

PRODUCT IDENTIFICATION



Product Name: Sodium Hypochlorite 12.5%
CAS Number: 7681-52-9
Molecular Formula: ClNaO
Molecular Weight: 74.44 g/mol
Grade: Technical Grade
Purity / Concentration: 12.5%
Synonyms: Liquid Bleach, Sodium Oxychloride

PRODUCT OVERVIEW

Alliance Chemical provides high-quality Technical Grade Sodium Hypochlorite (12.5%), a potent oxidizing agent essential for industrial sanitization and chemical processing. This pale yellow liquid features a standardized assay of 12.5% with strictly controlled metal impurities like iron and copper to ensure consistent performance in demanding applications.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial and commercial use, prioritizing functional performance and chemical consistency over food or pharmaceutical-grade certifications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	12.5	12	13	Titration
Specific Gravity (20°C)	g/mL	1.21	—	—	Hydrometer @ 20°C
Copper Cu	ppm	0.12	0	0.5	ICP-MS
Iron	ppm	0.6	0	2	ICP
Nickel Ni	%	0.05	0	0.5	ICP-MS
Sodium Na	ppm	0.4	0.2	0.6	ICP-MS

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Pale yellow liquid	Odor	Chlorine-like odor
Form	Liquid solution	Boiling Point	Not characterized for the 12.5% solution
Melting / Freezing Point	Not characterized for the 12.5% solution	Flash Point	null
Specific Gravity	1.19	Solubility	Highly water soluble, reacts with aqueous solutions
Molecular Formula	ClNaO	Molecular Weight	74.44 g/mol
Vapor Pressure (20°C)	0.5 mmHg	Viscosity (25°C)	1.0 cP
Refractive Index (20°C)	1.335	Density (25°C)	1.2 g/mL

APPLICATIONS

1. **Water Treatment** — Used extensively in municipal and industrial systems to effectively control algae growth and eliminate odors in drinking water and wastewater.
2. **Textile Manufacturing** — Serves as a powerful bleaching agent to achieve desired brightness and color consistency in fabrics and synthetic fibers.
3. **Chemical Synthesis** — Functions as a versatile oxidizing agent in various industrial chemical reactions where precise concentration control is required.
4. **Industrial Processing** — Utilized to adjust pH levels in specialized manufacturing processes to maintain optimal system stability and reactivity.

STORAGE & HANDLING

Sodium Hypochlorite is highly reactive and requires storage in a cool, well-ventilated area away from direct sunlight to prevent degradation. Proper containment is critical because the solution is corrosive to metals and poses a significant risk of toxic gas release if it comes into contact with acids.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to prevent reactions.
- Avoid contact with acids and organic materials.
- Ensure proper ventilation in storage areas to minimize vapor accumulation.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.

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:

- EUH031: Contact with acids liberates toxic gas
- H290: May be corrosive to metals
- H314: Causes severe skin burns and eye damage
- H400: Very toxic to aquatic life
- H410: Very toxic to aquatic life with long lasting effects

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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com

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