

Guide for Suppliers to the ABB List of Prohibited and Restricted Substances

This document is valid as of 2013-09-09

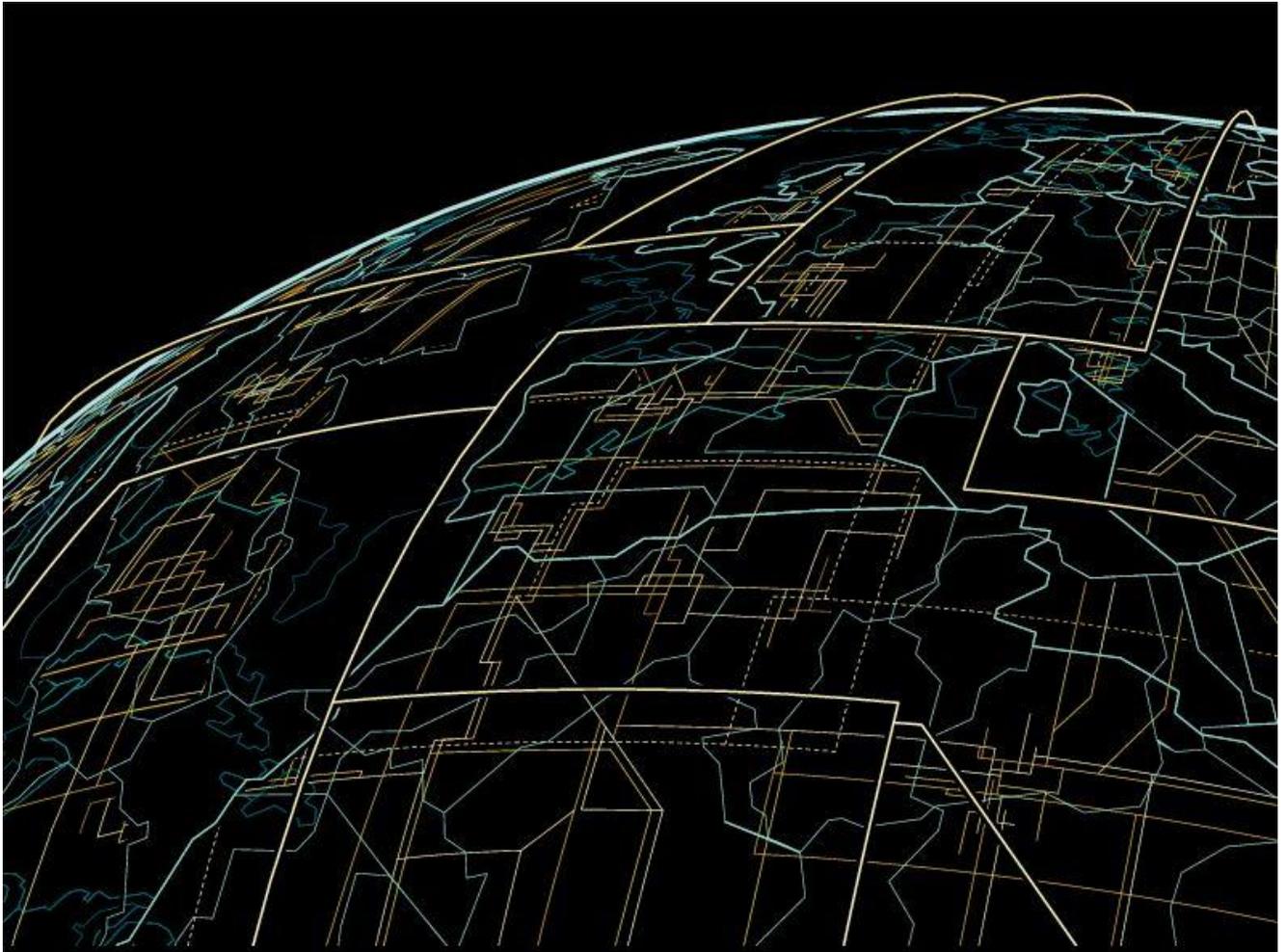


Table of Contents

1	Disclaimer	3
2	Definitions	3
3	Introduction	4
4	Supplier Obligations	4
5	Structure of the ABB List	5
6	Restricted Substance Classification	5
7	Legal Background	6
	7.1 Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)	6
	7.2 Restriction of the use of certain Hazardous Substances (RoHS)	6
8	Changes to the ABB List	7
9	Revisions	7
10	Legal references	8

1 Disclaimer

The information contained in this Guide is of a general nature and is principally intended to provide information in support of the ABB List of Prohibited and Restricted Substances, hereinafter also referred to as the “ABB List”. ABB suppliers shall be responsible for consulting the ABB List when issuing an ABB purchase order. The latest version of the ABB List is available at www.abb.com - Supplying to ABB. It should be noted that this Guide is not intended to address specific circumstances of any particular individual or entity.

