

REACH & RoHS

**Awareness
presentation**



REACH and RoHS overview

- The European REACH Regulation (**R**egistration, **E**valuation, **A**uthorisation and **R**estriction of **C**hemicals) aims to ensure that more is known about the chemicals being used in the EU and, where necessary, restricting or prohibiting the use of higher risk substances to avoid adverse affects to human health or the environment. With REACH, the EU Commission also hopes, amongst other things, to reduce the need for animal testing (as producers and users will be required to share their test results) as well as spurring innovations in new chemicals.
- The European RoHS Directive on the **R**estriction of the use **O**f **H**azardous **S**ubstances in Electrical and Electronic Equipment (EEE) lays down rules with a view to contributing to the protection of human health and the environment, including the environmentally sound recovery and disposal of waste EEE.
- Several other countries have implemented similar regulations as the European REACH and RoHS, but the European is the most restricted.

What is European REACH?

Applicable for:

- The substances regulation is applicable for **all** Johnson Controls products having the possibility to be sold in Europe – and thereby it affect a majority of Johnson Controls suppliers.

Requirements:

- Suppliers need to inform customers if one or more of 170* specific **S**ubstances of **V**ery **H**igh **C**oncern are present in products/parts with concentration higher than 0.1% weight/weight. According to recently court rule this threshold is also applicable for sub-article (parts).
 - *With this information available, customer has the possibility to change supplier before the substances may get banned.*
- More than 70* specific and restricted substances are not allowed to be used at all, after a so-called sunset period – fixed date.
- More than 30* specific substances are not allowed to be used at all, unless they are listed on the authorization list – allowed for specific use.

* Number increase each half year.

What is European RoHS

Applicable for:

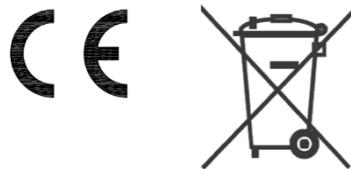
- The substances regulation is applicable for all electrical and electronic equipment and products containing electronic components, having the possibility to be sold in Europe.

Requirements:

- Suppliers are according to this Directive required to remove the following contents from deliverables:
 - Lead (0.1%*), Mercury (0.1%*), Cadmium (0.01%*), Hexavalent chromium (0.1%*), PBBs (0.1%*) and PBDEs (0.1%*)
 - From 2021 additional: DEHP (0,1%*), BBP (0,1%*), DBP (0,1%*) and DIBP (0,1%*)

* Indicates maximum concentration values tolerated by weight in homogeneous materials.

- A Declaration of Conformity (DoC) must state compliance with RoHS and products/parts in scope must be labeled.



Request and differences in declarations, pros/cons

Our requests from suppliers:

- Johnson Controls will request both a **Full Material Disclosure** – FMD and a **Supplier Declaration** from its suppliers.
- Due to the difficulties to create a FMD, Johnson Controls accept postponement of this requirement until the end of 2017.

Full Material Disclosure

- + Easy for your customers to search for customer-specified substances
- + Easy for your customers to search for restricted substances for other regulations
- + No need for regular updates to customers
- ÷ More demanding to create
- ÷ Require staff with chemical knowledge or understanding for evaluation
- ÷ Require suitable tool to proceed xml-files
Tool provided by Johnson Controls can be used.

Supplier Declaration

- + Easy to deliver
- + Easy to make
- + Do not require staff with chemical knowledge
- + Do not require special tool to proceed
- ÷ Cannot be used by customers to search for customer specified substances
- ÷ Cannot be used by customers to search for restricted substances for other regulations
- ÷ Need continuously update for customers

REACH & RoHS Resources

REACH definition and understanding of REACH:

- ❑ European Chemical Agency:
<http://echa.europa.eu/regulations/reach>
- ❑ European Commissions web site – REACH:
http://ec.europa.eu/environment/chemicals/reach/reach_en.htm



ROHS definition and understanding of ROHS:

- ❑ European Commissions web site RoHS:
http://ec.europa.eu/environment/waste/rohs_eee/index_en.htm

Possible tools for creation of IPC 1752A Class D full material disclosure:

- The following web site have references to several tools which can be used to create requested IPC 1752A Class D xml-fil:
<http://www.ipc.org/ContentPage.aspx?pageid=Materials-Declaration>