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EUROBAT

ENVIRONMENT, HEALTH AND SAFETY NEWSLETTER

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Contents

1° REACH – Lead Monoxide and Lead Tetroxide

On 4 October 2011, ECHA contacted members of the REACH Lead consortium to inform them that it has appointed a consultant to help it evaluate whether it should consider adding Lead monoxide and tetroxide to the Candidate List of Substances of Very High Concern under the REACH Regulation. ECHA was requested to do so by the European Commission. The consultant (AMEC) has drafted a questionnaire, to which detailed answers were provided by all industries using these substances in November and December 2011.

For batteries, EUROBAT and ILA provided inter alia data and evidence to demonstrate that Lead monoxide and tetroxide should be considered as intermediates, as neither of these substances are present in articles ready to be placed on the market, but are transformed during the battery manufacturing process.

AMEC has provided their report to ECHA for the end of 2011. This report is not public. ECHA is currently preparing its opinion on the two substances considered for the end of January. ECHA's report will be provided to the European Commission, which will have to decide on further steps in the process, alongside a CARACAL meeting with the EU Member States. More information on whether the argumentation put forward by industry for the different uses of the substances has been accepted by the European Commission and Member States will be available then.

2° REACH – Other substances

Registration Deadline 2013
On 16 January, EUROBAT's Committee on Environmental Matters (CEM) discussed the 2013 REACH registration deadline (tonnages between 100 and 1,000 tonnes). Considering that all Lead compounds used by the battery industry are manufactured, used or imported in tonnages way above these limits, the REACH Lead Consortium will not register any substance in 2013, having already registered them at an earlier date. However, for other substances, the CEM calls on battery manufacturers to assess whether they should join / purchase letters of access to some of the consortia registering substances in 2013. EUROBAT's REACH Guidelines[1] provide for more detailed information on this matter. ECHA is also regularly publishing information on its website or organizing information workshops on this matter.

Cobalt Salts
On 15 June 2011, ECHA proposed that 5 Cobalt salts be added to Annex XIV of the REACH Regulation (substances subject to authorization): These Cobalt salts are not present as active substances in automotive or industrial batteries. Cobalt (II) dinitrate and Cobalt (II) sulphate are however used as intermediates in preparation steps of active substances used in batteries. They are currently mostly sourced from outside the EU.

On 21 December 2011, ECHA proposed that the use of these substances should in the future be subject to authorisation. The final decision on the inclusion of the substances in Annex XIV of the REACH Regulation will eventually be taken by the European Commission following the committee procedure with scrutiny. Then, as of a specific date (called "sunset date") substances on the authorization list can only be used within the EU for those uses for which an authorisation has been granted.

3° Results of the meeting of EUROBAT with Karl Falkenberg, Director General of the European Commission's DG Environment on 13 October 2011

On 13 October 2011 a meeting between EUROBAT representatives and the Director General Environment of the EU commission, Karl Falkenberg, took place. EUROBAT representatives were:

- Johann-Friedrich Dempwolff, Johnson Controls
- Anthony Jowett, Enersys
- John Searle, Saft
- Alfons Westgeest, EUROBAT
- Marc Zoellner, Hoppecke.

EUROBAT's delegation notably presented to Mr Falkenberg the outlook for different battery technologies and discussed with him the need to avoid double regulation and constant reviews of substances under different pieces of legislation. In DG Environment, Mr Karl Falkenberg is responsible inter alia for the Battery, ELV and RoHS Directives as well as for the REACH Regulation.

During the meeting, Mr Falkenberg acknowledged that – because it is well covered already by a number of sectoral pieces of legislation aimed notably at protecting human health and the environment – the battery industry has good grounds to obtain exemptions from the authorization requirement according to article 58 (2) for active substances used in batteries. This has to be examined on a case by case basis for each substance considered. He also recognized that the ELV Directive may need to be updated, in line with other pieces of legislation, and indicated that the Commission may carry out a "fitness test" of this Directive in 2012.

