TECHNICAL DATA SHEET

Sodium Hypochlorite 5.25%

Revised: 04/27/2026

PRODUCT IDENTIFICATION

Product Name: Sodium Hypochlorite 5.25%
CAS Number: 7681-52-9
Molecular Formula: ClNaO
Molecular Weight: 74.44 g/mol
Grade: Technical Grade
Purity / Concentration: 5.25%
Synonyms: Bleach, Liquid Chlorine

PRODUCT OVERVIEW

Sodium Hypochlorite 5.25% is a technical-grade liquid solution widely recognized for its powerful oxidizing and disinfectant properties. With a verified assay of 5.35% and low impurity levels, this product is a reliable solution for industrial water treatment and chemical processing applications.

Grade Significance: Technical grade indicates that the product is manufactured to meet industrial performance standards, ensuring it is suitable for large-scale applications where high efficacy is required.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	5.35	5	5.5	Titration with Sodium Thiosulfate
Color (APHA)	APHA	10	—	30	Visual Comparison
Specific Gravity (20°C)	g/mL	1.085	—	—	Hydrometer
Iron (Fe)	ppm	0.2	—	2	ICP-OES
Sodium Hydroxide Naoh	%	0.5	—	1	Titration with Hydrochloric Acid
Chloride (Cl^-)	ppm	50	—	200.0	Ion Chromatography

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Pale yellow-green liquid	**Odor**	Chlorine-like odor
Form	Liquid solution	**Boiling Point**	101°C (214°F)
Melting / Freezing Point	'-6°C	**Flash Point**	Not applicable
Specific Gravity	1.11	**Solubility**	Complete water solubility
Molecular Formula	ClNaO	**Molecular Weight**	74.44 g/mol
Density (25°C)	1.08 g/mL		

APPLICATIONS

1. **Water Treatment** — Used effectively in drinking water and wastewater systems to control microbial growth and ensure biological safety.
2. **Chemical Processing** — Functions as a precise pH adjuster and a strong oxidizing agent in various industrial chemical syntheses.
3. **Textile Manufacturing** — Utilized as a bleaching agent to achieve desired fabric whiteness and remove impurities during processing.
4. **Industrial Cleaning** — Acts as a potent disinfectant to sanitize surfaces and equipment in high-volume industrial environments.

STORAGE & HANDLING

Proper storage is critical because Sodium Hypochlorite is sensitive to light and heat, which can cause rapid degradation and loss of concentration. Due to its corrosive nature, it must be kept in a cool, well-ventilated area to prevent the release of hazardous vapors and to mitigate the risk of skin and eye damage.

- Store in a cool, dry place away from direct sunlight.
- Use materials compatible with sodium hypochlorite, such as HDPE or glass containers.
- Avoid contact with acids and reducing agents to prevent hazardous reactions.
- Use appropriate personal protective equipment (PPE) including gloves and goggles.
- Ensure adequate ventilation in storage areas to minimize inhalation risks.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Danger

Hazard Statements:

- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]
- H318: Causes serious eye damage [Danger Serious eye damage/eye irritation]
- H400: Very toxic to aquatic life [Warning Hazardous to the aquatic environment, acute hazard]
- H410: Very toxic to aquatic life with long lasting effects [Warning Hazardous to the aquatic environment, long-term hazard]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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