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**EUROBAT Position -  
Annex XV SVHC report published in the context of SVHC identification in  
accordance with REACH Article 57 – Lead**

The Swedish Chemicals Agency (KemI) published a document in September 2017 presenting its conclusions from a “Risk Management Option Analysis” (RMOA). In that document, KemI indicated its conclusion that additional regulatory action on lead metal, including REACH Candidate Listing, was justified at EU level. A proposal for Candidate Listing, i.e. formal identification of lead (Pb) metal as a Substance of Very High Concern (SVHC), was submitted to the European Chemicals Agency (ECHA) by KemI in February 2018.

EUROBAT (More information in Annex 1) is the Association of European Automotive and Industrial Battery Manufacturers, representing all battery manufacturers of all available battery technologies. EUROBAT Members welcome that the format used by ECHA to conduct the public consultation provides the opportunity for submitting comments that go beyond the question of whether a substance has hazardous properties that render it eligible for inclusion in the Candidate List. However, noting that the commenting form states that information on Use, Exposure, Alternatives and Risks will not be taken into account for SVHC identification, we request that such comments are taken into consideration by the ECHA Member State Committee in the context of ‘relevancy’ and the SVHC Roadmap.

Lead is the fundamental chemical element of lead-based batteries and therefore per se not substitutable. We do not dispute that lead metal formally fulfils the toxicological criteria for candidate listing but we question the proportionality and regulatory effectiveness of an inclusion in the candidate list. Lead is one of the most highly-regulated substances in the EU, with a significant existing framework of substance-specific legislation intended to address risks to human health and the environment (Annex 1). The existing legislation covers all lifecycle stages of products made using lead metal, including production, use, and end-of-life/waste, and includes lead-specific limits on industrial emissions to air and water, and for lead in food and drinking water.

Furthermore, the risk of potential occupational lead exposure is covered by occupational health and safety legislation and in addition voluntary self-commitments by the industry itself. Therefore the identification of metallic lead as SVHC is neither suitable nor effective to manage the risk of occupational lead exposure.

In any way prior to a possible uptake of lead in the candidate list, the administrative burdens should be determined carefully and existing sector specific legislation should be considered.

*EUROBAT therefore urges the ECHA Member State Committee representatives to use their discretion to oppose the proposal to include lead metal on the Candidate List of substances of very high concern for Authorisation based on the finding that the proposed substance is not of relevance for Candidate Listing.*

## **Risk Management Option Analysis (RMOA) on lead metal**

EUROBAT highly appreciates that the Swedish authority applied the voluntary step of a Risk Management Option Analysis (RMOA) for its conclusion regarding further regulatory steps for metallic lead.

This RMOA was published in the Public Activities Coordination Tool in September 2017 but there was no EU-wide opportunity for participation in the RMOA for stakeholders. This RMOA is very short and does neither include technical or scientific details nor a comprehensive presentation of existing regulations of lead, efforts for the substitution of lead or existing declaration schemes. Therefore, we would like to add the following details to the RMOA of Sweden to support ECHA and national authorities to come to a comprehensive conclusion regarding further measures with respect to lead metal in batteries.

## **Use of Lead in Batteries**

The use of lead metal in the production of lead-based batteries is, by far, the predominant use of lead in the EU, and worldwide. In the EU alone, 84% of the total volume of lead metal is used to produce lead-based batteries, the figure having grown from 64% in 2000. According to figures compiled by the International Lead and Zinc Study Group, automotive and industrial lead-based battery applications accounted for 1,274,000 tonnes of lead metal used in 2015 in the EU. Automotive batteries account for more than half – 53% – of the total EU use volume, and industrial batteries for 31%.

Lead-based batteries are part of the solution to energy storage needs in a wide number of applications, from facilitating environmentally friendly transport to enabling security of (renewable) power supply and storage. Indeed the lead-based technology is the most widely used electrochemical system, used in numerous applications from back-up for uninterruptible power supplies and grid energy storage, to traction in battery electric vehicles and for starting, lighting and ignition (SLI) in conventional combustion engine vehicles. Through these various applications, batteries play a key role in nearly all sectors of industry, the economy and the environment. Indeed, batteries can help the European Union to be more sustainable, competitive and generate growth and jobs.

