

SAFETY DATA SHEET

1. Identification

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| Product identifier | Freestyle® Calcium Hypochlorite 65% | |
| Other means of identification | | |
| SDS number | 320221-02 | |
| Product registration number | EPA 1258-1069-148 | |
| Recommended use | Bleaching agent; water treatment; disinfectant; pesticide. | |
| Recommended restrictions | None known. | |
| Manufacturer/Importer/Supplier/Distributor information | | |
| Manufacturer | | |
| Company name | Harcros Chemicals Inc | |
| Address | 5200 Speaker Rd. Kansas City, KS 66106 United States | |
| Telephone | Main Telephone Number | 1-913-321-3131 |
| Website | www.harcros.com | |
| E-mail | custserv@harcros.com | |
| Emergency phone number | CHEMTREC | 1-800-424-9300 |
| | CHEMTREC | 1-703-527-3887 (call collect) |

2. Hazard(s) identification

| | | |
|------------------------------|--|-----------------------------|
| Physical hazards | Oxidizing solids | Category 2 |
| Health hazards | Acute toxicity, oral | Category 4 |
| | Skin corrosion/irritation | Category 1 |
| | Serious eye damage/eye irritation | Category 1 |
| Environmental hazards | Hazardous to the aquatic environment, acute hazard | Category 1 |
| | Hazardous to the aquatic environment, long-term hazard | Category 1 |
| OSHA defined hazards | Combustible dust | Classification not possible |
| | Pyrophoric gas | Not applicable |
| | Simple asphyxiant | Not applicable |

Label elements



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|--------------------------------|---|
| Signal word | Danger |
| Hazard statement | May intensify fire; oxidizer. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. |
| Precautionary statement | |
| Prevention | Keep away from heat. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. |

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| Response | If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see this label). Wash contaminated clothing before reuse. Collect spillage. |
| Storage | Store locked up. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |

Supplemental information None.

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|--|--------------------------|------------|-------|
| Calcium Hypochlorite | | 7778-54-3 | 60-80 |
| Other components below reportable levels | | | 35 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

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| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. |
| Ingestion | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. |
| Most important symptoms/effects, acute and delayed | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. |
| General information | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. |

5. Fire-fighting measures

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| Suitable extinguishing media | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | May intensify fire; oxidizer. |
| Special protective equipment and precautions for firefighters | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |
| Fire-fighting equipment/instructions | Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. |
| Specific methods | Cool containers exposed to flames with water until well after the fire is out. |
| General fire hazards | May intensify fire; oxidizer. |

6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop the flow of material, if this is without risk. Collect spillage. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS. |
| Environmental precautions | Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

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| Precautions for safe handling | Keep away from heat. Take any precaution to avoid mixing with combustibles. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains. |
| Conditions for safe storage, including any incompatibilities | Store locked up. Keep away from heat. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Do not store near combustible materials. Store away from incompatible materials (see Section 10 of the SDS). |

8. Exposure controls/personal protection

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| Occupational exposure limits | No exposure limits noted for ingredient(s). |
| Biological limit values | No biological exposure limits noted for the ingredient(s). |
| Appropriate engineering controls | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. It is recommended that users of this product perform a risk assessment to determine the appropriate PPE. |
| Individual protection measures, such as personal protective equipment | |
| Eye/face protection | Do not get in eyes. Wear chemical goggles and face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. |
| Hand protection | Wear appropriate chemical resistant gloves. |
| Skin protection | Wear appropriate chemical resistant clothing. |
| Other | In case of insufficient ventilation, wear suitable respiratory equipment. |
| Respiratory protection | Wear appropriate thermal protective clothing, when necessary. |
| Thermal hazards | Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |
| General hygiene considerations | |

9. Physical and chemical properties

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| Appearance | Solid-powder, crystal, flake, granule, tablet, prill, briquette, etc. |
| Physical state | Solid. |
| Form | Powder. |
| Color | White. |
| Odor | Chlorine. |
| Odor threshold | Not available. |

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|---|------------------------------|
| pH | Not available. |
| Melting point/freezing point | 212 °F (100 °C) |
| Initial boiling point and boiling range | 338 - 356 °F (170 - 180 °C) |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | < 1 kPa @25 °C |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | 18 % @25 C |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | > 350 °F (> 176.7 °C) |
| Viscosity | Not available. |
| Other information | |
| Molecular formula | Ca2Cl-H-O |
| Molecular weight | 142.98 g/mol |
| pH in aqueous solution | 10.4 - 10.8 (1% in DI Water) |
| Specific gravity | 0.8 - 1 @25 C |

10. Stability and reactivity

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| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | Excessive heat. Contact with incompatible materials. |
| Incompatible materials | Organic/Inorganic acids and bases Strong reducing agents. Hydrogen. Hydrazine. Sulfites Nitrites. |
| Hazardous decomposition products | Toxic chlorine gas and oxygen may form by combining acids, ammonia or excessive heat. |

