



# Safety Data Sheet

(Caustic Soda 50%)

DATE PREPARED: 12/23/2013

REVISION NUMBER: 12/23/2013

## Section 1 – Company Information

**Parchem - fine & specialty chemicals**

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EMERGENCY RESPONSE NUMBER:

CHEMTEL - Parchem CCN# M1S0007152

Toll Free US & Canada: (800)255-3924

All other Origins: (813) 248-0585

Collect Calls Accepted

## Section 2 – Product Identification/ Information on Ingredients

PRODUCT NAME Caustic Soda 50%

PRODUCT	CAS NUMBER	% BY WEIGHT
Sodium Hydroxide	1310-73-2	45 – 55%

## Section 3 – Hazards Identification

**Color:** Clear, opaque

**Form:** Liquid

**Odor:** Odorless

Water runoff from firefighting may be corrosive. Irritating gases/fumes may be given off during burning or thermal decomposition. Contact with metals liberates flammable gas. Reacts violently with water. Causes respiratory tract burns. Causes skin burns. May be harmful if absorbed through skin. Causes eye burns. Causes digestive tract burns. Harmful if swallowed.

### Potential Health Effects

**Primary Routes of Entry:** Skin Contact, Eye Contact, Ingestion, Inhalation

**Medical Conditions Aggravated by Exposure:** Skin disorders, Respiratory disorders, Eye disorders

### Human Effects and Symptoms of Overexposure for Component: Sodium Hydroxide

**Acute Inhalation:** Corrosive with symptoms of coughing, burning, ulceration, and pain.

**Acute Skin:** Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.

**Acute Eye:** Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.

**Acute Ingestion:** Harmful if swallowed. Corrosive to the digestive tract with symptoms of burning and ulceration.

**Chronic Effects of Exposure for Product: Caustic Soda 50%**

**General Effects of Exposure:** Repeated or prolonged overexposure may cause effects as noted under acute health effects.

**Carcinogenicity:** No carcinogenic substances as defined by IARC, NTP and/or OSHA



#### Section 4 – First Aid Measures

**Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>), Foam, Dry chemical

**Special Fire Fighting Procedures:** Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

**Unusual Fire/Explosion Hazards:** Water runoff from firefighting may be corrosive. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Contact with metals liberates flammable gas.

#### Section 5 – Fire Fighting Measures

**Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>), Foam, Dry chemical

**Special Fire Fighting Procedures:** Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

**Unusual Fire/Explosion Hazards:** Water runoff from firefighting may be corrosive. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Contact with metals liberates flammable gas.

#### Section 6 – Accidental Release Measures

**Spill and Leak Procedures:** Cleanup personnel must use appropriate personal protective equipment. Cover spill with inert material (e.g., dry sand or earth) and collect for proper disposal. Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems. Decontaminant/Neutralizer: Dilute hydrochloric acid solution. Wash spill area with water. Collect wash water for approved disposal.

#### Section 7 – Handling & Storage

**Storage Period:** Not applicable

**Handling/Storage Precautions:** Do not breathe vapors or spray mist. Do not get on skin or clothing. Do not get in eyes. Do not taste or swallow. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

**Further Info on Storage Conditions:** Material can be stored safely at ambient temperatures. Do not expose to direct sunlight. Protect from freezing. This product is corrosive to metal(s). Product can react with water.

#### Section 8 – Exposure Controls & Personal Protection

**Sodium Hydroxide (1310-73-2)**

**US ACGIH Threshold Limit Values:** Ceiling Limit Value: 2 mg/m<sup>3</sup>

**US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000):** PEL: 2 mg/m<sup>3</sup>



**Industrial Hygiene/Ventilation Measures:** General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment.

**Hand Protection:** Permeation resistant gloves.

**Eye Protection:** Chemical resistant goggles must be worn. Chemical safety goggles in combination with a full face shield if a splash hazard exists.

**Skin and Body Protection:** Permeation resistant clothing and foot protection.

**Additional Protective Measures:** Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

#### Section 9 – Physical & Chemical Properties

**Form:** Liquid

**Color:** Clear, opaque

**Odor:** Odorless

**pH:** 14

**Melting Point:** 12°C (53.6°F)

**Boiling Point/Boiling Range:** 140°C, 284°F (at 1,013 hPa)

**Flash point:** Not applicable

**Vapor Pressure:** 13 mm Hg (at 15.56°C, 60.01°F)

**Density:** 1.54 g/cm<sup>3</sup> (at 15°C, 59°F; DIN 51757)

1.52 g/cm<sup>3</sup> (at 20°C, 68°F; DIN 51757)

1.505 g/cm<sup>3</sup> (at 50°C, 122°F; DIN 51757)

**Specific Gravity:** 1.53 (at 15.56°C, 60.01°F)

**Solubility in Water:** Soluble

**Viscosity, Dynamic:** 79 mPa.s (at 20°C, 68°F)

#### Section 10 – Stability & Reactivity Data

**Hazardous Reactions:** Hazardous polymerization does not occur.

**Stability:** Stable

**Materials to Avoid:** Combustible material, Acids, Halogenated compounds, Halogens, Metals, Oxidizing agents, Peroxides, Organic nitro compounds

**Conditions to Avoid:** Avoid contact with moisture/water. Do not expose to direct sunlight. Protect from freezing. Avoid heat, flames, and sparks.

