



Solve 11 H

Safety Data Sheet

Date Issued: 10/14/2015

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Solve 11H**

Company Identification: WaterSolve, LLC
5031 68th Street
Caledonia, Michigan 49316, USA www.gowatersolve.com

For Product Information: 616-575-8693

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2. HAZARDS IDENTIFICATION

GHS Ratings:

Corrosive to metals: 1

Corrosive to metals

Skin corrosive: 1A

Destruction of dermal tissue; Exposure < 3min. Observation < 1hour, visible necrosis in at least one animal.

Eye corrosive: 1

Serious eye damage: Irreversible damage 21 days after exposure, Draize score: Corneal opacity>=3, Iritis >1.5

Organ toxin single exposure: 1

Significant toxicity in humans-Reliable, good quality human case studies or epidemiological studies

Presumed significant toxicity in humans-Animal studies with significant and/or severe toxic effects relevant to humans at generally low exposure

Aquatic toxicity: A3

Acute toxicity <=10.0 but <100 mg/l

GHS Label element:

Hazard pictograms:



SIGNAL WORD:

DANGER

Hazard statement:

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

Hazard statements:

H318 Causes serious eye damage

H370 Causes damage to organs
H402 Harmful to aquatic life

GHS Precaution Statements:

- P 234 Keep only in original container**
- P260 Do not breathe**
- P264 Wash face, hands, and any exposed skin thoroughly after handling**
- P270 Do not eat, drink or smoke when using this product**
- P273 Avoid release to the environment**
- P280 Wear protective gloves/protective clothing/eye protection/face protection**
- P310 Immediately call a POISON CENTER or doctor/physician**
- P321 Specific treatment (see first aid treatment on SDS)**
- P363 Wash contaminated clothing before reuse**
- P390 Absorb spillage to prevent material damage**
- P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.**
- P303+353+361 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing**
- P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing**
- P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do-continue rinsing**
- P307+311 IF EXPOSED: Call a POISON CENTER or doctor/physician**
- P405 Store locked up**
- P406 Store in a corrosive resistant container with a resistant inner liner**
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations**

3. **COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name/CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other exposure Limits
SodiumHydroxide/ 1310-73-2 50 percent	2 mg/m ³ TWA	2 mg/m ³ Ceiling	NIOSH: 2 mg/m ³ Ceiling

4. **FIRST AID MEASURES**

Inhalation: Rescuers should put on appropriate protective gear. Remove from area of exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep victim warm. Get immediate medical attention. To prevent aspiration, keep head below knees.

Ingestion: If swallowed, DO NOT induce vomiting. Give victim a glass of water. Call a physician or poison control center immediately. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Remove contaminated clothing. Wash skin with soap and water. Get medical attention. Wash clothing separately and clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water. Flush eye with water for a minimum of 15 minutes, occasionally lifting lower and upper eyelids. Get medical attention promptly.

5. **FIRE FIGHTING MEASURES**

Flash Point: N/A

Lower: **Upper:**

Extinguishing Media: Use media suitable for the surrounding fires.

Specific Hazards Arising from the chemical: In a water solution, sodium hydroxide can react with amphoteric metals, generating hydrogen, which is flammable and/or explosive gas when ignited. Contact with acid or strong oxidizers will cause vigorous reaction, with generation of heat and can cause splattering of corrosive mist. Contact with acids will also release large amounts of CO² gas.

Special Protective Equipment and Precautions for Firefighters:

Special information:

As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Use appropriate safety equipment. Contain spilled material if possible. Neutralize and collect in suitable and properly labeled containers. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

7. HANDLING AND STORAGE

Handling Procedures

Do not get this material in your eyes, on your skin, or on your clothing. Wash thoroughly after handling. Do not inhale vapors or mists of this product. Never add water to product. For dilutions, add product slowly to water while stirring. Use caution; heat may be generated.

Storage Requirements

Keep containers tightly closed when not in use and protect from damage. Store in a cool, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name/CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other exposure Limits
Sodium Hydroxide/ 1310-73-2 50 percent	2 mg/m ³ TWA	2 mg/m ³ Ceiling	NIOSH: 2 mg/m ³ Ceiling

Engineering Controls

Provide ventilation sufficient to maintain exposure below the recommended limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant the use of a respirator.

SKIN PROTECTION: Wear imperious protective gloves. Wear protective gear as needed-apron, suit, boots.

