European Copper Institute
Copper Alliance

Public consultation on the M-factors for long-term aquatic classification of copper compounds and coated copper flakes

Comments by the European Copper Institute

February 4, 2019

We welcome the opportunity to comment on this document, and we appreciate the re-evaluation of the assessment for copper compounds and coated copper flakes in the view of more recent evidence on the environmental toxicity of copper ions. The evaluation was done thoroughly and in line with the applicable guidance. We have some comments on the document, which are reflected below. These comments reflect the view of the European Copper Institute, the Copper REACH Consortium, and the REACH Copper compounds consortium.

1. The RAC opinion on granulated copper, and the present draft RAC opinion, show 2 sets of ERV values. These sets of ERVs were obtained with the new ecotoxicity dataset with and without normalisation for the DOC content. On review, the lowest ERV across pH bands is 4 µg/L (not normalised) or 6.2 µg/L (with normalisation for DOC content). For the 9 copper compounds, Table 2 in the draft RAC opinion only shows the evaluation with 4 µg/L. No justification for the exclusion of normalised values is given and we think the RAC opinion would be more complete with a discussion of normalised versus non-normalised values. The normalised values constitute a more refined assessment, with consideration of physico-chemical factors known to affect copper toxicity.

   We have conducted an assessment with the value of 6.2 µg/L (normalised ERV), and this would lead to a change in M-factor for 4 additional substances (see table below). In view of the differences in the resulting M-factors for some copper substances, we would appreciate a discussion of these values and justification for the final selection of the value chosen.

Compound Name	Substance-specific ERV (mg/L) (ERV not normalized)	Corresponding M-factor	Substance-specific ERV (mg/L) (ERV normalized)	Corresponding M-factor
Copper (II) oxide	0.0050	10	0.0078	10
Copper (I) oxide	0.0045	10	0.0070	10
Copper (II) hydroxide	0.0061	10	0.0095	10
Copper (II) carbonate – copper (II) hydroxide (1:1)	0.0070	10	0.0109	1
Dicopper chloride trihydroxide	0.0067	10	0.0104	1
Copper thiocyanate	0.0077	10	0.0119	1
Copper sulphate pentahydrate	0.0157	1	0.0243	1
Tetra-copper hexahydroxide sulphate	0.0073	10	0.0113	1
Bordeaux mixture	0.0138	1	0.0214	1

2. There appears to be an inconsistency in the CLP Guidance. According to the present draft RAC opinion, if using the TD data obtained at a loading rate of 1 mg/L (as described in CLP Guidance Annex IV.5.4), the long-term M-factor for coated copper flakes could become higher (M=100) than for soluble copper compounds (M=10 or M=1). This seems counter-intuitive. It seems that the text in Annex IV.5.4 on deriving M-factors for metals and sparingly soluble metal

compounds does not recognize that, if sufficient long-term data are available, the classification of Chronic 1 is established by using TD data obtained at loadings of 0.1 mg/L (for non-rapidly degraded substances) or 0.01 mg/L (for rapidly degraded substances).

If the approach of Example B in the CLP guidance is followed, this apparent counter-intuitive situation is avoided.

A potential way forward to set the M-factor for metals and sparingly soluble metal compounds could be: to **calculate the M-factor based on TD data obtained at the same loading as the one that was used to establish the classification category (i.e. Acute 1 or Chronic 1)**. This approach is consistent with example B in the CLP guidance, and avoids the counter-intuitive situation referred to above.

If it is deemed appropriate to update the text in the CLP guidance, then Annex IV 5.4 could be amended by replacing

"(at respectively 7 d or 28 d's for a loading of 1 mg/l)"

with

"(at respectively 7 days or 28 days and for the same loading as the one that was used to establish the Acute 1 or Chronic 1 classification)".

3. In Regulation (EU) 2016/1179 (9th ATP to the CLP), the CAS and EC numbers of copper have not been included in the entry for "Coated copper flakes", in order to avoid confusion when applying the classification and labelling for such a specific form. We suggest that, in order to maintain consistency, the CAS and EC numbers of copper are removed from the draft RAC opinion on page 2 and on page 4 (Table 2). The table in Annex 1 (page 6) of the present draft RAC opinion is already correct in this regard.

4. We note that the draft RAC opinion proposes not to consider rapid environmental transformation for copper, based on the current information. We refer to the ongoing discussions on this topic to reach an internationally agreed approach. As also stated in the RAC opinion on granulated copper, the outcome of these discussions may further affect the classification decisions for copper compounds and coated copper flakes.

5. The RAC opinion on Granulated copper also includes acute ERVs, which are slightly different from those derived in 2014 for the copper compounds. These new values could trigger a change in acute M-factor for some of the substances: specifically, Copper (II) oxide and Copper (I) oxide could obtain an acute M-factor of 10 instead of 100. Although this was not formally part of the mandate, it would be useful if the RAC opinion could comment on this.

For more information, please contact

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