Furthermore, liability claims cannot be derived from referencing this Guide or the ABB List. Nor do the contents of this Guide, or the ABB List, relieve parties from their obligation to comply with the laws and regulations regarding prohibited, restricted and/or hazardous materials, including any resulting additional prohibitions or application limitations.

2 Definitions

Homogenous Material	Material of uniform composition throughout or a material consisting of a combination of materials that cannot be disjointed or separated into different materials by mechanical actions (e.g. unscrewing, cutting, crushing, grinding and abrasive processes).
Materials	Substances or preparations in a finished state for use in the manufacture of products/articles.
Parts	Single components consisting of one or more homogenous material(s). <i>Example: an electronic device (e.g. a capacitor) to be used in a control equipment</i>
Preparations	Mixtures or solutions composed of two or more substances. <i>Example: paint</i>
Products / Articles	Materials or preparations transformed during production to take on a specific shape, surface or design, thereby enhancing their function. <i>Example: control equipment</i>
Substances	Chemical elements and their compounds found in their natural state or obtained by any manufacturing process <i>Example: lead chromate</i>

3 Introduction

The purpose of the supplier Guide to the ABB List, is to provide ABB suppliers insight into international regulations, including the regulation on the **Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)** and the directive on the **Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS)**, set by the European Union. Furthermore, this guide offers support for the interpretation of the ABB List.

Overall, the ABB List has been compiled in order to comply with legislation requirements, to ensure a high level of protection for human health and the environment, and to manage risks encountered by chemicals present in various products. The Substances included in the ABB List have been selected based on an evaluation of their likely presence in a material or part supplied to ABB and incorporated in an ABB product. Certain circumstances may prohibit the use of a substance in specific applications. Therefore, a case by case examination is required in order to identify and declare prohibited and restricted substances to ABB.

The validity date for ABB List applies to purchase orders accepted as of this date.

4 Supplier Obligations

All suppliers to ABB are required to disclose information regarding products/parts/material supplied to ABB that contain any substances included in the ABB List. Under these circumstances, information must be reported to the local ABB contact person.

What information needs to be reported to ABB?

- Declaration of substances included in the ABB List
- Product name/identity/weight
- Part name/identity/weight
- Material name (e.g. name of alloy, polymer or other mixture)
- Concentration of substance in part or if no parts are present in the product (percentage per weight).

The example below summarizes the necessary disclosure information for identified substances.

Substances included in the ABB List (include CAS-no. if known)	Product name	Product identity	Product weight (kg)	Part name	Part identity	Part weight (kg)	Material name	Conc. of substance in part (% w/w)
Lead, CAS no 7440-43-9	Switch	NHP101	2.0	Contact arm	NHP101P001	0.1	RD 10 MS-CU ZN39 PB3 F44	3.5
PPB	Housing	NHP102	0.2				POLYAMIDE	7
DBP	Cable	NHP103	0.1	Cable insulation	NHP103P002	0.5	PVC	20

5 Structure of the ABB List

Below is an overview of the structure provided in the ABB List, including detailed explanations of its content:

Substance name	Name of chemical elements, chemical compounds, substance or materials.
CAS no.	CAS Registry Numbers are unique numerical identifiers assigned by the Chemical Abstracts Service to every chemical described in the open scientific literature (currently including those described from at least 1957 through the present) and including elements, isotopes, organic and inorganic compounds, ions, organometallics, metals, non-structural materials.
Risk	The reason for a chemical, substance, or material to be on this list, is its inherent properties that makes it hazardous to humans or the environment.
ABB classification	Classification of chemical in this list (see also further below): P – Prohibited or R-Restricted regarding limitation of use. NOTE: <u>A chemical may be Restricted in certain applications and Prohibited in others.</u>
Threshold value	If nothing else stated, a threshold value of 0.1% w/w (weight/weight) applies. “Sunset date” corresponds to the date after which use of the substance in the EU must stop (i.e. the chemical is prohibited, unless authorized by EU). NOTE: <u>If products supplied to ABB include any of these substances, regardless of concentration, ABB shall be informed, following the procedure described under chapter “Supplier Obligations” above.</u>
Legislation	Reference to legislation provides further information on the substance, regulated applications, exceptions and threshold values.
Example of application/s	Example of applications where a specific chemical, substance or material is used.
Comments	Additional comments regarding the substance, i.e. if covered by REACH or RoHS.

