Technical Information:

Date:Aug 13th 2004Subject:Dilution Of Sodium HypochloriteProduct:General InfoCategory:ChlorinePage :1

In some cases it is necessary to dilute Sodium Hypochlorite for an application, this is typically done to achieve better mixing / accuracy in a Sodium Hypochlorite feed system.

Precautions.

Dilution water should be of quality to prevent precipitates from forming and reduce decomposition. Softened water should be used where possible.

Care should be taken to keep the pH of the final solution above pH 12. This is done to ensure the final solution remains stable.

Calculation

$$V = I \ge SG \ge (\frac{\%A - \%B}{\%B})$$

V = Volume of water needed per Volume of initial solution.
I = Volume of initial solution.
SG = Specific gravity of initial solution. (approx 1.168 for 12% Sodium Hypochlorite)
%A = weight % of initial solution
%B = weight % of final solution

Example

I have 100 litres of 12 % Sodium Hypochlorite, I want to dilute to 6 %.

$$V = (100) x (1.16) x (12\%-6\%) = 116 \text{ litres.}$$

6%

So, I need to add 116 litres of water to my initial 100 litres of 12% Sodium Hypochlorite to get a 6% solution.