General Information on the European RoHS & WEEE Directives

1. Introduction

Increasing wealth brings about more and more waste.
Every year consumers generate 1.3 billion tonnes of waste in the European Union alone – of which about 40 million tonnes are to be rated as hazardous. Most of what we dispose of is either incinerated or stored on dumpsites.
Both endanger the environment. The avoidance and reduction of hazardous substances has become a key factor. Wherever possible, waste must be recirculated and recycled.

The current environmental legislation restricts the use of certain hazardous substances in electrical and electronic equipment, in particular the concentration or use of lead (Pb), cadmium (Cd), mercury (Hg), hexavalent chromium Cr(VI), polybrominated biphenyl (PBB) and polybrominated diphenyether (PBDE).

To protect the people and the environment, the European Union has passed a series of directives to be transposed into national law by the member countries.

2. Directives and laws

What is **RoHS**, **WEEE**, ElektroG?

WEEE (…on **w**aste **e**lectrical and **e**lectronic **e**quipment…)
Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment.
Objective of the WEEE: collection, treatment, recycling, disposal.

RoHS (…the **r**estriction **o**f the use of certain **h**azardous **s**ubstances…)
Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in waste electrical and electronic equipment.

ElektroG (German Electrical and Electronic Equipment Act)
Act on putting electrical and electronic equipment on the market, their return and environmentally friendly disposal of 16 March 2005.
ElektroG is the transposition of RoHS and WEEE into German national law.
Section 5 – Forbidden substances – of ElektroG recapitulates RoHS' requirements regarding hazardous substances.

The EU standard was adopted on 1 January 2003. By the end of 2004, the EU member countries should have transposed this EU directive into national law. The situation, however, is different in the individual countries.

The Electrical and Electronic Equipment Act became effective in Germany on 16 March 2005 which, in addition to RoHS, also transposed the EU directive WEEE (reduction and disposal of electronic waste) into German law. The transition period for the countries and sectors concerned ended on 1 July 2006.

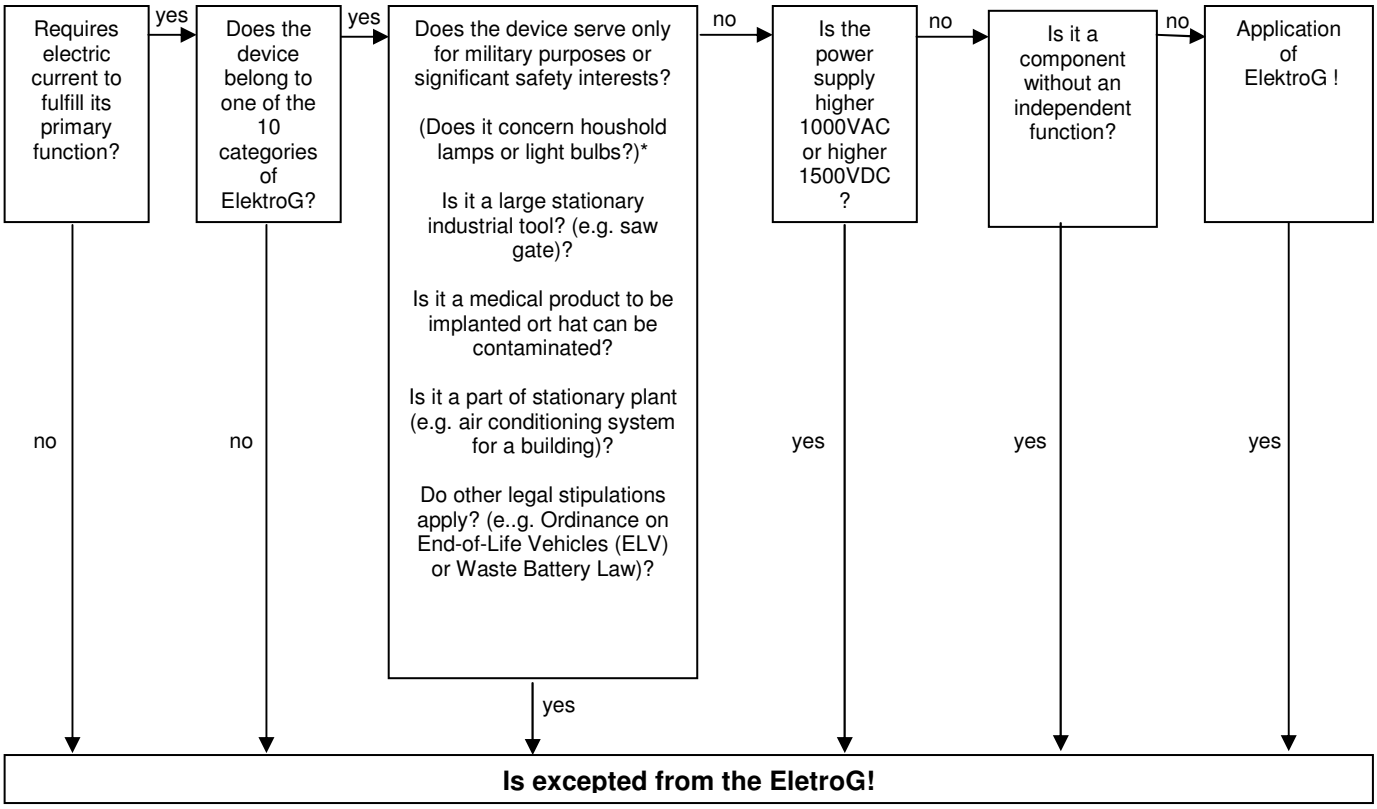
In Austria transposition of the RoHS and WEEE is regulated in the Ordinance on Waste Electrical and Electronic Equipment that become effective on 30 April 2005.