EYE PROTECTION: Wear safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE EQUIPMENT: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

HYGENIC PRACTICES: Do not eat, drink, or smoke in areas where this material is used. Avoid breathing vapors. Remove contaminated clothing and wash before reuse. Wash thoroughly after handling. Wash hands before eating.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical state:	liquid
Appearance:	colorless
Odor:	odorless
pH:	strongly basic
Melting point:	10-12.8°C
Freezing point:	unknown
Boiling range:	unknown
Flammability:	unknown
Flash point:	unknown
Explosive properties:	unknown
Lower / upper limits:	No applicable
Vapor Pressure:	23.76 mm HG @ 25°C
Vapor density:	unknown
Density:	12.77 lbs/gal
Specific Gravity:	1.11 -1.45 @ 15.6C
Evaporation Rate:	unknown
Solubility:	unknown
Partition coefficient (n-octanol/water)	unknown
Autoignition temperature:	unknown
Viscosity:	unknown
Decomposition temperature:	unknown
Grams VOC less water:	unknown

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal use, handling and storage.
Conditions to avoid:	None known
Incompatible Materials:	Contact with acids and organics materials and concentrated acids may cause violent reactions. Contact with metals such as aluminum, magnesium, galvanized zinc, tin chromium, brass, and bronze generates explosive hydrogen. Reactions with various food sugars may form carbo monoxide.
Hazardous Decomposition:	Carbon monoxide. Heated to decomposition, it emits fumes of sodium oxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.
Hazardous polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

MIXTURE TOXICITY

Dermal Toxicity LD50: 2,700 mg/kg

Routes of Entry: inhalation, ingestion, skin contact, eye contact

Target organs

Eyes skin respiratory system

Effects of Overexposure

Contact with this material will cause burns to the skin, eyes and mucous membranes. May be harmful if swallowed.

Health Effects

This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness. Corrosive to the skin. This product may produce corrosive damage to the gastrointestinal tract if it swallowed. Inhalation of mists of this product may cause severe irritation and burns to the respiratory tract.

12. ECOLOGICAL INFORMATION

Component Ecotoxicity

Sodium hydroxide 96 hr LC50 Oncorhynchus mykiss: 45.4 mg/L (static)

13. DISPOSAL CONSIDERATIONS

Dispose container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Refer to Bill of Lading or CONTAINER LABEL for DOT or other transportation hazard classification.

15. REGULATORY INFORMATION

<u>NAME</u>	<u>CAS</u>	<u>TSCA</u>	<u>SARA 302</u>	<u>SARA 304</u>	<u>SARA 313</u>	<u>CERCLA</u>
Sodium Hydroxide	1310-73-2	Yes	No	No	No	1000LBS.

OTHER INFORMATION

The information provided in this Safety Data Sheet is accurate to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. Both the supplier and manufacturer make no representations and assume no liability for any direct, incidental or consequential damages resulting from its use. Both the supplier and manufacturer make no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This information is for the specific material described only and may not be valid if the material is used in combination with any other materials or in any process. The user is responsible to determine the completeness of the information and suitability for the user's own particular use. Users of any chemical should educate themselves on all aspects of its use by independent investigation of current scientific and medical knowledge that the material can be used safely. The buyer assumes all responsibility for using and handling the product in accordance with applicable federal, state and local regulations.

List of abbreviations and acronyms that could be, but not necessarily are, used in the safety data sheet:

- ACGIH: American Conference of Industrial Hygienists
- BEI: Biological Exposure Index
- CAS Chemical: Abstracts Service (Division of the American Chemical Society)
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
- CMR: Carcinogenic, Mutagenic or Toxic for Reproduction
- DOT: Department of Transportation
- FG: Food grade
- FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
- GHS: Globally Harmonized System of Classification and Labeling of Chemicals
- H-statement: Hazard Statement
- HMIRC: Hazardous Materials Information Review Commission

HMIS: Hazardous Materials Identification System
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulation by the “International Air Transport Association” (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI (ICAO): Technical Instructions by the “International Civil Aviation Organization”
IMDG: International Maritime Code for Dangerous Goods
ISO: International Organization for Standardization
logPow: octanol-water partition coefficient
LCxx: Lethal Concentration, for xx percent of test population
LDxx: Lethal Dose, for xx percent of test population
ICxx: Inhibitory Concentration for xx of a substance
ECxx: Effective Concentration of xx
N.O.S.: Not otherwise specified
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
OECD: Organization for Economic Co-operation and Development
OEL: Occupational Exposure Limit
OSHA: Occupational Safety and Health Administration
P-Statement: Precautionary Statement
PBT: Persistent, Bioaccumulative and Toxic
PMRA: Health Canada Pest Management Regulatory Agency
PPE: Personal Protective Equipment
RTK: Right to Know
SDS: Safety Data Sheet
STEL: Short-term exposure limit
STOT: Specific Target Organ Toxicity
TLV: Threshold Limit Value
TWA: Time-weighted average
VPVB: Very Persistent and Very Bioaccumulative
WEL: Workplace Exposure Level
WHMIS: Workplace Hazardous Materials Information System