

Is copper a biocide?

Information note to producers of copper, copper alloys, and (semi-)finished products copper containing

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The access for biocidal products to the European market is governed by the Biocidal Products Regulation (BPR). Following a request from interested business parties, the relevant scientific body (Biocidal Products Committee) will be issuing an opinion for using copper as active substance in biocidal products, likely in 2020. If the opinion is favourable and copper is accepted as active biocidal substance, the formal approval through a Commission Implementing Regulation will follow about 6 months later.

This has raised questions among the copper industry. Is copper a biocide? Do the provisions of the BPR apply to all copper products and uses?

The BPR applies to biocidal products and treated articles (BPR, Art. 2). A biocidal product is *“any substance or mixture, in the form in which it is supplied to the user, consisting of, containing or generating one or more active substances, with the intention of destroying, deterring, rendering harmless, preventing the action of, or otherwise exerting a controlling effect on, any harmful organism by any means other than mere physical or mechanical action.”* A treated article is: *“any substance, mixture or article which has been treated with, or intentionally incorporates, one or more biocidal products.”* A treated article that has a primary biocidal function shall be considered a biocidal product (BPR, Art. 3).

The criterion of intentionality is essential in these definitions. Many common substances have been identified as biocidal active substance, including ethanol, citric acid, carbon dioxide, silver, and copper. However, products or articles containing these substances are only biocidal products or treated articles if there is an intention to affect harmful organisms. A claim on the label and in the marketing material may be evidence of such intention (see e.g. BPR, Art. 58). The following examples clarify that many common products and articles are not biocidal products or treated articles, even if they contain active substances.

- Vodka contains the active substance ethanol (alcohol), but vodka is sold as a drink, not for the purpose of affecting harmful organisms. No biocidal claim is made on the label. Vodka is therefore not a biocidal product.
- Silver cutlery contains the active substance silver, but cutlery is sold as a tool to eat, not to affect harmful organisms. Silver cutlery is therefore not a biocidal product or a treated article.

- The vast majority of copper is sold for its conductivity, durability, aesthetics, strength, and other properties. They are not sold for the purpose of affecting harmful organisms, and no associated claims are made.

In conclusion, the vast majority of copper and copper alloy products are not biocidal products or treated articles. Therefore, the provisions of the BPR do not apply.

In contrast, in some cases companies may sell certain very specific copper products with a clear intention to affect harmful organisms. In such cases, the provisions of the BPR apply. For these specific products, it is advised to carefully assess the situation on a case-by-case basis. Examples of such products include copper electrode systems for the purposes of water disinfection and legionella control, and copper or copper alloy surfaces sold for the purpose of their antimicrobial properties. The marketing claims made for a product are an important element when authorities assess the intentionality, and such claims should therefore be checked carefully. Different EU member states may have slightly diverging opinions on how this criterion is to be applied. Companies may consider to contact their competent authority in case of doubt. **In all cases, it is the responsibility of the company placing products on the market to assess whether the criterion of intentionality applies, and to ensure compliance with the BPR if necessary.**

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