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American Water Works Association

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AWWA Standard

# Hypochlorites

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## AWWA Standard

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# Contents

*All AWWA standards follow the general format indicated subsequently. Some variations from this format may be found in a particular standard.*

# Foreword

*This foreword is for information only and is not a part of ANSI*/AWWA B300.*

## I. Introduction.

I.A. *Background.* "Hypochlorites" is used as an all-inclusive term for chlorinated lime, calcium hypochlorite, and sodium hypochlorite. A concise description of each chemical follows.

*Chlorinated lime:* 25 percent to 37 percent available chlorine. Other common names for chlorinated lime are bleaching powder and chloride of lime. Because it is an unstable material and is subject to deterioration from heat and moisture, it is not usually fed dry but as a 2 percent solution. Excess insolubles present in this solution must be separated by decantation before use. Storage in a cool, dry area, for no more than nine months, is advisable. Chlorinated lime is available in 100 lb (45.4 kg), 300 lb (136 kg), and 800 lb (363 kg) drums. Approximately 0.25 lb/gal (30 g/L) of chlorinated lime to water will produce a solution of approximately 1 percent available chlorine.

*Calcium hypochlorite:* 65 percent to 70 percent available chlorine. This material is unstable but more stable than the grade with 35 percent available chlorine. It is best fed as a solution. Its theoretical solubility is approximately 22 g/100 mL of water (18 percent) at room temperature; however, its practical solubility use is closer to 3 percent. Decantation is advisable before use because of the excess insolubles present. Storage in a cool, dry area is advisable, but storage periods should not exceed one year. Calcium hypochlorite can lose 5–10 percent available chlorine in one year. It is available in 3 lb to 5 lb (1.4 kg to 2.3 kg) cans, 2 lb to 9 lb (0.9 kg to 4.1 kg) plastic containers, and 100 lb (45.4 kg) steel drums, and in granular powder, granule, and tablet form. Solubility tests that determine both rate and percentage should be conducted with particular emphasis on testing the tablets. Approximately 0.125 lb/gal (15 g/L) of calcium hypochlorite to water produces a solution of approximately 1 percent available chlorine.

*Sodium hypochlorite:* 12 percent to 20 percent available chlorine. Other common names for sodium hypochlorite are bleach, liquor, chlorine water, and Javelle water. Sodium hypochlorite will undergo some decomposition over time. There are numerous parameters that affect the rate of decomposition (see The Chlorine Institute[†] Pamphlet 96, *Sodium Hypochlorite Manual*).

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