Lead-based batteries are critical to the day-to-day economic and social wellbeing of Europe. They are an essential, reliable and safe enabler of the EU economy, supporting critical infrastructure including power back-up for emergency services, computer networks and telecommunications. The lead-based battery is a vital component in each of over 250 million cars on Europe's roads, including hybrid and electric vehicles. They are sealed units with no potential for lead exposure to users or the environment throughout their use. **There are no substitutes for the use of lead metal in lead-based batteries, and there are no alternatives for lead-based batteries in the majority of applications.**

Lead-based battery producers are situated in 14 EU Member States in which EUROBAT members operate in 31 lead-based battery plants, in an industry employing approximately 20,000 workers; the sector has an annual turnover of €5 billion and has spent more than €845 million on R&D over the last five years. In addition, a highly effective collection and recycling network exists to ensure that lead batteries are handled in a closed loop. Lead-based battery recyclers are present in 15 Member States and recycle over 1,000,000 tonnes of used batteries per year.

### **Lead use in batteries is already highly regulated in the EU**

Lead-based batteries are already highly regulated at EU level through a framework of substance-specific product and waste legislation – including the Batteries and ELV Directives – designed to address risk throughout the product lifecycle and end-of-life stage.

Lead is one of the most highly-regulated substances in the EU, with a significant existing framework of substance-specific legislation intended to address risks to human health and the environment (Annex 1). The existing legislation covers all lifecycle stages of products made using lead metal, including production, use, and end-of-life/waste, and includes lead-specific limits on industrial emissions to air and water, and for lead in food and drinking water. 99% of used lead-based batteries are collected at end-of-life and recycled, the recovered metal being used to produce new batteries: today, more than 85% of a new lead-based battery is made from recycled materials. No other battery technology meets these sustainability credentials. The use of the REACH Authorisation process to further regulate lead metal would therefore be disproportionate to the additional benefit obtained.

In the workplace, lead and inorganic lead compounds are the only substances in the Chemical Agents Directive (98/24/EC) to have EU-wide binding occupational exposure and biological limit values, supplemented by a mandatory requirement for employers to undertake health surveillance. In addition, the Pregnant Workers Directive (92/85/EEC) protects the health and safety of women in the workplace when pregnant or having recently given birth, and women who are breastfeeding. The Directive includes specific provisions intended to ensure that expectant mothers and those breastfeeding are not exposed to lead.

Despite the absence of a recent scientific review of existing EU binding limit values, the battery and lead manufacturing industry already goes beyond workplace legislation on lead, by establishing proactively, and progressively reducing, voluntary employee blood lead targets, and requiring continuous improvement – its exposure management performance now far exceeds the current EU binding limit values mandated in the Chemical Agents Directive.

We agree with other stakeholders that the EU-wide binding occupational exposure limits established by DG Employment have not kept pace with Industry exposure management practices and the developing scientific knowledge about health effects and agree with Advisory Committee on Health & Safety at Work recommendation made in 2013 that an urgent scientific review by SCOEL was necessary as a precursor to lowering the binding limit values.

EUROBAT would emphasise that the failing to review the EU binding limit values should be remedied through an update to the existing limit in the Chemical Agents Directive, and not through the introduction of additional burdensome legislative requirements. Industry remains supportive of a review by an appropriate scientific committee as first step to the revision of EU limit values as a priority.

The Batteries Directive regulates waste batteries. Indeed, under the directive, there are existing requirements in terms of labelling, collection and recovering targets for lead containing batteries and accumulators. All collected batteries have to fulfill a given recycling efficiency. The production of lead-based batteries, which accounts for more than 85% of EU lead use, is managed in a closed-loop recycling process with 99% of batteries being fully recycled.

EU Directive 2000/53/EC on end-life-vehicles restricts the use of several heavy metals, including lead, in vehicles. There are a few exemptions to this restriction where substitution is not possible due to technical reasons. These exemptions are subject to regular reviews according to technical and scientific progress. Recently, lead-based batteries in automotive applications have been granted an extended exemption because of the lack of alternatives for the use of lead in automotive batteries.

