

REACH Classification, Labelling and Packaging of Copper

Updated March 2017,

The Classification, Labelling and Packaging of copper, in massive and powder forms, and of copper flakes has been assessed in the Copper REACH dossier in accordance with Regulation (EC) 1907/2006. The same conclusions are also applicable to self-classification under the EU Classification, Labelling and Packaging (CLP) regulation (EC) 1272/2008.

ECI's REACH C&L proposal for copper follows the 2015 CLP guidance¹ and distinguishes the following forms put on the EU market:

1. Copper massive (specific surface area equal or below 0.67 mm²/mg, which is equivalent to particles with diameter equal or above 1 mm):

> 99.90 % purity

- No classification and no labelling for human health or the environment.

2. Copper powder (specific surface area above 0.67 mm²/mg, which is equivalent to particles with diameter below 1 mm):

> 95 % copper, < 5 % Cu₂O

- Aquatic Acute 1, H400 Very toxic to aquatic life M-factor = 1;
- Aquatic chronic 3, H 412 Harmful to aquatic life with long term-effects.

With regards to the classification for environmental hazards, one can distinguish between 2 copper powder forms. Copper powder A (fine powder) has specific surface area (SSA) above 9.1 mm²/mg. This powder has Acute 1 and Chronic 3 classifications for environmental hazards. Copper powder B (coarse powder) has specific surface area between 0.67 and 9.1 mm²/mg. This powder has no acute classification, but does have Chronic 3 classification for environmental hazards. These classifications are based on the critical surface area approach for environmental classification showing that copper powders with a SSA above 1.3 mm²/mg would merit chronic 3 classification, and powders with a SSA above 9.1 mm²/mg would additionally merit acute 1 classification.

¹ http://echa.europa.eu/documents/10162/13562/clp_en.pdf

3. Copper flakes (coated with aliphatic acid) (particle size in the range of 5 - 100 µm, with stearic acid coating)
> 93 % copper, < 3 % stearic acid and < 3 % Cu₂O

Copper flakes (coated with aliphatic acid) have received a harmonized classification through the 9th Adaptation to Technical Progress (ATP) of the CLP. Its mandatory entry into force is March 1st, 2018.

- Acute Tox. 3, H331: Toxic if inhaled
- Acute Tox. 4, H302: Harmful if swallowed
- Eye Irrit. 2, H319: Causes serious eye irritation
- Aquatic Acute 1, H400: Very toxic to aquatic life, M-factor = 10
- Aquatic Chronic 1, H410: Very toxic to aquatic life with long-lasting effects, M-factor = 1

ECl's rationales for these proposals are contained in the Chemical Safety Report submitted to ECHA, as part of the joint updated submission dossier, on January 11th, 2017 by the Lead Registrant Aurubis.

According to Article 23 of CLP, metals in massive form and alloys benefit from a derogation from labelling requirements (i.e. they do not require labelling).