4° Transportation of Large Format Lithium batteries by air

Coordination and determination of safety requirements in new ICAO Special Provision

The safe transport and use of lithium batteries is still being discussed intensively at international level. It was not possible to achieve a solution to repeal the weight restriction of 35 kg per lithium ion industrial battery during the ICAO Dangerous Goods Panel (DGP) Meeting in October 2011.

[1] http://www.eurobat.org/sites/default/files/documents/REACH-EurobatGuidelines_V9October2008.pdf

The future requirements for the transport of lithium batteries will be discussed in a special ICAO DGP (Dangerous Goods Panel) Working Group of the Whole from 6 – 10 February 2012 in Montreal. Major focus will be put on the intended capping of facilitation for the transport of lithium portable batteries (primary and secondary) in the Packaging Instruction 965 and 968 as well as the transport of devices with lithium batteries via air mail.

The ICAO DGP and the superordinate ICAO Air Navigation Commission (ANC) have to debate and resolve this first, before rules for the transport of lithium ion industrial batteries over 35 kg/battery by air can be adopted.

On 21-22 February 2012 a joint international meeting of the car and battery manufacturers will take place in Brussels. Topics include future regulations for the transport of used lithium batteries (for road/rail and sea) with corresponding UN proposals. and safety requirements for the transport by air of new lithium ion industrial batteries over 35 kg/per battery.

The latter will be discussed at the 2nd meeting of the ICAO Working Group in autumn 2012.

Interpretation of authorization according to existing special provision A99

The transport of lithium batteries over 35 kg is regulated under ICAO Special Provision A99. However, the interpretation of this provision varies from country to country. In practice, the interpretation often demands that for each single transport an authorization of the respective sender state (State of Origin) is required before dispatch. This will have a negative impact on future series production (incl. spare part supply). Personnel resources at authorities for granting an exemption to authorization in time are often scarce.

The first step will be to propose an interpretation of authorization under SP A99 for the benefit of the battery manufacturers and users. This clarification shall mean that batteries to be transported and the packaging will have to be authorized only **once,** namely, by the competent authority in the country where the battery is produced**.** This means that batteries and its packaging will be authorized. This authorization could then be used for each transport until the expiry date or revocation of the authorization. A copy of this authorization would be attached to each transport.

Industry experts will develop a draft ICAO Working Paper at the 21-22 February 2012 meeting referred to above. This Working Paper shall also be submitted to the ICAO Working Group of the Whole in autumn 2012 with the hope of finding sufficient support for a new interpretation of SP A99, should the adoption of a new SP Axxx for the transportation of lithium ion industrial batteries over 35 kg not be possible at the meeting.

5° Transport of used or waste large format Lithium batteries (undamaged/damaged) for inspection, maintenance and recycling

The above-mentioned industry meeting on 21/22 February will also discuss the future transport regulation for used large Lithium batteries by road, rail and sea to be regulated by the relevant UN bodies.

The new proposals have to be submitted for 02 April 2012 at the latest.

- The transport of undamaged large lithium industrial batteries (for maintenance, inspection and recycling) should occur according to the Packaging Instruction 903 which is focused on the transport of new lithium batteries. This procedure would be analogous to the transport of new and undamaged lead batteries by road according to the ADR Special Provision 598.

- The transport of damaged used or waste batteries (for repair and recycling) has to occur in the authorized packaging.

- The transport of used prototypes/sample batteries (undamaged and damaged) should be regulated in UN Special Provision 310.

- The definition of damaged batteries should be based on the ICAO Special Provision A154 in air traffic.

The air transport of damaged lithium batteries is prohibited according to the ICAO Special Provision A 154. As there are no regulations for those batteries in road, rail and sea traffic, the competent authorities therefore derive that the transport ban apply to all modes of transport. Each transport of damaged large lithium industrial batteries has to be authorized by the competent authority in the respective Member

State. Here too, a two-track strategy is recommended to avoid increasing bureaucratic effort with countless individual exemptions. Besides the proposal to initiate a new packaging instruction for damaged large lithium industrial batteries a second proposal will propose the application of Packaging instruction P099 with authorization of the packaging and not the individual transport until the expiry date or revocation of the authorization. A copy of this authorization would have to be attached to each transport.

