

## Disposal of disinfectant concentrates and use solutions

### Disinfectant concentrates

Across the European Union, waste materials are classified and categorized using the European Waste Catalogue (EWC), according to what they are and how they were produced. The category that a waste material is assigned to also determines how it can be disposed of.

For disinfectant concentrates, the EWC code 07 06 01 "Wastes from the MFSU (manufacture, formulation, supply and use) of fats, grease, soaps, detergents, disinfectants and cosmetics" applies. This EWC code is also mentioned in the material safety data sheet.

Obviously, it is best to avoid generating disinfectant concentrate waste altogether, by making sure that the disinfectant is used up before it reaches its expiry date.

### Disinfectant use solutions

Like cleaning solutions, disinfectant use solutions may be disposed of via the sewer system. Due to the high dilution of disinfectant use solutions in the waste water, they don't pose any risk for microorganisms in sewage plants.

A possible exception of this rule may occur when the disinfectant use solution contains compounds which are on a list of substances whose concentration (amount per volume) or load (amount per time) is limited by local waste water regulations. The maximum concentration / load of these substances varies from one community to the other. The list of substances itself is usually nearly identical. Most substances whose disposal is limited (e.g. heavy metals, cyanides etc.) are not found in commonly used disinfectants.

Furthermore, several parameters of the waste water have to be within certain limits. Typical parameters are:

#### pH-value

the pH-value of waste water is usually required to be within the range from 6.5 - 9.0. Most disinfectant use solutions have a pH within this range. If not, they will be neutralized within this range quickly due to the dilution that occurs when it is mixed with other waste water from the same facility (hospital, plant etc.).

## **AOX-value**

The AOX-value (AOX = adsorbable organic halogens) is regarded as the mass of organically bound halogens present in a certain volume of water. The AOX-value is influenced by the presence of hazardous CFC (chlorofluorocarbon) and FC (fluorocarbon) compounds or pentachlorophenol, but also by the presence of relatively readily degradable single halogenated phenolic compounds (2-benzyl-4-chlorophenol or 3-methyl-4-chlorophenol) found in certain phenolic disinfectants. When using phenolic disinfectants, it should be considered that a very strong dilution of the disinfectant use solution in the sewer system may be necessary in order to achieve AOX-values below the defined limit.

Please note that chloride ions, such as those in benzalkonium chloride or other quaternary ammonium compounds, usually do **not** contribute to the AOX-value.

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