SAFETY DATA SHEET

1. Identification

Product identifier **De Stainer**

Other means of identification

Synonyms Sodium Hypochlorite * Liquid Bleach * Bleach

Recommended use Bleaching, laudry sanitizer

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Energy Mizer Corporation

Address 295 Edwardia Drive
Greensboro, NC 27409

Telephone 800-627-5634 (8:00 am-5:00pm)

Website www.energymizer.net

E-mail Not available.

Emergency phone number 800-627-5634 24-hours

Supplier Refer to Manufacturer

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

Environmental hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

OSHA defined hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Label elements

Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary statement

Prevention Keep only in original container. Do not breathe mist. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing and eye/face protection.

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.Wash contaminated clothing before reuse. 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. Immediately call a POISON CENTER or doctor/physician.

Storage Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant container with a resistant inner liner.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) No OSHA defined hazard classes.
Other hazards which do not result in classification: Contact with most acids may liberate and toxic gas. Chronic skin contact with low concentrations may cause dermatitis.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium Hypochlorite	HYPOCHLORITE SOLUTION	7681-52-9	12.5

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, trained personnel should give oxygen. Call a physician or poison control center immediately. IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin contact Immediately flush skin with running water for at least 20 minutes. Take off immediately all contaminated clothing. Take off immediately all contaminated clothing. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse. Cover wound with sterile dressing. Do not rub area of contact. Leather and shoes that have been contaminated with the solution may need to be destroyed.

Eye contact Immediately flush eyes with plenty of water for at least 20 minutes. 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. Take care not to rinse contaminated water into the unaffected eye or onto the face.

Ingestion Call a physician or poison control center immediately. Rinse mouth. If swallowed: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. 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 Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Can cause severe respiratory irritation. Symptoms may include coughing, choking and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.

Indication of immediate medical attention and special treatment needed Immediate medical attention is required. Causes chemical burns. Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide. Use water with caution. Contact with water will generate considerable heat.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire. Do not use dry chemical extinguishing agents. Maleic anhydride may react with the basic sodium compounds. Use chemical extinguishing agents with caution. Some chemical extinguishing agents may react with this material.

Specific hazards arising from the chemical Not considered flammable. Vapors are heavier than air and may spread along floors. Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. Reacts violently with a wide variety of organic and inorganic chemicals including alcohol, carbides, chlorates, picrates, nitrates and metals. Toxic fumes, gases or vapours may evolve on burning.

Special protective equipment and precautions for firefighters Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn.

Fire fighting equipment/instructions Fight fire with normal precautions from a reasonable distance. Evacuate the area promptly. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards	Vapors are heavier than air and may spread along floors.
Hazardous combustion products	Hydrogen gas. Hydrogen chloride. De Stainer . Oxygen. Sodium oxides.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Immediately evacuate personnel to safe areas. 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 breathe mist or vapor. 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

Ventilate the area. Remove sources of ignition. Stop leak if you can do so without risk. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Remove with vacuum trucks or pump to storage/salvage vessels. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Small spills can be neutralized by covering with a reducing agent, such as Sodium thiosulfate or Sodium sulphite. If not recoverable, dilute with water or flush to holding area and neutralize.

Never return spills to original containers for re-use. Contact the proper local authorities. Contaminated absorbent material may pose the same hazards as the spilled product. For waste disposal, see Section 13.

Environmental precautions

Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing and eye/face protection. Label containers appropriately. When using, do not eat, drink or smoke. Do not taste or swallow. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Avoid ultraviolet (UV) light sources. Inspect periodically for damage or leaks. Store in corrosive resistant container with a resistant inner liner. Store in original tightly closed container. Keep container tightly closed. Store in a well-ventilated place. Store away from and do not mix with incompatible materials such as acids, oxidizers, organics, reducing agents and all metals except titanium. Keep away from food, drink and animal feedingstuffs.

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
SODIUM HYPOCHLORITE (CAS 7681-52-9)	STEL	2 mg/m3

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.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical goggles and face shield are recommended. Eye wash facilities and emergency shower must be available when handling this product.

Skin protection

Hand protection

Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

Other

Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield. Use of an impervious apron is recommended.

Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece. A NIOSH/MSHA approved air-purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may be used to reduce exposure. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134). Advice should be sought from respiratory protection specialists.

Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Do not breathe mist. Avoid contact with eyes, skin and clothing. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

9. Physical and chemical properties

Appearance	Clear yellow/green liquid.
Physical state	Liquid.
Form	Liquid.
Color	Clear to yellow/green.
Odor	Pungent. Chrlorine-like.
Odor threshold	Not available.
pH	> 11
Melting point/freezing point	7.52 °F (-13.6 °C) 230 °
Initial boiling point and boiling range	F (110 °C)
Flash point	Not Applicable
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not Applicable
Flammability limit - lower (%) temperature	Not Applicable
Flammability limit - upper (%)	Not Applicable
Flammability limit - upper (%) temperature	Not Applicable
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	17.5 mm Hg @ 70 F.
Vapor density	> 1
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.08 - 1.26 g/cm3
Explosive properties	Not explosive.
Molecular formula	NaOCl
Molecular weight	74.4
Oxidizing properties	None known.
Percent volatile	100 %
Specific gravity	1.08 - 1.26

10. Stability and reactivity

Reactivity Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. Reacts with amines and ammonia compounds to form explosively unstable compounds. May be corrosive to metals. May be corrosive to: Aluminum. Stainless steel. Carbon steel. Copper. Bronze

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Reacts vigorously or violently with many organic and inorganic chemicals such as: acids, acrolein, acrylonitrile, chlorinated hydrocarbons (e.g. 1,2 dichloroethylene), Chlorine, dioxide, maleic anhydride, nitroethane, nitroparaffins, 2-nitrophenol, nitropropane, phosphorus, potassium persulfate, and tetrahydrofuran (containing peroxides).

