

CUSTOMER: 485705
BATCH #: 1652434
PICK ZONE: EB03
PRODUCT NAME: E-100

ORDER #: 1399697
DELIVERY ID: 12161980
PICK SEQUENCE #: 3200
BARCODE #: 10172114

Material Safety Data Sheet: E-100

Supersedes Date 04/06/2010

Issuing Date 07/19/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name E-100
Recommended use Water treatment chemical
Information on Manufacturer
CHEMSEARCH FE DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Product Code 10172114
Chemical nature mixture
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

DANGER
POISON
Oxidizing agent
Corrosive
Causes skin and eye burns
Harmful if inhaled and may cause delayed lung injury
Harmful or fatal if swallowed

Color Blue

Potential Health Effects

Principle Route of Exposure

Primary Routes of Entry

Acute Effects

Eyes

Skin

Inhalation

Ingestion

Physical State Solid

Odor Odorless

Eye contact, Skin contact, Inhalation.
Inhalation

Corrosive to the eyes and may cause severe damage including blindness.
Causes skin burns.

Harmful by inhalation. Causes burns.

Harmful or fatal if swallowed. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Components of the product create formation of methemoglobin.

Harmful if inhaled and may cause delayed lung injury.

Central nervous system, Respiratory system, Liver, Kidney, Blood, Heart, Skin, Eyes.

Neurological disorders, Liver disorders, Kidney disorders, Blood disorders, Respiratory disorders, Heart disease, Skin disorders.

See Section 12 for additional Ecological information.

Chronic Toxicity

Target Organ Effects

Aggravated Medical Conditions

Potential Environmental Effects

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | CAS-No |
|---|------------|
| Sodium hydroxide | 1310-73-2 |
| Sodium nitrate | 7631-99-4 |
| Aluminum | 7429-90-5 |
| Petroleum distillates, hydrotreated light | 64742-47-8 |
| Sodium carbonate | 497-19-8 |
| Sodium chloride | 7647-14-5 |

4. FIRST AID MEASURES

General advice

Eye Contact

Skin Contact

Inhalation

Ingestion

Notes to physician

Do not get in eyes, on skin or on clothing. Do not breathe dust.

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.

Wipe up with absorbent material (e.g. cloth, fleece). Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.

Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock

therapy if needed.

5. FIRE-FIGHTING MEASURES

| | | | |
|---|--|----------------|----------------------|
| Flash Point | Does not flash | Method | Not applicable |
| Autoignition Temperature | No information available. | | |
| Flammability Limits in Air % Hydrogen, by reaction with metals. | | Upper 75 | Lower 4 |
| Suitable Extinguishing Media | Dry chemical. Carbon dioxide (CO ₂). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. | | |
| Specific hazards arising from the chemical | Contact with metals liberates flammable hydrogen gas. Water reactive. | | |
| Protective Equipment and Precautions for Firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear | | |
| NFPA | Health 3 | Flammability 1 | Instability 1 |
| HMIS | Health 3 | Flammability 1 | Instability 0 |
| | | | Other Water Reactive |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---------------------------|--|
| Personal Precautions | Use personal protective equipment. Prevent further leakage or spillage if safe to do so. |
| Environmental Precautions | No special environmental precautions required. |
| Methods for Containment | Cover powder spill with plastic sheet or tarp to minimize spreading |
| Methods for Cleaning Up | Pick up and arrange disposal without creating dust. |
| Neutralizing Agent | Acetic acid, diluted. Corrosive hazard. Wear protective gloves/clothing and eye/face protection. |

7. HANDLING AND STORAGE

| | | | |
|---------------------|---|--------------|--------------|
| Handling | Do not get in eyes, on skin or on clothing. Do not breathe vapors/dust. | | |
| Storage | Store in original container. Metal containers must be lined. Keep containers tightly closed in a dry, cool and well-ventilated place. | | |
| Storage Temperature | Minimum | 35 °F / 2 °C | Maximum |
| Storage Conditions | Indoor | X | Outdoor |
| | | | Heated |
| | | | Refrigerated |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH |
|---|---------------------------------|--|--|
| Sodium hydroxide | Ceiling: 2 mg/m ³ | TWA: 2 mg/m ³ | IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³ |
| Sodium nitrate | No data available | No data available | No data available |
| Aluminum | TWA: 1 mg/m ³ | TWA: 15 mg/m ³ TWA: 5 mg/m ³ | TWA: 10 mg/m ³ TWA: 5 mg/m ³ |
| Petroleum distillates, hydrotreated light | 5 mg/m ³ as oil mist | 10 mg/m ³ as oil mist | No data available |
| Sodium carbonate | No data available | No data available | No data available |
| Sodium chloride | No data available | 5 mg/m ³ PNOR (as solid) | No data available |

