

SAFETY DATA SHEET



Version 1

1. Identification of the Substance / Preparation and of the Company / Undertaking

Product Name: Novel Wash Bleach 5.25%
Synonyms: Novel Wash Bleach, Liquid Bleach, Soda Bleach
Formula: NaOCl
Molecular Weight: 74.45

Company Name: Vertex Chemical Corporation, 11685 Manchester Road, St. Louis, Missouri 63131. (314) 471-0500
Supplier: Novel Wash Company 11685 Manchester Road St. Louis, MO 63131 (314) 471-0555

Emergency Telephone:
 NATIONAL EMERGENCY RESPONSE CENTER: 1-800-424-8802
 VERTEX CHEMICAL CORPORATION 314-471-0500
 CHEMTREC (US): 1-800-424-9300
 Call CHEMTREC only in the event of chemical emergencies involving a SPILL, LEAK, FIRE, EXPOSURE, or ACCIDENT involving chemicals.

2. Hazards Identification

GHS - Classification

| | |
|-----------------------------------|------------------------|
| Skin corrosion/irritation | Category 1 Category 1B |
| Serious eye damage/eye irritation | Category 1 |
| Acute aquatic toxicity | Category 1 |
| Chronic aquatic toxicity | Category 1 |



Signal Word: Danger

Hazard Statements:
 • Causes severe skin burns and eye damage
 • Very toxic to aquatic life with long lasting effects

Physical Hazards
 • None

Precautionary Statements:

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- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
- P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- P363 - Wash contaminated clothing before reuse
- P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P405 - Store locked up
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 - Immediately call a POISON CENTER or doctor/physician
- P501 - Dispose of contents/container to industrial incineration plant
- P273 - Avoid release to the environment
- P501 - Dispose of contents/ container to an approved waste disposal plant

3. Composition / Information on Ingredients

Hazardous

| Chemical Name | CAS No | Weight-% | EC No |
|---------------------|-----------|----------|-----------|
| Sodium hypochlorite | 7681-52-9 | 5.25 | 231-668-3 |
| Caustic soda | 1310-73-2 | 0.2 | 215-185-5 |
| Sodium chloride | 7647-14-5 | 4.12 | 231-598-3 |

Non-Hazardous

| Chemical Name | CAS No | Weight-% | EC No |
|---------------|-----------|----------|-----------|
| Water | 7732-18-5 | Balance | 231-791-2 |

4. First Aid Measures

- General Advice:** Immediate medical attention is required.
- Eye Contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Immediate medical attention is required. Do not rub affected area.
- Skin Contact:** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
- Inhalation:** Move to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Ingestion:** Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately.
- Note to Physicians:** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.
- Self-protection of the First Aider:** Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

5. Fire-fighting Measures

Flammable Properties:

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes

Explosive Properties:

Not considered to be an explosion hazard

Suitable Extinguishing Media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable Extinguishing Media:

No information available

Specific Hazards Arising from the Chemical:

The product causes burns of eyes, skin and mucous membranes; Thermal decomposition can lead to release of irritating and toxic gases and vapors; In the event of fire and/or explosion do not breathe fumes

Protective Equipment and Precautions for Firefighters:

In the event of a fire, wear full protective clothing and MSHA/NIOSH (approved or equivalent) self-contained breathing apparatus with full facepiece operated in the pressure-demand or other positive pressure mode

6. Accidental Release Measures

- Personal Precautions:** Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.
- Environmental Precautions:** Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
- Methods for Containment:** Prevent further leakage or spillage if safe to do so.
- Methods for Cleaning Up:** Soak up with inert absorbent material. Prevent product from entering drains. Clean contaminated surface thoroughly. Dike far ahead of liquid spill for later disposal. Take up mechanically, placing in appropriate containers for disposal. Dam up. After cleaning, flush away traces with water.
- Other Information:** Not applicable.