Comparable regulations in non-EU countries

Also **Switzerland** follows suit with the adoption of the Ordinance on Risk Reduction related to Chemical Products (ChemRRV). Similar ordinances are either being discussed, implemented or already in force in countries such as Japan and the USA.

In **China** the "ChinaRoHS" (Management Methods for Controlling Pollution Caused by Electronic Information Products Regulation) became effective on 1 March 2007. As a result, the industry is confronted with a comprehensive set of regulations including forbidden substances, certifications and/or customs controls as well as labelling duties. The scope of application of this directive at first refers to the same six categories of substances of the RoHS directive. In addition, there are stipulations regarding energy efficiency, simple recycling and environmental compatibility. Furthermore, also the packaging must be environmentally compatible and the materials must be disclosed.

3. What is electrical and electronic equipment? - an orientation guide



* Here prohibition of substances pursuant to Section 5 only applies – often a clear decision regarding the scope of application of the German Electrical and Electronic Equipment Act is difficult and must remain in the scope of responsibility of the manufacturer of electrical and electronic equipment. Information can be obtained, for example, at: europa.eu.int/comm/environment/waste; www.bmu.de/abfallwirtschaft/downloads/doc/35687.php; europa.eu.int/eur-lex;

4. Forbidden substances – threshold values

It is forbidden to put new electrical and electronic equipment on the market containing more than 0.1 weight per cent of lead, mercury, hexavalent chromium, polybrominated biphenyl (PBB) or polybrominated diphenyether (PBDE) per homogeneous material or more than 0.01 weight per cent of cadmium per homogeneous material. Sentence 1 does not apply to electrical and electronic equipment of categories 8 and 9 and not to electrical and electronic equipment put on the market in a member country of the European Union before 1 July 2006 for the very first time. It also does not apply to spare parts for repairing or recycling electrical and electronic equipment put on the market before 1 July 2006 for the very first time. (RoHS)/ElektroG, Section 5 – categories 8 and 9 – also refer to Annex I of the German Electrical and Electronic Equipment Act.

5. Important dates

13 August 2005: equipment concerned must be labelled. (WEEE)/ ElektroG, §7

1 July 2006: Equipment concerned must comply with the threshold values for the substances specified in (RoHS)/ElektroG, Section 5.

6. A further outlook

We expect that the European legislation fulfils a pioneer function and that countries outside the European Economic Area will adapt local legislation. Already now there is a series of self-commitments to avoid hazardous substances.

Legislation of the European Community will be further standardised – important directives will be harmonised.

The EU Commission has already submitted a proposal with the objective to adopt RoHS threshold values for the end-of life vehicles directive.

Technical progress and new substitutes will also entail new restrictions and confront manufacturers and their suppliers with further challenges.

Environmental compability is already now a competitive factor and will also increasingly be so in the future.

We are your partner for compliance with legal requirements.

We protect technology.

Furthermore, we gladly inform you about the ingredients in the following products and materials known to us whose knowledge can be reasonable under recycling, disposal or occupational safety aspects, for example:

• Turned parts made of brass have a lead portion of 1.5% to 3.5% for cutting operations. Cu alloys with a lead portion of 4% are allowed in accordance with the RoHS exceptional rule.

• Soft PVC has a share of up to 3.2% lead stabilisers that are designated as a hazardous substance in accordance with the IMDS (international electronic material data system). We are endeavouring to agree substitute materials with the manufacturer as soon as possible.

• Chromisations (which are used as an anti-corrosive coating at the customer's request only) contain Cr (VI) in minor weight per cents.
Due to a standard analysis procedure lacking, no statements can be made regarding quantities. Our surface coaters are intensively trying to replace the hexavalent chromium components while maintaining an equivalent corrosion resistance.

• Our powder coaters work with environmentally compatible and heavy metal free paint; unfortunately, we cannot make any statements on coatings from other productions.

• Tests conducted on paper and paperboard revealed that the total share of Pb, Cd, Hg and Cr (VI) is generally significantly below the threshold of 100 ppm. Unfortunately, we cannot provide more detailed information about our packing materials.

All information is provided to the best of our knowledge and is consistent with the state of the art known to us.