| | |
|--------------------------------|--|
| Engineering Measures | Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. |
| Personal Protective Equipment | |
| Eye/Face Protection | Tightly fitting safety goggles. Face-shield. |
| Skin Protection | Wear suitable protective clothing, Impervious gloves. |
| Respiratory Protection | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. |
| General Hygiene Considerations | Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|------------------|-------------------|---------------------------|--------------------|
| Physical State | Solid | Viscosity | Granular |
| Color | Blue | Odor | Odorless |
| Appearance | Opaque | pH | (10 % solution) 14 |
| Specific Gravity | 1.18 | Bulk Density (lb/cu ft) | 81.4 |
| Evaporation Rate | 0 | Percent Volatile (Volume) | 4.1 |
| VOC Content (%) | 1.5 | VOC Content (g/L) | 18 |
| Vapor Pressure | <0.01 mmHg @ 70°F | Vapor Density | 6.6 |
| Solubility | Partly soluble | Boiling Point/Range | Not applicable |

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions. Hazardous polymerization does not occur.

Conditions to Avoid

Keep away from open flames, hot surfaces, and sources of ignition, Protect from moisture.

Incompatible Products

Strong oxidizing agents, Reducing agents, Contact with metals liberates hydrogen gas, Water.

Hazardous Decomposition Products

Carbon oxides, Nitrogen oxides (NOx), Sodium oxides.

Possibility of Hazardous Reactions

Water reactive, Oxidizing properties.

11. TOXICOLOGICAL INFORMATION

Product Information

No information available.

Component Information

Acute Toxicity

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation | Draize Test | Other |
|---|----------------------|-------------------------|--------------------------------------|-------------------|-------------------|
| Sodium hydroxide | no data available | = 1350 mg/kg (Rabbit) | no data available | no data available | no data available |
| Sodium nitrate | = 1267 mg/kg (Rat) | no data available | no data available | no data available | no data available |
| Aluminum | no data available | no data available | no data available | no data available | no data available |
| Petroleum distillates, hydrotreated light | > 5000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | > 5.2 mg/L (Rat) 4 h | no data available | no data available |
| Sodium carbonate | = 4090 mg/kg (Rat) | no data available | = 2300 mg/m ³ (Rat) 2 h | no data available | no data available |
| Sodium chloride | = 3 g/kg (Rat) | no data available | > 42 g/m ³ (Rat) 1 h | no data available | no data available |

Chronic Toxicity

| Component | Mutagenicity | Sensitization | Developmental Toxicity | Reproductive Toxicity | Target Organ Effects |
|---|-------------------|-------------------|------------------------|-----------------------|--|
| Sodium hydroxide | no data available | no data available | no data available | no data available | eyes, respiratory system, skin |
| Sodium nitrate | no data available | no data available | no data available | no data available | Blood, CNS, heart, liver, kidneys |
| Aluminum | no data available | no data available | no data available | no data available | eyes, respiratory system, skin |
| Petroleum distillates, hydrotreated light | no data available | no data available | no data available | no data available | respiratory system, liver, kidney, CNS |
| Sodium carbonate | no data available | no data available | no data available | no data available | no data available |
| Sodium chloride | no data available | no data available | no data available | no data available | kidney |

Carcinogenicity

There are no known carcinogenic chemicals in this product.

| Component | ACGIH | IARC | NTP | OSHA | Other |
|---|----------------|----------------|----------------|----------------|----------------|
| Sodium hydroxide | not applicable | not applicable | not applicable | not applicable | not applicable |
| Sodium nitrate | not applicable | not applicable | not applicable | not applicable | not applicable |
| Aluminum | not applicable | not applicable | not applicable | not applicable | not applicable |
| Petroleum distillates, hydrotreated light | not applicable | not applicable | not applicable | not applicable | not applicable |
| Sodium carbonate | not applicable | not applicable | not applicable | not applicable | not applicable |
| Sodium chloride | not applicable | not applicable | not applicable | not applicable | not applicable |

12. ECOLOGICAL INFORMATION

Product Information

No information available.

