The term “bio-cide” means “killer of life”. Because biocides kill living organisms, they are a potential danger for human health as well. Their use should therefore be restricted to what is technically absolutely necessary. The most important biocides in construction industry products are fungicides (against fungi), algicides (against algae), herbicides (against plants) and preservatives.

Biocides may be contained in wall and wood paint, wood-based materials, sealants, disinfectants, carpets and insulating materials. The use of biocides can often be avoided, however, or the risk reduced by opting for less harmful substances.

Definition
“Biocides” is a blanket term that covers many different substances and applications, similar to “pesticides” in agriculture and forestry. In chemicals and products used in construction, the purpose of biocides is to destroy, control or repel harmful organisms, such as insects, fungi, algae and bacteria in order to prevent damage to the construction.

Biocides and human health
Apart from their intended effects on harmful organisms, biocides may also pose a threat to human health and the environment, especially if instructions for proper use are not closely observed. Potential adverse effects may range from headaches to nausea, allergic reactions or damage to the nervous system.

Alternatives
Before using a biocide-containing product, one should always consider whether its use is really necessary, and if yes, whether the hazards inherent in the selected product can be properly assessed. As a rule, solutions have to be worked out on a case-by-case basis.

Here are some examples:
Painting interior walls with biocide-containing paint “to be on the safe side” is not necessary: mould will not grow in rooms that are sufficiently ventilated. In places where there is a strong risk that mould may develop, lime or silicate mineral paints may be used. These are alkaline materials that prevent fungus growth, but are less harmful for human health.
Roofing sheets with integrated copper mesh can prevent plants from penetrating the roof just as well as herbicide-containing membranes. The substances contained in the latter, though largely insoluble in water, may over time “hydrolyse”, i.e. convert into water-soluble acids, which are then carried away by rainwater and released into the environment.

With respect to the group of preservative products, a highly critically view must be taken of formaldehyde – classified as a carcinogen by the WHO – and isothiazolinones, which are powerful allergens. Both substances should be avoided wherever possible, or their use minimised.

→ For further information, see “ÖkoKauf Wien” information sheet “VOCs”