

2nd April 2021

To the members of ARGE

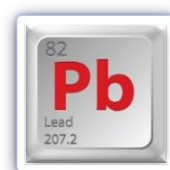
ARGE Lead (Pb) Reduction Programme

Update and next steps | Invitation to participate in Working Group

This bulletin provides both, an introduction into the subject and an update on where we stand in preparing and ramping up ARGE's Lead (Pb) Reduction Programme.

It also contains an [invitation to participate in the ARGE Working Group Lead \(Pb\) Reduction](#).

ARGE's members, the National Associations, are kindly asked to reach out to their members and invite those companies for which the heavy metal lead in building hardware is a relevant topic to participate in the ARGE Working Group *Lead (Pb) Reduction*.



1. Lead in building hardware

Lead is not only used as an addition in copper alloys of which lock cylinders, padlocks and keys are made, it also can be contained in machining steel and aluminium alloys used for certain components of building hardware products. Such products can be e.g., door closers, all sort of locks, window furniture, sliding door gear.

Whilst for most lead-containing alloys alternatives without lead have been developed, no lead-free copper alloys for lock cylinders, padlocks and keys are available yet which are technically and commercially feasible.

2. Legal challenges with lead

ARGE's focus is on European Union's respective legal framework. When referring to EU legislation it has to be taken into account that EU regulations and directives are relevant not only for EU member states, but also the other member states of the European Economic Area (EEA), namely Norway, Iceland, and Liechtenstein. A brief intro into the most relevant EU legislation concerning lead and the impact on building hardware is given below.

a. EU REACH Regulation

▫ What is REACH ?

REACH stands for **R**egistration, **E**valuation, **A**uthorisation and Restriction of **C**hemicals. As REACH is an EU regulation, it applies automatically and uniformly to all EU (EEA) member states, without the need to be transposed into national law. Despite the reference to chemicals in its name, REACH covers all type of substances, as, e.g., lead and its compounds.



▫ Lead as a restricted substance under REACH

In 2012, legal restrictions on the use of lead for certain products were applied under REACH for the first time, focusing on jewellery articles. Since then, the list of restricted products has been extended with having such products in focus which can be put into the mouth by children (REACH Annex XVII Entry 63).

Certain products have been excluded from this restriction, amongst them “keys and locks, including padlocks”. In 2019 the European Chemicals Agency (ECHA) made a call for comments and evidence in order to evaluate whether the derogation of “keys and locks, including padlocks” and some other derogations shall remain or can be withdrawn. ARGE responded to this call and pointed out that this derogation will be required also in the years to come and followed up with conveying this information to the European Commission as well. In ECHA’s respective Investigation Report the summary concerning “keys and locks, including padlocks” reads as follows:

8(e)	<i>Keys and locks, including padlocks;</i>	<p><i>Testing with alternatives has led to products not meeting quality standards.</i></p> <p><i>The most advanced alternative, Si-based alloy, has decreased sliding behaviour and results in products with inferior surface quality.</i></p> <p><i>Currently there are no technically and economically feasible alternatives to lead in brasses and nickel silver in keys and locks, including padlocks.</i></p> <p><i>Industry testing not performed, due to derogation.</i></p>	<p><i>In the absence of information on migration from this article group, ECHA is not in a position to conclude on whether migration limits were fulfilled for these articles.</i></p> <p><i>Industry is advised to collect migration data in order to demonstrate compliance with the migration limits in entry 63 should the derogation be removed.</i></p>
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Whilst legally there is no time limit (‘sunset date’) for this derogation, it is important to understand that the European Commission expects manufacturers to (a) test the migration of lead in keys in artificial saliva and provide migration data, and (b) endeavours to reduce or eliminate lead in keys. It can be expected that in several years this derogation will be under review again.

▫ Lead on REACH’s Candidate List of Substances of Very High Concern (SVHC)

The authorisation process under REACH aims to ensure that Substances of Very High Concern (SVHC) are progressively replaced by less dangerous substances or technologies where technically and economically feasible alternatives are available. Before a substance might be included in the strict authorisation regime, it is added to the so-called Candidate List of SVHC. Presently, there are 211 substances on this Candidate List. Lead was added to this list on 27th June 2018. This list usually is updated twice a year, with some substances being added each time.

The inclusion of a substance in the Candidate List brings immediate obligations for suppliers of such a substance, as well as for suppliers of articles containing it if the concentration of the substance in the article is above a defined threshold (for lead the threshold is 0.1 % w/w). The most prominent duty of manufacturers of building hardware located in the European Economic Area is the obligation to provide information on the SVHC to their customers.

There is no direct link between a substance being on this Candidate List of SVHC and being a restricted substance. As lead is both, a restricted substance, and a substance on the Candidate List of SVHC, it is fair to say that EU Member States, the European Commission, and the European Parliament clearly aim at further reducing the use of lead within the EU.

▫ **SVHC's relevance for the Waste Framework Directive and the related SCIP Database**

As of 5th January 2021, under the EU Waste Framework Directive (WFD) and the respective national laws of the 27 EU member states into which the WFD has been transposed, suppliers must notify the European Chemicals Agency (ECHA) about SVHC in their products. For this notification, the so-called SCIP database has been established. Whilst having been available for uploading information since some months, this database is still in the ramp-up phase. Later in April 2021, ARGE will provide a recommendation document for manufacturers of building hardware products for establishing lead related SCIP notifications.

▫ **SVHC's relevance for other European Union legislation**

The fact whether a substance is included in the Candidate List of SVHC or not has also relevance concerning other EU legislation, as e.g., in the Construction Products Regulation, and the Taxonomy Regulation on the Establishment of a Framework to Facilitate Sustainable Investment.

b. EU RoHS Directive

▫ **What is RoHS ?**

Under the **R**estriction **o**f **H**azardous **S**ubstances Directive (RoHS) 10 hazardous substances are restricted in their use in electrical and electronic equipment (EEE). Lead is one of these 10 restricted substances.