Conditions to avoid Direct sources of heat. Avoid high temperatures. Direct sunlight. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation. Do not allow evaporation to dryness.

Incompatible materials Metals. Strong oxidizing agents. Acids. Amines. Ammonia. Reducing agents. Nitrites. Organic compounds.

Hazardous decomposition products None known, refer to hazardous combustion products in Section 5.
In the event of fire the following can be released: Chlorine . Sodium chlorate.

11. Toxicological information

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful. May cause irritation to the respiratory system. May cause severe irritation to the nose, throat, and respiratory tract.

Skin contact Causes severe skin burns.

Eye contact Causes serious eye damage.

Ingestion Causes digestive tract burns. Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract.

Most important symptoms/effects, acute and delayed Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Can cause severe respiratory irritation. Symptoms may include coughing, choking and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.

Information on toxicological effects

Acute toxicity Not expected to be hazardous by OSHA criteria. See data for individual ingredient acute toxicity data.

Components	Species	Test Results
Sodium Hypochlorite (CAS 7681-52-9)		
Acute		
Dermal		
LD50	Rabbit	> 10000 mg/kg
Inhalation		
LC50	Rat	> 5.25 mg/l/4h
Oral		
LD50	Rat	8910 mg/kg

Skin corrosion/irritation Hazardous by OSHA criteria.
Causes severe skin burns and eye damage. Skin corrosion/irritation -Category 1.

Serious eye damage/eye irritation Hazardous by OSHA criteria.
Causes serious eye damage. Serious eye damage/eye irritation - Category 1

Respiratory or skin sensitization

Respiratory sensitization Not expected to be a respiratory sensitizer.

Skin sensitizer Not expected to be hazardous by OSHA criteria. Not expected to be a skin sensitizer.

May cause an allergic skin reaction (e.g. hives, rash) in some hypersensitive individuals.

Germ cell mutagenicity Not expected to be mutagenic.

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

IARC Monographs. Overall Evaluation of Carcinogenicity

Sodium Hypochlorite (CAS 7681-52-9) 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 Hazardous by OSHA criteria.
May cause respiratory irritation. Specific Target Organ Toxicity (STOT), Single Exposure, Category 3.

Specific target organ toxicity - repeated exposure Not classified as a specific target organ toxicity -repeated exposure.

Aspiration toxicity Not expected to be an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. Chronic skin contact with low concentrations may cause dermatitis.

12. Ecological information

Ecotoxicity Toxic to aquatic life.

Components		Species	Test Results
Sodium Hypochlorite (CAS 7681-52-9)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	0.169 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.58 mg/l, 96 hours

Persistence and degradability Biodegradation is not applicable to inorganic substances.

Bioaccumulative potential No accumulation in living organisms is expected due to high solubility and dissociation properties.

Mobility in soil High water solubility indicates a high mobility in soil.

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

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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

UN number UN1791
UN proper shipping name HYPOCHLORITE SOLTUTIONS (RQ = 100)
Transport hazard class(es)
Class 8
Subsidiary risk -
Label(s) 8
Packing group III
Environmental hazards
Marine pollutant Yes
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions	IB3, N34, T4, TP2, TP24
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

This product does the definition of a marine pollutant as described in 49 CFR section 171.8.

IATA

UN number	UN1791
UN proper shipping name	HYPOCHLORITE SOLUTION
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	NO
ERG Code	8L
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	UN1791
UN proper shipping name	HYPOCHLORITE SOLUTION
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
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 available.

DOT

IATA; IMDG

Marine pollutant

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)

Sodium Hypochlorite (CAS 7681-52-9) 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 - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

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.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Sodium Hypochlorite (CAS 7681-52-9)

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

Sodium Hypochlorite (CAS 7681-52-9)

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

Sodium Hypochlorite (CAS 7681-52-9)

US. Rhode Island RTK

Sodium Hypochlorite (CAS 7681-52-9)

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 03-15-2015

Version # 01

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
EC: European Community
EINECS: European Inventory of Existing Commercial chemical Substances
EPA: Environmental Protection Agency
EPCRA: Emergency Planning and Community Right-to-Know Act
HSDB® - Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
IMDG: International Maritime Dangerous Goods
LC: Lethal Concentration
LD: Lethal Dose
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Cooperation and Development
OSHA: Occupational Safety and Health Administration
PPE: Personal Protective Equipment
RCRA: Resource Conservation and Recovery Act
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TLV: Threshold Limit Values
TWA: Time Weighted Average

Disclaimer

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