Germany is prepared to submit this proposal to the next UN meeting. After acceptance of the proposal in June/July 2012 on EU level, Germany would initiate a Multilateral Agreement for immediate application of this solution for road transport.

6° Implementation of the Seveso II Directive

The EU's legislation for the preventions of major industrial accidents (Seveso II Directive) imposes a number of extended obligations to industrial sites falling under the scope of the Directive.

In connection with the REACH Regulation, Regulation (EC) no. 440/2008 for the determination of test methods (Test Method Regulation) came into force on 01 June 2008. It was amended by Regulation (EC) n° 761/2009 of 27 August 2009 in order to integrate the provisions of OECD guideline 211 relating to the algae inhibition test for sweet water algae.

In order to determine whether battery manufacturing sites fall within the scope of extended obligations under the Seveso II Directive, the German Battery Association requested the certified laboratory Hydrotox in September 2011 to assess "Battery Lead Oxyde" (a mixture of Lead metal and Lead oxide) under the Test Method Regulation as amended.

This follows earlier tests for Lead metal and Lead oxide of 2005 and 2006, which for both substances concluded that the substances were to be classified **R52/53 (no Seveso relevance)** with an **effect level of 12,7 mg/l (> 10 mg/l)**.

The 2011 tests seem to confirm earlier findings as the draft Hydrotox report for battery Lead oxide from January 2012 indicates an **effect level of 17,2 mg/l.** If this is confirmed in the final report (expected in February 2012), the resulting classification for battery Lead oxide would be the same as for Lead metal and Lead oxide in 2005/2006.

The goal of this new test is to support the fact that Lead battery production in EU Member States should be further exempted from extended obligations of the Seveso II Directive in the future.

7° Intended OELs and BLvs for Cadmium, Lead and Nickel

Implementation of the German risk-acceptance-concept for substances classified as verifiable carcinogenic and the resulting exposition-risk-relationship (ERB) at workplace;

- **Cadmium: ERB values of 1.6 µg Cd/m³ (tolerance risk), 160 ng Cd/m³ (acceptance risk until 2013), 16 ng/m³ (acceptance risk after 2013 – from 2018 at the latest) have been noted with approval by the German Hazardous Substances Committee (AGS) on 14/15 November 2011**

- **Nickel: ERB values of 2 µg/m³ (tolerance risk), 0.8 µg/m³ (acceptance risk until 2013), 0.08 µg/m³ (acceptance risk after 2013 – from 2018 at the latest) in discussion in the AGS in 2012**

- **Lead: according to the intended classification of Lead as carcinogenic in the AGS the ERB values would orientate to a limit value for Lead in the ambient air of 0.5 µg/m³ (according to the IPPC Directive)**

The implementation of the German risk-acceptance-concept and the resulting exposition-risk-relationship (ERB) for verifiable carcinogenic substances will be impacting battery manufacturing in Germany, but also beyond since the majority of the EU member states have agreed to adopt the German concept.

It should be noted that ERB values regarding the acceptance risk are defined for the not-occupationally-exposed general population. **ERB values are non-binding limit values** and correlate with corresponding low Biological Limit Values (based on the background concentration of the general population). An

appropriate clarification shall be included in the catalogue of the AGS' "questions and answers related to the risk-acceptance concept" in 2012. This does not however mean that these values will not be enforced.

CADMIUM

The ERB values for Cadmium have been approved at the AGS meeting of 14/15 November 2011. It can be expected that the ERB values 1,6 µg Cd/m³ (tolerance risk) and 160 ng Cd/m³ (acceptance risk) will be included in the AGS Announcement 910 in 2012. The acceptance-risk shall be decreased to 16 ng/m³, to be met by 2018 through a tiered concept of measures.