This restriction does not only apply on the electrical and/or the electronic components of a product but covers the whole product, including the mechanical parts.

From a pure legal perspective RoHS is not connected with REACH.

▫ **RoHS concerning building hardware**

Our industry considers electromechanical/ mechatronic/ electronic building hardware products as being within Category 11 of RoHS, which covers "all other electronic and electrical equipment". Since 22nd July 2019, all products under Category 11 must be RoHS compliant.

It is not only REACH which allows specific derogations of restrictions, but also RoHS permits certain exemptions. One group of these exemptions allows the use of lead in copper alloys (e.g., in brass and nickel silver), in aluminium alloys, and in machining steel used in products. For products in Category 11, this means inter alia building hardware, these specific exemptions exist until 21st July 2024.

The most important of these exemptions for building hardware products is the exemption under which lead is allowed in copper alloys up to 4.0% w/w. The housing and some other parts of most mechatronic/ electronic/ digital cylinders are made of brass which contains lead. For technical reasons the respective copper alloys cannot be replaced by non-lead containing alternatives short- and mid-term (see ARGE's argumentation towards ECHA and ECHA's Investigation Report as referred to above).

To be presented in front of the European Commission as strongly as possible, ARGE became a Partnering Association of the **RoHS Umbrella Industry Project** and has started to provide information to the European Commission's consultant (Öko-Institut e.V. in Germany), aiming at extending the exemption for lead in Category 11 products until 2028 or 2029 – with the option for further extensions thereafter. An official application for such an extension was filed by the RoHS Umbrella Industry Project already in 2020. The RoHS Umbrella Industry Project is a co-operation of approx. 70 industry associations, most of them Europe-based, but some also from Asia (Japan and Korea).

3. ARGE Lead (Pb) Reduction Programme

a. Work Packages

The ARGE Lead (Pb) Reduction Programme is divided into 4 Work Packages (WP):

- ➡ **WP 1: Keys – Establishing robust test data for lead release in artificial saliva (REACH Annex XVII Entry 63)**
Based on ECHA's recommendation, tests will be carried out according to EN 12472:2020, titled 'Method for the simulation of accelerated wear and corrosion for the detection of nickel release from coated items'.
- ➡ **WP 2: Keys – Reduction of lead content in copper alloy**
- ➡ **WP 3: Lock cylinders & padlocks – Reduction of lead content in copper alloy**
- ➡ **WP 4: All other building hardware products – Compiling and disseminating information relevant for reduction of lead content respectively elimination of lead in products**

b. Compliance with antitrust regulations

ARGE obtained advice from legal experts on how to set up the co-operation between manufacturers of keys, lock cylinders & padlocks on the one side and their suppliers of semi-finished materials on the other side, whereby full compliance with antitrust regulations must be granted.

The overall concept of such a co-operation foresees that ARGE, on behalf of National Associations respectively the manufacturers, will enter into a contract with a research institute or university, with the obligation for this research institute (university) to co-operate in its research with certain suppliers of semi-finished materials (coils and bars).

c. Timeline

Whilst Work Package 1 (establishing robust test data for lead release of keys in artificial saliva) is expected to be concluded in 2021, Work Package 2 and 3 (developing alternative copper alloys) will stretch over a period of several years.

Work Package 4 (compiling and disseminating information on lead-free alloys) is assumed to be of rather short nature.

d. Financing

Substantial expenses have to be expected for Work Packages 2 and 3. A plan how to finance these expenses needs to be worked out between the National Associations, the participating companies, and ARGE.

4. ARGE Working Group Lead (Pb) Reduction – status and next steps

The Working Group *Lead (Pb) Reduction* was officially constituted on 10th September 2020 by a decision of the ARGE General Meeting. Since then, preparatory work has been carried out.

The next step is to invite companies to participate and to nominate their experts as members of the Working Group (see below under item 5. and 6.). Thereafter, the first Working Group meeting will be held.

5. Call for companies to participate in Working Group

ARGE herewith kindly asks the National Associations to contact their members and invite companies to participate in the Working Group *Lead (Pb) Reduction*. Interested companies are asked to state in which Work Package they are interested, and to nominate their experts (name, function, email address).

The target group for the Work Packages 1, 2, and 3 are the manufacturers of lock cylinders, padlocks, and keys. Manufacturers which produce keys only – but no cylinders and padlocks – will have the option to participate in Work Packages 1 and 2 only.

The target group for Work Package 4 are manufacturers of all other building hardware products which have the intention to eliminate or have already eliminated lead from their products.

6. Next actions

- ➔ **ARGE members** (the National Associations) will inquire with their members which of them are interested in participating in the ARGE WG *Lead (Pb) Reduction*, and will inform ARGE accordingly by returning the filled-in survey Excel sheet to Hans Weissenböck (h.weissenboeck@arge.org) – **by Monday, 26th April 2021** (earlier feedback is appreciated)
- ➔ **ARGE members and representatives from ARGE's Executive Team** will address the ARGE Lead (Pb) Reduction Programme in more detail during the ARGE Online Meeting – **on 29th April 2021 (09.00 – 12.00 CEST)**
- ➔ **Members of the ARGE WG Lead (Pb) Reduction** will meet for the Working Group kick-off meeting (date and time will be set after having run a Doodle poll) – **May/ June 2021**

Many thanks in advance for your support!

In case of any queries, please do not hesitate to get back to me.

Kind regards

Hans Weissenböck
General Secretary