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## **About EUROBAT**

EUROBAT is the association for the European manufacturers automotive, industrial and energy storage batteries. EUROBAT has 52 members from across the continent comprising more than 90% of the battery industry in Europe. The members and staff work with all stakeholders, such as battery users, governmental organisations and media, to develop new battery solutions in areas of hybrid and electro-mobility as well as grid flexibility, renewable energy storage and demand response services.

More information on our website [www.eurobat.org](http://www.eurobat.org).

# EUROBAT

ASSOCIATION OF EUROPEAN AUTOMOTIVE AND INDUSTRIAL BATTERY MANUFACTURERS

## Annex 1 – EUROBAT Infographic

### EUROBAT

The Association of European Automotive and Industrial Battery Manufacturers

Promoting European manufacturing of batteries for a competitive and sustainable Europe

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**EUROBAT REPRESENTS THE MANUFACTURERS OF ALL BATTERY TECHNOLOGIES**

Pb

Li

Ni

Na

**LEAD BASED ADVANTAGES**

High energy density, long life, low cost, well established technology

**LITHIUM BASED ADVANTAGES**

High energy density, long life, low self-discharge, high power

**NICKEL BASED ADVANTAGES**

High energy density, long life, low self-discharge, high power

**SODIUM BASED ADVANTAGES**

High energy density, long life, low self-discharge, high power

**APPLICATIONS**



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### EUROBAT

Promoting European manufacturing of batteries for a competitive and sustainable Europe

**MORE THAN 30**  
BATTERY MANUFACTURING PLANTS

**16**  
RESEARCH CENTERS

**OVER € 6.5 BN**  
EUROBAT TURNOVER

**MORE THAN 50**  
MANUFACTURERS AND ASSOCIATED PARTNERS FROM WITHIN THE VALUE CHAIN

**OVER 30.000 EMPLOYEES IN EUROPE**

**90% OF THE AUTOMOTIVE AND INDUSTRIAL BATTERY MARKET**

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### A SUSTAINABLE INDUSTRY

Towards a circular economy with responsible end-of-life treatment of automotive and industrial batteries

Take back and recycling of all battery technologies lowers CO2 emissions and improves resource efficiency

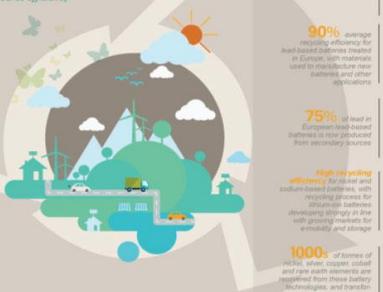
**99%** of all automotive and industrial batteries are taken back at their end-of-life for further processing

**90%** average recycling efficiency for lead-acid batteries treated in Europe, with materials used to manufacture new batteries and other applications

**75%** of lead in European lead-acid batteries is now produced from secondary sources

**High energy density solutions:** For car and sodium-based batteries, with recycling partner for lithium-ion batteries, developing strategy in the high growing markets for mobility and storage

**1000s** of tonnes of plastic, silver, copper, cobalt and rare earth elements are recovered from these battery technologies, and transformed into new applications (e.g. new batteries, stainless steel, road pavement)



### ADVANCED BATTERIES FOR THE DECARBONISATION OF TRANSPORT

All battery technologies contribute to the decarbonisation of the European transport sector

Lead-based batteries are the technologically viable mass-market option for starting, lighting and ignition systems, as well as start-stop systems. Micro hybrid start-stop systems **IMPROVE FUEL EFFICIENCY BY 5.5%**, contributing to 700 000 KG OF CO2 SAVINGS across the vehicle lifecycle.