6 Restricted Substance Classification

Disclosure is required for materials or parts which contain substances reported on ABB List, classified as Prohibited “P” or Restricted “R”, and can be found in an ABB product or during the manufacturing of this product. The definitions of prohibited and restricted are as follows:

P = Prohibited – A substance designated “P” is prohibited by regulation for use in certain or all applications.

R = Restricted – A substance designated “R” must always be declared, if the concentration in part/article exceeds the defined threshold limits this shall be reported as well.

Depending on its specific application, the same substance may be classified “P” in one circumstance, and “R” in another. In such cases, both classifications are presented with further explanations in the Threshold value column of the ABB List. Threshold values depend on the specific application, in order to fulfill legal compliance a case by case assessment shall be performed in cooperation with ABB.

7 Legal Background

REACH and RoHS are the primary legal references for the ABB List. Additional references and legislation can be found in the ABB List.

7.1 Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

What is the purpose of REACH?

The EU Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) entered into force on 1 June 2007. The purpose of this regulation is to ensure high level protection of human health and the environment. This regulation enhances the industry's responsibility to manage the risks from chemicals and to provide safety information on the substances present in various products. To ensure safe handling, manufacturers and importers are required to gather and disclose information regarding the properties of chemical substances.

What is the Candidate List?

The Candidate List compiles substances identified as Substance of Very High Concern (SVHC). SVHC is defined by meeting one or more of the following criteria:

1. Carcinogenic, Mutagenic or Toxic for reproduction
2. Persistent, Bioaccumulative and Toxic (PBT)
3. Very Persistent and very Bioaccumulative (vPvB) or
4. "Scientific evidence of probable serious effects to human health or to the environment that give rise to an adequate level of concern"

The use of SVHC within the European Union may be subjected to authorization under REACH. This means chemical substances are under evaluation and in the future may be prohibited to use within EU, unless authorized for a specific use. Substances in products imported are not subject to authorization. However, declaration is always required.

What to do?

For articles containing substances from the Candidate List in a concentration above 0.1% by weight, suppliers must inform their EU customers and provide relevant safety information regarding which articles contain the substances included in the Candidate List.

7.2 Restriction of the use of certain Hazardous Substances (RoHS)

What is the purpose of RoHS?

The purpose of the EU Directive on the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS) is to restrict the use of hazardous substances in electrical and electronic equipment. The directive applies to Electrical and Electronic Equipment (EEE) designed for use with a voltage rating not exceeding 1 000 volts for alternating current and 1 500 volts for direct current. The table below summarizes the substances and maximum concentration values tolerated by weight in homogeneous materials.

RoHS restricts the use of the following substances:

Substance	Maximum concentration of the substance in Homogenous Materials (by weight %)
Cadmium	0.01%
Hexavalent chromium	0.1%
Lead	0.1%
Mercury	0.1%
Polybrominated biphenyls (PBBs)	0.1%
Polybrominated diphenylethers (PBDEs)	0.1%

The Directive applies to the following categories:

1. Large household appliances.
2. Small household appliances.
3. IT and telecommunications equipment.
4. Consumer equipment.
5. Lighting equipment.
6. Electrical and electronic tools.
7. Toys, leisure and sports equipment.
8. Medical devices.
9. Monitoring and control instruments including industrial monitoring and control instruments.
10. Automatic dispensers.
11. Other EEE not covered by any of the categories above.

What to do?

The new RoHS is a CE mark directive, meaning that CE marking must be affixed to all finished products covered by RoHS. As a result, electrical or electronic product will not only need to comply with e.g. the low voltage directive or the electromagnetic compatibility requirement, but also with RoHS. If RoHS compliance is not assured, the application of the CE mark will violate EU law.

8 Changes to the ABB List

The ABB List of Prohibited and Restricted Substances will be updated and published annually in order to achieve a high standard of product safety and environment protection. This Guide will also be updated along with the new versions of the ABB List if deemed necessary.

9 Revisions

Rev.	Page (P) Chapt. (C)	Description	Date Dept./Init.
1.0	All	New document	2013-07-01/MP
1.1	Page 3, Chapter 3	Added text: <i>The validity date for ABB List applies to purchase orders accepted as of this date.</i>	2013-09-01/AI
1.1	Page 4, Chapter 4	Included: Lead, CAS no 7440-43-9	2013-09-01/AI
1.1	Page 5, Chapter 5	Included: The reason for a chemical, substance, or material <i>to be on this list, is its inherent properties that makes it hazardous to humans or the environment.</i>	2013-09-01/AI
1.1	Page 5, Chapter 6	A substance designated "P" is prohibited by regulation for use in certain <i>or all</i> applications	2013-09-01/AI

10 Legal references

All legal references can be found in the ABB List. Follow the links below for REACH Regulation and RoHS Directive:

EU REACH ([Link](#))

EU RoHS ([Link](#))