

4. HOW TO MAKE 0.5% SODIUM HYPOCHLORITE DISINFECTANT SOLUTION (CHLORINE BLEACH)

Gloves should be worn when handling and preparing chlorine solutions.

Protective eye wear should be worn to avoid accidental splashing into eyes.

Surgical mask should be worn to avoid inhaling chlorine fumes when using chlorine powder.

1. Formula when using 3.5% Sodium Hypochlorite (Chlorine Liquid)

$$\frac{\% \text{ Chlorine in Liquid Product} - 1}{\% \text{ Chlorine Desired}} = \text{Total parts of water for each part of Chlorine Liquid}$$

Example:

To make a 0.5% sodium hypochlorite solution (chlorine bleach) from 3.5% sodium hypochlorite liquid:

$$\frac{3.5\% \text{ of Chlorine Liquid} - 1}{0.5\% \text{ Chlorine Desired}} = 7 - 1 = 6$$

0.5% Chlorine Desired

Therefore, add **6 parts of water** each time you add 1 part of 3.5% Sodium hypochlorite (Chlorine liquid).

2. Formula when using Chlorine Powder

$$\frac{\% \text{ Chlorine desired} \times 1000}{\% \text{ chlorine in powder}} = \text{Grams of Chlorine powder for each liter of water}$$

Example:

To make a 0.5% Chlorine solution from 35% Chlorine powder:

$$\frac{0.5\% \text{ Chlorine Desired} \times 1000}{35\% \text{ Chlorine in powder}} = 14.2 \text{ grams}$$

35% Chlorine in powder

Therefore, dissolve **14.2g of Chlorine powder** in each liter of water.