

## **TGN14 - DISPOSAL OF CHLORINE SOLUTIONS & CHLORINATED WATER**

### **Introduction**

Chlorine is toxic to aquatic flora and fauna. Care should be taken when disposing of water containing chlorine, particularly strong solutions used for the disinfection of water mains and fittings. Chlorine may also inactivate the biological process necessary for effective sewage treatment.

### **Good Practice**

1. Chlorine solutions and chlorinated water should not be discharged to water courses, without prior consent from the Environment Agency. Care should also be taken to ensure that surface and land drains do not discharge to water courses.
2. Chlorine solutions and chlorinated water may be discharged to foul drainage systems. A risk assessment should be carried out prior to doing so in order to confirm that the receiving sewage treatment works will not be adversely affected.
3. It may be necessary to dechlorinate water prior to disposal. Dechlorination can be achieved using a number of different chemical compounds, the most commonly used of which are sodium thiosulphate and sodium bisulphite.
4. Only materials which are approved under Regulation 31 of the Water Supply (Water Quality) Regulations 2016 and their equivalents in the devolved administrations should be used for the dechlorination of water that will be subsequently used for supply.
5. Dechlorination solutions, powders and tablets should not be used after the stated “expiry date”.
6. Chlorine-based solutions must only be stored in dedicated and clearly marked containers. Containers previously used for the storage of petroleum products must not be used (see TGN13)
7. The following information is provided as a guide to the relative concentration of sodium thiosulphate and sodium bisulphite solutions required to neutralise a specific chlorine solution. Advice from technical and scientific staff should be sought in order to calculate the required amount of dechlorination chemical in other circumstances.
  - 1ml of 1.8% (w/v) solution of sodium thiosulphate will neutralise 1L of water containing 5mg/L (ppm) of free available chlorine.
  - 10g of sodium thiosulphate (w/w) crystals will neutralise 1,000L of water containing 5mg/L (ppm) free available chlorine.
  - 15ml of 23% (w/v) sodium bisulphite will neutralise 1000L of water containing 5mg/L of free available chlorine.