

General remark for all copper dossiers. Why was the acute ERV for copper not based on the acute aquatic toxicity results on *Pimephalus promelas* which are considered of high quality?

We support the proposed classification of Cu_2O as aquatic acute 1, H400 with M=100 and chronic cat 1, H410 with M=1.

The measured water solubility of Copper(I)-oxide (pH6.6 : 0.639 mg/l, pH9.8 : 0.539 mg/l) is greater than the acute ERV of the dissolved metal ion and therefore the metal compound can be considered readily soluble.

In water copper is rapidly bound to material resulting in very low levels of free Cu^{2+} ion in solution. More than 70% of copper is removed from the water column within 28 days. Copper remobilization from the sediment is considered limited (the pseudo-steady state total and dissolved copper conc. were lower than the conc. corresponding to 70% removal, which is supported by sediment sensitivity analyses). Copper binds to the sediment organic carbon and the anaerobic sulphides with formation of Copper sulfide. The latter has a very low stability constant and thus the remobilization of the anaerobic sediment layer is considered limited.

There is still lack of scientific consensus on the interpretation of rapid removal for classification purposes.

pH range	Ecotoxicity Reference Value (ERV) for Cu_2O	
	Acute ERV (mg/l)	Chronic ERV (mg/l)
DAR	0.01	
EU RAR pH 5.5-6.5	0.005	0.0225
EU RAR pH >6.5-7.5	0.0532	0.0083
EU RAR pH >7.5-8.5	0.0337	0.0180

We agree with the proposed acute classification and acute M-factor of 100 ($0.001\text{mg/l} < \text{acute ERV} \leq 0.01\text{mg/l}$) for Copper(I)oxide but we think that following rationale is more appropriate. The lowest Acute ERV, adjusted for molecular weight of the metal compound, is lower than 1 mg/l and therefore copper(I) oxide should be classified as Aquatic acute 1, H400. However, the lowest Acute ERV of copper (I) oxide should be based on the results of the metal for *Pimephales promelas* at pH 5.5-6.5., the ERV is lower than 1 mg/l and therefore copper (I) oxide should be classified as Aquatic acute 1, H400. If the number of datapoints < 4, the lowest value should be taken. The lowest data point (n=2) for *Pimephalus promelas* = 0.0044mg/l, adjusted for molecular weight, results in a M-factor of 100 ($0.001\text{mg/l} < \text{acute ERV} \leq 0.01\text{mg/l}$).

Based on the mean result of the aquatic chronic toxicity test on the most sensitive species (invertebrate *Ceriodaphnia dubia*, at pH >6.5-7.5), the lowest Chronic ERV for the metal compound is 0.0083 mg/l. If the chronic ERV compound ≤ 0.01 mg/l and there is evidence of rapid environmental transformation, than the compound should be classified as chronic category 1-H410. A chronic M-factor of 1 should be applied ($0.001\text{mg/l} < \text{Chronic ERV} \leq 0.01\text{mg/l}$).