmium, mercury, hexavalent chromium, and brominated flame retardants (PBBs /PBDEs). The amendment (EU) 2015/863 was issued in 2015, including controls on four phthalates (DEHP/BBP/DBP/DIBP). The amendment took effect for all types of electrical and electronic products on July 22, 2021.

**Mandatory:** DoC

**Marking:** combine with CE marking

Hazardous Substances	Maximum Permitted Concentration (%)
Lead (Pb)	≤ 0.1
Mercury (Hg)	≤ 0.1
Cadmium (Cd)	≤ 0.01
Hexavalent chromium (Cr <sup>6+</sup> )	≤ 0.1
Polybrominated biphenyls (PBBs)	≤ 0.1
Polybrominated diphenyl ether (PBDEs)	≤ 0.1
Bis (2-ethylhexyl) phthalate (DEHP)	≤ 0.1
Butyl benzy phthalate (BBP)	≤ 0.1
Dibutyl phthalate (DBP)	≤ 0.1
Diisobutyl phthalate (DIBP)	≤ 0.1



## Asia

### China RoHS

**Administrative Measure on the Control of Pollution Caused by Electronic Information Products**

**Mandatory:** Certificate

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

**Marking:**

### Taiwan BSMI RoHS

**Guidance of CNS 15663 on reduction of restricted chemical substances in electrical and electronic equipment**

**Mandatory / Certificate:** Incorporate CNS 15663 Section 5 "Indication of Containment" into the "Products Subject to Inspection" standard

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

**Marking:**

RPC scheme				
TABI scheme				
DOC scheme				

### Japan RoHS (J-Moss)

The name J-Moss is a combination of the initial for "Japan" and an acronym of the JIS C 0950 title "The marking for presence of the specific chemical substances for electrical and electronic equipment" and the Japanese Recycling Law (Law for Promotion of Effective Utilization of Resources)

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

**Marking:**

### South Korea RoHS

**Act for Resource Recycling of Electrical /Electronic Products and Automobiles**

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs, DEHP, BBP, DBP, DIBP

**No marking**

### Singapore RoHS

**Order 263/2016 (Amendment to Environmental Protection and Management Act, 2002)**

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

**No marking**

### India E-Waste

**E-Waste (Management) Rule, 2016**

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

**No marking**

### Bangladesh RoHS

**Electrical and Electronic Waste (E-waste) Management Rules**

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs, DEHP, BBP, DBP, DIBP

**No marking**

### Turkey RoHS

**Control of Waste Electrical and Electronic Equipment Regulations**

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

**No marking**

### Vietnam RoHS

**Hazardous Substances in Electrical and Electronic Equipment, Circular No. 30/2011/TT-BCT**

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

**No marking**

## Middle East

### Saudi Arabia SASO RoHS

**Technical Regulation for Restriction of Hazardous Substances in Electrical and Electronic Equipment**

**Mandatory:** SALEEM certificate

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

**No marking**

### UAE RoHS

**UAE RoHS - Decision No. 10/ 2017 Mandatory ECAS certificate of conformity or EQM mark**

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs, DEHP, BBP, DBP, DIBP

**Marking:** (No need for ECAS mark for products that require only RoHS)



## Europe

### EAC EAEU EAC RoHS

**TR EAEU 037/2016 On restriction of use of hazardous substances in products of electrical engineering and radio electronics**

**Mandatory:** DoC or combine in product CoC

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

\*There was a draft issued on October 25, 2021, with plans to add DEHP, BBP, DBP, and DIBP as Restricted Hazardous Substances. The draft will take effect 180 days after its official announcement.

**Marking:** Combine in product certificate



### Ukraine RoHS

**Technical Regulation Decree No. 139**

**Mandatory:** DoC

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs, DEHP, BBP, DBP, DIBP

**Marking:** Combine in product certificate

### United Kingdom UK RoHS

**Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations, SI 2012/3032**

**Mandatory:** DoC

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs, DEHP, BBP, DBP, DIBP

\* UK RoHS: Only applicable to England, Wales, and Scotland, not applicable to Northern Ireland

**Marking:** Combine in product certificate



## North America

### USA

**California RoHS:** The Electronic Waste Recycling Act (S.B.20 and S.B.50)

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>

**California Lighting Efficiency and Toxics Reduction Act (AB 1109)**

**Restricted Hazardous Substances:** Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs, PBDEs

Other US states that have issued similar RoHS regulations include Colorado, Illinois, Indiana, Minnesota, New Mexico, New York, Rhode Island, and Wisconsin.

In addition, Moldova, Serbia, Cyprus, Montenegro, Switzerland, Bosnia and Herzegovina, Jordan, etc. all have similar mandatory requirements for RoHS. Thailand, Mexico, etc. have formulated RoHS voluntary standards and regulations; Oman, Australia, Argentina, Brazil, Nigeria, etc. have drafted similar RoHS regulations.

TÜV Rheinland Greater China provides IEC 62321 RoHS restricted substances screening and testing services, as well as RoHS compliance declaration application services for different countries/regions.

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