Component Information

| Component | Toxicity to Algae | Toxicity to Fish | Microtox | Water Flea | log Pow |
|---|-------------------|---|-------------------|-----------------------|---------|
| Sodium hydroxide | no data available | LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h | no data available | no data available | N/A |
| Sodium nitrate | no data available | LC50 = 2000 mg/L Lepomis macrochirus 96 h LC50 994.4 - 1107 mg/L Oncorhynchus mykiss 96 h | no data available | no data available | -3.8 |
| Aluminum | no data available | no data available | no data available | no data available | N/A |
| Petroleum distillates, hydrotreated light | no data available | LC50 = 45 mg/L Pimephales promelas 96 h LC50 = 2.2 mg/L Lepomis macrochirus 96 h LC50 = 2.4 mg/L Oncorhynchus mykiss 96 h | no data available | LC50 = 4720 mg/L 96 h | N/A |
| Sodium carbonate | EC50 = 242 mg/L | LC50 = 300 mg/L Lepomis | no data available | EC50 = 265 mg/L 48 h | N/A |

| | | | | | |
|-----------------|-------------------|---|-------------------|---|-----|
| | Nitzschia 120 h | macrochirus 96 h LC50 310 - 1220 mg/L Pimephales promelas 96 h | | | |
| Sodium chloride | no data available | LC50 5560 - 6080 mg/L Lepomis macrochirus 96 h LC50 = 12946 mg/L Lepomis macrochirus 96 h LC50 6020 - 7070 mg/L Pimephales promelas 96 h LC50 = 7050 mg/L Pimephales promelas 96 h LC50 6420 - 6700 mg/L Pimephales promelas 96 h LC50 4747 - 7824 mg/L Oncorhynchus mykiss 96 h | no data available | EC50= 1000 mg/L 48 h EC50 340.7 - 469.2 mg/L 48 h | N/A |

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of in accordance with local regulations.

Container Disposal

Empty containers should be taken for local recycling, recovery, or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name SODIUM HYDROXIDE, SOLID, MIXTURE
Hazard Class 8
UN-No UN1823
Packing Group II
Description UN1823, SODIUM HYDROXIDE, SOLID, MIXTURE, 8, P.G. II

TDG

Proper shipping name SODIUM HYDROXIDE, SOLID, MIXTURE
Hazard Class 8
UN-No UN1823
Packing Group II
Description UN1823, SODIUM HYDROXIDE, SOLID, MIXTURE, 8, P.G. II

ICAO

UN-No UN1823
Proper Shipping Name SODIUM HYDROXIDE, SOLID, MIXTURE
Hazard Class 8
Packing Group II
Shipping Description UN1823, SODIUM HYDROXIDE, SOLID, MIXTURE, 8, P.G. II

IATA

UN-No UN1823
Proper Shipping Name SODIUM HYDROXIDE, SOLID, MIXTURE
Hazard Class 8
Packing Group II
Shipping Description UN1823, SODIUM HYDROXIDE, SOLID, MIXTURE, 8, P.G. II

IMDG/IMO

Proper Shipping Name SODIUM HYDROXIDE, SOLID, MIXTURE
Hazard Class 8
UN-No UN1823
Packing Group II
Shipping Description UN1823, SODIUM HYDROXIDE, SOLID, MIXTURE, 8, P.G. II

15. REGULATORY INFORMATION

Inventories

TSCA

Complies

DSL

Complies

U.S. Federal Regulations

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.

| Component | CAS-No | Weight % | SARA 313 - Threshold Values |
|----------------|-----------|----------|-----------------------------|
| Sodium nitrate | 7631-99-4 | 15-40 | 1.0 |
| Aluminum | 7429-90-5 | 3-7 | 1.0 |

SARA 311/312 Hazardous Categorization

| Acute Health Hazard | Chronic Health Hazard | Fire Hazard | Sudden Release of Pressure Hazard | Reactive Hazard |
|---------------------|-----------------------|-------------|-----------------------------------|-----------------|
| Yes | No | No | No | Yes |

CERCLA

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|---|--------------------------|----------------|
| Sodium hydroxide | 1000 lb | Not applicable |
| Sodium nitrate | Not applicable | Not applicable |
| Aluminum | Not applicable | Not applicable |
| Petroleum distillates, hydrotreated light | Not applicable | Not applicable |
| Sodium carbonate | Not applicable | Not applicable |
| Sodium chloride | Not applicable | Not applicable |

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

E Corrosive material C Oxidizing materials D2B Toxic materials

**16. OTHER INFORMATION**

Prepared By Rachael Mohochi
 Supersedes Date 04/06/2010
 Issuing Date 07/19/2013
 Reason for Revision No information available.
 Glossary No information available.
 List of References. No information available.

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