7. Handling and Storage

- Advice on Safe Handling:** Use personal protective equipment as required. Use only with adequate ventilation. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.
- Storage Conditions:** Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.
- Incompatible Materials:** Strong acids and bases; Oxidizing agents; Reducing agents; Organic materials; Ammonia; Heavy metals such as iron, copper, magnesium, aluminum, tin, manganese, zinc, chromium, nickel, and their alloys

8. Exposure Controls / Personal Protection

| Chemical Name | | ACGIH TLV | | OSHA PEL | | Ontario TWA | |
|---------------|----------------|---|------------------------------|--|--------------------------|--------------------------|--|
| Caustic soda | | Ceiling: 2 mg/m ³ | | 2 mg/m ³ Ceiling 2 mg/m ³ TWA | | CEV: 2 mg/m ³ | |
| Chemical Name | European Union | China | Japan | Korea | Australia | Taiwan | |
| Caustic soda | | Ceiling: 2 mg/m ³ Ceiling | Ceiling: 2 mg/m ³ | Ceiling: 2 mg/m ³ | 2 mg/m ³ Peak | TWA: 2 mg/m ³ | |

Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

Engineering Controls: Ensure adequate ventilation, especially in confined areas

Personal protective equipment (PPE)

| | |
|-----------------------------|---|
| Eye/Face Protection: | Tight sealing safety goggles. Face protection shield. |
| Body Protection: | Gloves made of plastic or rubber. Rubber boots. Suitable protective clothing. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear chemical resistant clothing such as gloves, apron, boots or whole bodysuits made from neoprene, as appropriate. |

General Hygiene Considerations:

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

| | | | |
|--|--|--------------------------|------------------------------|
| Physical State: | Liquid | Odor: | Pungent chlorine bleach odor |
| Appearance: | Aqueous solution | Odor Threshold: | No information available |
| Color: | Clear Yellow | | |
| Property | Values | Remarks • Method | |
| pH: | 12.4 | No information available | |
| "Salt Out" Point (°F): | | No information available | |
| Melting Point/Freezing Point: | -7 °C / 19 °F | | |
| Boiling Point/Boiling Range: | 102 °C / 216 °F | | |
| Flash Point: | | No information available | |
| Evaporation Rate (BuAc=1): | | No information available | |
| Flammability (solid, gas): | | No information available | |
| Flammability Limits in Air: | | No information available | |
| Upper Flammability Limit: | | | |
| Lower Flammability Limit: | | | |
| Vapor Pressure (mm Hg) : | 62.18 @ 55 °C | | |
| Vapor density (Air =1) | | No information available | |
| Specific Gravity (H2O=1): | 1.08 | | |
| Specific Gravity (2nd value): | | | |
| Water Solubility: | 100% soluble in water | | |
| Solubility(ies): | | No information available | |
| Partition Coefficient (n-octanol/water) | | No information available | |
| Autoignition Temperature: | | No information available | |
| Decomposition Temperature: | | No information available | |
| Kinematic Viscosity: | 1.10 centistokes @ 25 °C | No information available | |
| Dynamic Viscosity: | | No information available | |
| Oxidizing Properties: | No information available | | |
| Explosive Properties: | Not considered to be an explosion hazard | | |

9.2. Other information

| | |
|--------------------------|--------------------------|
| Softening Point: | No information available |
| Molecular Weight: | 74.45 |
| VOC Content(%): | No information available |
| Density: | No information available |
| Bulk Density: | No information available |

10. Stability and Reactivity

| | |
|-------------------|---|
| Stability: | Stable under normal conditions of use and storage |
|-------------------|---|

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Conditions to Avoid: Exposure to air or moisture over prolonged periods; Heat, flames and sparks; Extremes of temperature and direct sunlight

Incompatible Materials: Strong acids and bases; Oxidizing agents; Reducing agents; Organic materials; Ammonia; Heavy metals such as iron, copper, magnesium, aluminum, tin, manganese, zinc, chromium, nickel, and their alloys

Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors

Possibility of Hazardous Reactions: None under normal processing

11. Toxicological Information

Product Information

Acute Toxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

| Chemical Name | Oral LD ₅₀ : | Dermal LD ₅₀ : | LC ₅₀ (Lethal Concentration): |
|---------------------|-------------------------|---------------------------|--|
| Water | 90 mL/kg (Rat) | | |
| Sodium hypochlorite | 8200 mg/kg (Rat) | 10000 mg/kg (Rabbit) | |
| Caustic soda | | 1350 mg/kg (Rabbit) | |
| Sodium chloride | 3 g/kg (Rat) | 10 g/kg (Rabbit) | 42 g/m ³ (Rat) 1 h |

