



Mercury in Measuring Devices

Guidance Note

November 2015 (Version 3)

We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

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About this guidance

This guidance note contains information about the Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) regulations on the marketing and use of mercury and its compounds. The information will help you to understand the restrictions and provide guidance on how you can comply with them.

In this guidance note, you will find:

- legal guidance notes - what the regulations say
- technical guidance notes - information about mercury

If you need help and advice

We have made the guidance notes as straightforward as possible, but please get in touch with us if you need any advice.

Contact us by:

Calling our National Customer Contact Centre on 03708 506 506 and asking to speak to the Chemical Compliance Team about REACH.

Sending an email to the Chemical Compliance Team at chemicalrestrictions@environment-agency.gov.uk.

Legal guidance notes

The REACH (Registration, Evaluation, Authorisation and restriction of Chemicals) Regulation 2006 (As amended). Referred to in these notes as "the regulation".

Introduction

We have prepared this guidance to help you understand how restrictions under the regulation may affect your business. It should help you to establish if you are complying with the particular restrictions in question. The information relates to specific chemicals and the supply and/or use of various articles, substances and preparations that contain them.

Background

The REACH Regulation 2006 (as amended) is an EU regulation that is directly applicable to all European Union member states. Annex 17 of the regulation contains a list of chemicals that are subject to restrictions. The restrictions apply to supplying and/or using certain chemicals in concentrations equal to or exceeding the limits stated in the regulation.

Environmental impact

The chemicals restricted by the regulation have been scientifically proven to pose significant risks to human health and the environment. They tend to be persistent, which means they don't break down in the environment easily. They are often toxic to marine and freshwater life and can stay in water for a very long time. Please refer to the technical guidance notes to find out more about the chemical in question.

Legal requirements

The law states that if your company has involvement with any article, substance or preparation containing a restricted chemical, and the concentration of the restricted chemical is equal to or greater than the limits specified in the regulation, you must ensure that you do not place it on the market or use it except in accordance with the restrictions listed in Annex 17.

Article 3 of the regulation includes the five definitions listed below.

Article - an object which during its production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition.

Substance - means a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Preparation - means a mixture or solution composed of two or more substances.

Placing on the market - means supplying or making available, whether in return for payment or free of charge, to a third party. Import shall be deemed to be placing on the market.

Import - means the physical introduction into the customers territory of the Community.

The Environment Agency is one of the enforcing authorities for this regulation. Under the REACH Enforcement Regulations 2008 (as amended), we have the power to request information and to take enforcement action for failure to respond or for responding with a false declaration; we may also take appropriate enforcement action if we become aware of any non-compliance with REACH restrictions.

Enforcement action may mean the issuing of enforcement notices, prohibition notices or prosecution. Prosecution may lead to a fine or imprisonment (or both).

Mercury restrictions

The relevant restriction in Annex XVII, as per the REACH Regulation (EC) 552/2009 and (EU) 847/2012, is stated below.

<p>18a. Mercury</p>	<p>1. Shall not be placed on the market:</p> <ul style="list-style-type: none">(a) in fever thermometers;(b) in other measuring devices intended for sale to the general public (such as manometers, barometers, sphygmomanometers, thermometers other than fever thermometers). <p>2. The restriction in paragraph 1 shall not apply to measuring devices that were in use in the Community before 3 April 2009. However, Member States may restrict or prohibit the placing on the market of such measuring devices.</p> <p>3. The restriction in paragraph 1(b) shall not apply to:</p> <ul style="list-style-type: none">(a) measuring devices more than 50 years old on 3 October 2007;(b) barometers (except barometers within point (a)) until 3 October 2009. <p>Please note: Paragraph 4 of this restriction was removed by amendment as per Commission Regulation (EU) 847/2012.</p> <p>5. The following mercury-containing measuring devices intended for industrial and professional uses shall not be placed on the market after 10 April 2014:</p> <ul style="list-style-type: none">(a) barometers;(b) hygrometers;(c) manometers;(d) sphygmomanometers;(e) strain gauges to be used with plethysmographs;(f) tensiometers;(g) thermometers and other non-electrical thermometric applications. <p>The restriction shall also apply to measuring devices under points (a) to (g) which are placed on the market empty if intended to be filled with mercury.</p>
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6. The restriction in paragraph 5 shall not apply to:

(a) sphygmomanometers to be used:

i. in epidemiological studies which are ongoing on 10 October 2012;

ii. as reference standards in clinical validation studies of mercury-free sphygmomanometers;

(b) thermometers exclusively intended to perform tests according to standards that require the use of mercury thermometers until 10 October 2017;

(c) mercury triple point cells which are used for the calibration of platinum resistance thermometers.

7. The following mercury-using measuring devices intended for professional and industrial uses shall not be placed on the market after 10 April 2014:

(a) mercury pycnometers;

(b) mercury metering devices for determination of the softening point.

8. The restrictions in paragraph 5 and 7 shall not apply to:

(a) measuring devices more than 50 years old on 3 October 2007;

(b) measuring devices which are to be displayed in public exhibitions for cultural and historical purposes.

Technical guidance notes

The chemical to which this guidance relates is mercury.

What is mercury?

Mercury is a naturally occurring metallic element that is represented by the chemical symbol 'Hg'. At room temperature and in its pure form, mercury is a silvery white liquid.