11. Toxicological information

Information on likely routes of exposure

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| Ingestion | Causes digestive tract burns. Harmful if swallowed. |
| Inhalation | May cause irritation to the respiratory system. |
| Skin contact | Causes severe skin burns. |
| Eye contact | Causes serious eye damage. |
| Symptoms related to the physical, chemical and toxicological characteristics | Burning pain and severe corrosive skin damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Causes serious eye damage. Permanent eye damage including blindness could result. |

Information on toxicological effects

Acute toxicity Harmful if swallowed.

| Product | Species | Test Results |
|---|---------|--------------|
| Freestyle® Calcium Hypochlorite 65% (CAS Mixture) | | |
| Acute | | |
| Oral | | |

LD50

Rat

1307.6923 mg/kg estimated

| Components | Species | Test Results |
|--------------------------------------|---------|--------------|
| Calcium Hypochlorite (CAS 7778-54-3) | | |
| Acute | | |
| Oral | | |

LD50

Rat

850 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Calcium Hypochlorite (CAS 7778-54-3) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

| Product | Species | Test Results |
|---|---------|---|
| Freestyle® Calcium Hypochlorite 65% (CAS Mixture) | | |
| Aquatic | | |
| Crustacea | EC50 | Daphnia 1.2513 mg/l, 48 hours estimated |
| Fish | LC50 | Fish 0.2766 mg/l, 96 hours estimated |
| Components | Species | Test Results |
| Calcium Hypochlorite (CAS 7778-54-3) | | |
| Aquatic | | |
| Crustacea | EC50 | Rotifer (<i>Philodina acuticornis</i>) 0.07 mg/l, 48 hours |
| Fish | LC50 | Atlantic silverside (<i>Menidia menidia</i>) 0.037 mg/l, 96 hours |

* Estimates for product may be based on additional component data not shown.

| | |
|--------------------------------------|---|
| Persistence and degradability | No data is available on the degradability of this product. |
| Bioaccumulative potential | No data available. |
| Mobility in soil | No data available. |
| Other adverse effects | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |

13. Disposal considerations

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| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Local disposal regulations | Dispose in accordance with all applicable regulations. |
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. |

14. Transport information

DOT

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|-------------------------------------|---|
| UN number | UN2880 |
| UN proper shipping name | Calcium hypochlorite, hydrated |
| Transport hazard class(es) | |
| Class | 5.1 |
| Subsidiary risk | - |
| Label(s) | 5.1 |
| Packing group | II |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | 165, IB8, IP2, IP4, IP13, W9 |
| Packaging exceptions | 152 |
| Packaging non bulk | 212 |
| Packaging bulk | 240 |

IATA

| | |
|-------------------------------------|---|
| UN number | UN2880 |
| UN proper shipping name | Calcium hypochlorite, hydrated |
| Transport hazard class(es) | |
| Class | 5.1 |
| Subsidiary risk | - |
| Packing group | II |
| Environmental hazards | No. |
| ERG Code | 5L |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Other information | |
| Passenger and cargo aircraft | Allowed. |
| Cargo aircraft only | Allowed. |

IMDG

| | |
|-----------------------------------|--------------------------------|
| UN number | UN2880 |
| UN proper shipping name | Calcium hypochlorite, hydrated |
| Transport hazard class(es) | |

Class 5.1

| | |
|---|---|
| Subsidiary risk | - |
| Label(s) | 5.1 |
| Packing group | II |
| Environmental hazards | |
| Marine pollutant | No. |
| EmS | Not available. |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |

DOT



IATA; IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Calcium Hypochlorite (CAS 7778-54-3)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

| | |
|--------------------------|---|
| Hazard categories | Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No |
|--------------------------|---|

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Hazardous substance**Section 112(r) (40 CFR****68.130)****Safe Drinking Water Act** Not regulated.
(SDWA)**US state regulations****US. Massachusetts RTK - Substance List**

Calcium Hypochlorite (CAS 7778-54-3)

US. New Jersey Worker and Community Right-to-Know Act

Calcium Hypochlorite (CAS 7778-54-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Calcium Hypochlorite (CAS 7778-54-3)

US. Rhode Island RTK

Calcium Hypochlorite (CAS 7778-54-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|-------------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision**Issue date** 06-10-2014**Version #** 01**HMIS® ratings**
Health: 3
Flammability: 1
Physical hazard: 2

NFPA ratings

Health: 3
Flammability: 1
Instability: 1
Special hazards: OX

Disclaimer

The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. Harcros Chemicals Inc., provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Harcros Chemicals Inc., knows of no medical condition, other than those noted on this Material Safety Data Sheet, which are generally recognized as being aggravated by exposure to this product.

Revision Information

Physical & Chemical Properties: Multiple Properties