#### **Hazardous Decomposition Products**

**By Fire and Thermal Decomposition:** Sodium oxides, Hydrogen, Phenol, Carbon monoxide, Carbon oxides, other potentially toxic fumes



## Section 11 – Toxicological Information

**Toxicity Data for Caustic Soda 50%:** No data available

### Toxicity Data for Sodium Hydroxide

**Acute Oral Toxicity:** LD50: 140-340 mg/kg (rat)

**Acute Dermal Toxicity:** LD50: 1350 mg/kg (rabbit)

**Skin Irritation:** Rabbit, corrosive

**Eye Irritation:** Rabbit, corrosive

### Mutagenicity

**Genetic Toxicity in Vitro: Ames:** negative (*Salmonella typhimurium*)

Positive and negative results were seen in various in vitro studies.

**Genetic Toxicity in Vivo: Micronucleus Assay:** (mouse, male/female, intraperitoneal)  
negative

## Section 12 – Ecological Information

**Ecological Data for Caustic Soda 50%:** No data available

### Ecological Data for Sodium Hydroxide

**Acute and Prolonged Toxicity to Fish:** LC50: 45.4 mg/L (50 %, pH 8) (Rainbow (Donaldson) Trout (*Oncorhynchus mykiss*), 96 h)

**Acute Toxicity to Aquatic Invertebrates:** LC100: 156 mg/L (pH 9.1 - 9.5) (Water flea (*Daphnia magna*))

**Toxicity to Aquatic Plants:** The freshwater algae are destroyed at a pH of > 8.5.

## Section 13 – Disposal Consideration

Dispose of product and contaminated packaging in accordance with all local, state and federal environmental control regulations.

## Section 14 – Transportation Data

### Land Transport (DOT)

**Proper Shipping Name:** Sodium hydroxide solution

**Hazard Class or Division:** 8

**UN/NA Number:** UN1824

**Packaging Group:** II

**Hazard Label(s):** Corrosive

**RSPA/DOT Regulated Components:** Sodium hydroxide

**Reportable Quantity:** 907 kg (2000 lb)



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### Sea Transport (IMDG)

**Proper Shipping Name:** Sodium hydroxide solution

**Hazard Class or Division:** 8

**UN Number:** UN1824

**Packaging Group:** II

**Hazard Label(s):** Corrosive

### Air Transport (ICAO/IATA)

**Proper Shipping Name:** Sodium hydroxide solution

**Hazard Class or Division:** 8

**UN Number:** UN1824

**Packaging Group:** II

**Hazard Label(s):** Corrosive

### Additional Transportation Information

**Pollution Category:** Y

**Ship Type:** 3

## Section 15 – Regulatory Information

### United States Federal Regulations

**OSHA Hazcom Standard Rating:** Hazardous

**US Toxic Substances Control Act:** Listed on the TSCA Inventory.

**US EPA CERCLA Hazardous Substances (40 CFR 302):** Sodium hydroxide; Reportable Quantity 1000 lbs

**SARA Section 311/312 Hazard Categories:** Acute Health Hazard, Reactivity Hazard, Chronic Health Hazard

**US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):**

Components: None

**US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification**

**Required:** Components: None

**US EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):** Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste., In its purchased form, this product meets the criteria of corrosivity under 40 CFR 261.22(a), and, when discarded in that form, should be managed as a hazardous waste.



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**State Right-To-Know Information:** The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists**

**Water:**  $\geq$  1%, CAS# 7732-18-5

**Sodium Hydroxide:** 45 - 55%, CAS# 1310-73-2

**New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists**

**Sodium Hydroxide:** 45 - 55%, CAS# 1310-73-2

**California Prop. 65:** To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

**NFPA 704M Rating**

**Health:** 3

**Flammability:** 0

**Reactivity:** 2

**Other:** N/A

**HMIS Rating**

**Health:** 3\*

**Flammability:** 0

**Physical Hazard:** 2

\*Chronic Health Hazard

Section 16 – Other Information

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.