Chronic Toxicity:

Carcinogenicity: This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)

| Chemical Name | IARC |
|---------------------|---------|
| Sodium hypochlorite | Group 3 |

IARC (International Agency for Research on Cancer)
Not classifiable as a human carcinogen

12. Ecological Information

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Very toxic to aquatic life with long lasting effects

| Chemical Name | Toxicity to algae | Toxicity to fish | Toxicity to daphnia and other aquatic invertebrates |
|---------------|-------------------|------------------|---|
|---------------|-------------------|------------------|---|

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| | | | |
|---------------------|---|--|--|
| Sodium hypochlorite | 0.095: 24 h <i>Skeletonema costatum</i> mg/L EC50 | 0.06 - 0.11: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 4.5 - 7.6: 96 h <i>Pimephales promelas</i> mg/L LC50 static 0.4 - 0.8: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 0.28 - 1: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 0.05 - 0.771: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 0.03 - 0.19: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static 0.18 - 0.22: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static | 2.1: 96 h <i>Daphnia magna</i> mg/L EC50 0.033 - 0.044: 48 h <i>Daphnia magna</i> mg/L EC50 Static |
| Caustic soda | | 45.4: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static | |
| Sodium chloride | | 5560 - 6080: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 6020 - 7070: 96 h <i>Pimephales promelas</i> mg/L LC50 static 12946: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 7050: 96 h <i>Pimephales promelas</i> mg/L LC50 semi-static 6420 - 6700: 96 h <i>Pimephales promelas</i> mg/L LC50 static 4747 - 7824: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through | 1000: 48 h <i>Daphnia magna</i> mg/L EC50 340.7 - 469.2: 48 h <i>Daphnia magna</i> mg/L EC50 Static |

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

Mobility: No information available.

13. Disposal Considerations

Waste from Residues/Unused Products: Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated Packaging: Do not reuse container.

14. Transport Information

IATA

DOT

Description Not DOT Regulated

TDG

MEX

15. Regulatory Information

International Inventories

All of the components in the product are on the following inventory lists: TSCA (United States);, Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Australia (AICS), South Korea (KECL);, China (IECSC), Philippines (PICCS), This product contains a substance not listed on international inventories - it is for research and development use only.

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| | |
|----------------------|----------|
| AICS | Complies |
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | - |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |

| Chemical Name | AICS | TSCA | DSL | NDSL | EINECS | ELINCS | ENCS | IECSC | KECL | PICCS |
|---------------------|--------|--------|--------|------|--------|--------|---------------------|--------|----------|---------|
| Water | Listed | Listed | Listed | - | Listed | - | - | Listed | KE-35400 | Present |
| Sodium hypochlorite | Listed | Listed | Listed | - | Listed | - | (1)-237 | Listed | KE-31506 | Present |
| Caustic soda | Listed | Listed | Listed | - | Listed | - | (2)-1972 (1)-410 | Listed | KE-31487 | Listed |
| Sodium chloride | Listed | Listed | Listed | - | Listed | - | (1)-236 | Listed | KE-31387 | Present |

Inventory Legend

AICS - Australian Inventory of Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

RESTRICTIONS - REACH TITLE VII No information available

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical Name | CERCLA Hazardous Substances and the Reportable Quantities | SARA Extremely Hazardous Substances EPCRA RQ | SARA Extremely Hazardous Substances TPQ |
|---------------------|---|--|---|
| Sodium hypochlorite | 100 lb 45.4 kg | 100 lb | - |
| Caustic soda | 1000 lb 454 kg | - | - |

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

| | |
|--|-----|
| Acute health hazard | Yes |
| Chronic health hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive hazard | No |

U.S. State Right-to-Know Regulations

California Proposition 65:

This product does not contain any Proposition 65 chemicals

16. Other Information

National Fire Protection Association (NFPA) Ratings



Prepared By: Adam Peterson, Rob Kelley, Andrew Morabu and Todd Bain from the HSE department.
Issue Date: 08-Jan-2013
Revision Date: 08-Jan-2013
Revision Note: MSDS converted to GHS SDS Format.

Disclaimer:
Novel Wash Company ("Novel Wash") expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Novel Wash makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Novel Wash's control, and, therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes, and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

End of Safety Data Sheet