**HYBRID VEHICLES** use batteries of various technologies to provide regenerative braking and electric propulsion

Plug-in hybrid and full electric vehicles provide partial or full electric propulsion, **ALLOWING ZERO TAILPIPE EMISSIONS IN ELECTRIC MODE**

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### BATTERY ENERGY STORAGE & SERVICES

Batteries can store renewable energy and offer several services at every level of the electricity grid

**BATTERIES CAN STORE ENERGY PRODUCED BY SOLAR AND WIND FARMS** and release it into the grid when it is needed

**BATTERIES OFFER ANCILLARY SERVICES TO STABILISE THE GRID** (e.g. voltage control and frequency regulation), making it more stable, reliable and fit for renewables

At household level, a battery connected to a photovoltaic panel **CAN INCREASE THE PERCENTAGE OF SELF-CONSUMED ELECTRICITY FROM 10 TO 70%**

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### MOTIVE POWER BATTERIES

An innovative sector with a potential to become even bigger

**LEAD** based ACB and DCB batteries offer high energy density, long life, low self-discharge, high power

**EMERGENCY** backup power solutions

**TRUCK** and heavy-duty applications

**EV** and other applications

**BATTERY FOR EMERGENCY BACK UP AND DIGITALISATION TLC/UPS**

Telecommunications - Uninterruptible power supply

A major market is the **emergency back-up power** batteries in a variety of applications with reaction time below 20 ms, including for instance conventional power plants and hospitals.

AC stand-by line interactive and double conversion UPS with reaction times below 20 micro seconds, can be sized from 1.5kVA to 500kVA to deliver systems near 200 kW providing back-up for 2 minutes to several hours or days

Providing additional services to the owners such as **autonomous and electricity quality control**

Europe leading these markets providing constant technological innovation

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## Annex 2 – overview of legislation

<b><u>Manufacturing Environment</u></b>	Industrial Emissions Directive BREF (Pb AEL)
	Air Quality Directive (0.5µg/m <sup>3</sup> ambient air limit)
	Water Framework Directive (Pb EQS)
	Drinking Water Directive (10µg/L Pb)
	Food Contaminants Regulation (establishes max level of Pb in food)
<b><u>Manufacturing Workplace</u></b>	Chemical Agents Directive with specific rules for workers and pregnant women in relevant other Directives
	Binding European OEL of 0.15mg/m <sup>3</sup>
	Binding European biological exposure limit of 70µg/dl blood
	REACH DNEL of 40µg/dl blood for all workers and 10µg/dl for women in reproductive capacity
<b><u>Design, Use and End-of Life</u></b>	Battery Directive
	End of Vehicle Life Directive
	Waste Framework Directive and Waste Shipment Regulations

## Annex 2 – EUROBAT members

<b><u>REGULAR MEMBERS</u></b>	<b><u>ASSOCIATE MEMBERS</u></b>
Akkumulatorenfabrik Moll GmbH + Co. KG	Abertax Technologies
Assad Batteries	Accuma SpA
Banner GmbH	(accounting)
EH Europe GmbH - EnerSys EMEA	ACCUMALUX s.a.
Eternity Technologies	Amer-Sil
EXIDE Technologies	Arexim Engineering EAD / Battbox
FIAMM Energy Technology SpA	EL BAT JSC
FZ Sonick	Rosendahl Nextrom GmbH
Hoppecke Batterien GmbH & Co KG	DARAMIC
INCI GS YUASA AKU SAN VE TIC. A.S	ECO-BAT Europe
Johnson Controls Power Solutions EMEA	HJ Enthoven (Ecobat Group)
MIDAC Spa	ECO-Bat Technologies/Berzelius Metall
MUTLU Akü Ve Malzmereri San AS	Entek International Ltd
ROMBAT	Froetek Kunststofftechnik GmbH
SAFT	Hammond Expanders UK
System Sunlight	Hollingsworth & Vose
TAB Tovarna Akumulatorskih Baterij d.d.	Ikerlan
GS Yuasa Battery Europe Ltd	MECONDOR SPA
Auto X pty Ltd	Mitsui Chemicals Europe
JSC Group of companies AKOM	Microporous
LLC "ISTOK+" (Kursk)	MTH Metalltechnik Halsbrücke GmbH & Co KG
	NISSAN Motor Manufacturing (UK) Belgian Branch
<b><u>BATTERY SYSTEMS INTEGRATOR</u></b>	Recylex
Alpha House Ltd	T.B.S. Engineering Ltd
	TORAY International Europe
	Sovema Group SpA
	Water Gremlin Aquila Company SpA
	Wegmann Automotive
	Euro Support Advanced Materials BV
	Albemarle Corp.