Discussions have taken place on the implementation of ERB values for Cadmium and relating tiered measures in the form of a Technical Rule for Cadmium of the AGS. This would harmonize implementation in Germany and facilitate cooperation between employers, authorities and the employers' liability insurance association

It has been agreed by the AGS that a tolerance risk in terms of 1.6 µg/m³ should be achieved as soon as possible. In order to minimize further risks regarding an acceptance risk in terms of 160 ng/m³, the socio-economic aspects including the principle of proportionality depending on the risk have to be taken into account. During the evaluation of substitution the criteria for the technical suitability have to be applied.

The representatives of the industry in the AGS will call into question the implementation of the acceptance risk in terms of the planned adoption of 16 ng/m³ in 2015 as this value cannot be achieved in any case.

Eckhard Fahlbusch reported on the possible consequences of the development in Germany on EU level during the common meeting of the European Zinc, Cadmium and Battery Manufacturers on 17 January 2012 in Brussels.

NICKEL

The ERB values for Nickel in 2012 shall be discussed and adopted in sub-committee III of the AGS. Proposed are 2 µg/m³ (tolerance risk), 0.8 µg/m³ (acceptance risk until 2013) and 0.08 µg/m³ (acceptance risk after 2013 – from 2018 at the latest). The activities of the industry will be comparable to the activities regarding Cadmium.

LEAD

After the intended classification of Lead as carcinogenic in the AGS the ERB values would orientate to a limit value for Lead in the ambient air of 0.5 µg/m³ (according to the IPPC Directive). The former OEL for Lead and the current orientation value in the Technical Rule 505 (Lead) is 0.1 mg/m³.

ZVEI's battery association - together with the Wirtschaftsvereinigung Metalle – will put forward the position that there should be no national initiatives regarding the classification of Lead and inorganic Lead compounds as carcinogenic, category 2. In this case the implementation of the SCOEL recommendation of 2002 with an OEL of 0.1 mg/m³ and a Biological Limit Value of 300 µg Pb/l blood could be in the interest of the industry. Eckhard Fahlbusch (ZVEI / EUROBAT) is chairman of this working group which is responsible for the amendment of Technical Rule 505 (Lead) in the AGS.

8° Implementation of the OEL for sulphuric acid of 0.05mg/m3 (thoracic fraction)

New German Occupational Exposure Limit value (OEL) for sulphuric acid of 0.1 mg/m³ (inhalable fraction) came into force on 19 December 2011. This OEL implements into German law the EU limit value (IOELV) of 0.05 mg (thoracic fraction).

The AGS has decided during the meeting on 14/15 November 2011 an OEL of 0.1 mg/m³ (inhalable fraction). The new OEL has been official announced on 19 December 2011. Thus, the OEL for sulphuric acid of 0.1 mg/m³ came into force.

In the context of the European and German limit value discussions the Institute for Safety at Work (IFA) of the German employers' liability insurance association has made examinations to measure sulphuric acid also during the Lead battery production and recycling and the Lead battery charging. The key point of this

decision is the calculation of the relationship between the inhalable and thoracic fraction. The examinations indicate that a calculation of thoracic to inhalable occurs with a factor of two. Thus, as expected, the OEL of 0.1 mg/m³ and the IOELV of 0.05 mg/m³ are comparable and offer a comparable protection level. The final IFA report has been published in September 2011. An abstract in English is available from the EUROBAT Secretariat.

The calculation of thoracic to inhalable with a factor of two is a practical solution also in the interest of battery manufacturers. This clarification can also influence the implementation of the IOELV of 0.0.5 mg/m³ in other relevant Member States.

9° Battery Directive – Recycling Efficiency

On 5 January, the European Commission communicated to EU Member States a revised proposal for a draft Regulation laying down detailed rules for the calculation of recycling efficiencies of the recycling processes of waste batteries and accumulators. EU Member States and the European Parliament now have three months under the scrutiny procedure to reject the draft. Considering that this draft has been negotiated at length with the Member States and that it is a rather technical matter, it is expected that neither the Council nor the Parliament will reject the proposal. It is therefore reasonable to consider that this draft may be adopted in the course of Spring 2012. EUROBAT's CEM will consider whether it is relevant to provide EUROBAT Members with guidance or clarification for the implementation of the Regulation.

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