Uses of mercury

There are many uses of mercury which include:

- measuring devices such as thermometers and barometers
- dental amalgam
- electrical switches
- batteries
- fluorescent tubes
- biocides
- pesticides, herbicides and fungicides
- pigments and dyes
- preservative for wood/leather

Mercury in measuring devices

Because mercury is a liquid at room temperature and expands when it heats up, it is useful in measuring devices such as thermometers and barometers. If a measuring device is damaged and the mercury is released, the mercury will evaporate slowly and nearby people may be exposed. Contamination of clothing and cleaning equipment can also occur when dealing with the spillage and broken instrument.

However, there are now safer options available, including alcohol replacements or digital alternatives.

By restricting the sale of mercury measuring devices, the levels of mercury in waste will be reduced. This in turn means a reduction in mercury being released into the environment from landfills and incinerators¹.

Mercury and human health

Mercury is very toxic. High doses can be fatal to humans, but even relatively low doses can have serious impacts on the body's systems. Mercury has been linked with possible effects on the cardiovascular, immune and reproductive systems. Mercury in the environment can change into methyl mercury, the most toxic form. Methyl mercury can cross the placenta in pregnant women and can affect mental development in unborn babies.

Mercury in the environment

Mercury is persistent in the environment; this means that it does not break down. It can build up in plants and animals and accumulate along the food chain, particularly in fish and other aquatic life. Low levels of mercury in surface waters can lead to high concentrations in insects, fish and birds, resulting in very toxic contamination in parts of the ecosystem.

¹ Consultation on the proposal for restrictions on the marketing of certain measuring devices containing mercury. DEFRA, April 2006.

Measuring devices from consumers may end up in landfill and, over time, the mercury from measuring devices has the potential to cause environmental problems in leachate (the liquid waste from landfill) and groundwater. Groundwater feeds rivers and is also used for drinking water supplies.

Are you supplying measuring devices containing mercury?

The full text of the restrictions on mercury is supplied on page 4 and 5 of this guidance document (extracted from Annex 17 of the REACH Regulation 2006 [as amended]).

You must not supply any restricted mercury-containing measuring device, or any restricted measuring device that is intended to be filled with mercury, to any of the restricted customer types. Please be aware that there are some exemptions for certain types of device, and you must comply with any stated cut-off dates for supply (these may concern supply to particular customer types or for certain specified uses).

If you are supplying any measuring device which contains mercury you must check all your promotional materials to make sure that you are not advertising or endorsing it to any of the restricted customer groups. You should review your packaging, labelling, catalogues, mail shots and flyers, internet promotions and any other marketing materials to make sure that you are compliant with the regulation.

How to determine if mercury is present

To find out whether a measuring device contains mercury:

Check the label on the packaging of the device and any additional information included with the product from your supplier.

Ask your supplier direct.

Dealing with spillages of mercury

If mercury is accidentally released from a measuring device, it should be cleaned up and disposed of appropriately to minimise the potential impact upon human health and the environment.

Spillages in commercial premises should be assessed and controlled in accordance with Control of Substances Hazardous to Health (CoSHH) assessments. Further guidance about complying with CoSHH can be found at: www.hse.gov.uk. Mercury spill kits are widely available for managing spills safely.

Domestic mercury spillages

Spillages in domestic homes should be managed in accordance with guidance from the Health Protection Agency (HPA) at: www.hpa.org.uk. The following publications should be referred to:

- 'Mercury spills in residential settings: background information'
- 'Mercury spills in residential settings: step-by-step guide to cleaning up spills'

Waste Management

Measuring devices containing mercury are classed as hazardous waste. If you want to dispose of measuring devices that contain mercury, you will need to have them removed by a registered waste carrier to a permitted waste disposal site. Please be aware that we do not endorse any particular disposal process or disposal contractor.

Under duty of care, you have a legal obligation as a holder of waste to arrange for it to be disposed of properly. You must make sure that anybody who offers to:

- transport waste - holds a waste carriers registration
- move hazardous waste - uses a consignment note
- dispose of waste - holds an appropriate environmental permit

If you dispose of hazardous waste in quantities of more than 500kg in a year then you need to register as a hazardous waste producer.

For more information you can:

- visit our website: www.environment-agency.gov.uk - search for 'hazardous waste'
- call our National Customer Contact Centre on 03708 506 506

Domestic mercury waste

Mercury should not be disposed of in household waste.

If you are a householder, your local authority can advise you on how and where to dispose of your waste measuring devices. Alternatively, search business directories for hazardous waste disposal contractors.

The following links may be useful.

www.gov.uk – search for 'hazardous waste' and/or 'household waste'

Further information

For further information on the REACH regulation please refer to the following two documents.

The Registration, Evaluation, Authorisation and restriction of Chemicals Regulation 2006 (as amended)

This publication and its amendments are available online from: <http://eur-lex.europa.eu/en/index.htm>

The REACH Enforcement Regulations 2008 No.2852 (as amended)

This publication is available online from: www.legislation.gov.uk or by post from:

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Please note:

Regulations are subject to amendments.

The entries of REACH Annex 17 restrictions that are relevant to mercury measuring devices are contained in Commission Regulation (EC) No 552/2009 and (EU) No 847/2012.

Offences, enforcement powers and penalties are contained in the REACH Enforcement Regulations 2008 (No.2852).

This information is correct at the time of going to print.

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or about your environment?**

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