

## INSPIRE

SDS Number: 461

Revision Date: 9/17/2015

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### 1 PRODUCT AND COMPANY IDENTIFICATION

#### Manufacturer

Applied Chemical Innovations, LLC  
 1313 Summer Dawn Ave.  
 Address Line 2  
 Las Vegas, NV 89104

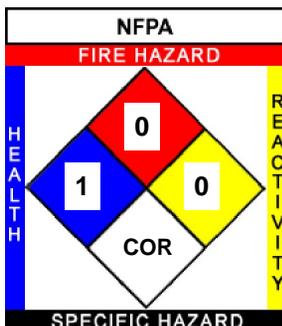
**Contact:** Applied Chemical Innovations, LLC  
**Phone:** +1-702-816-0915  
**Email:** chet.vo@aci-chem.com  
**Web:** www.aci-chem.com

**Product Name:** INSPIRE  
**Revision Date:** 9/17/2015  
**Version:** 1  
**SDS Number:** 461  
**Common Name:** Inorganic Hydroxide Solution  
**CAS Number:** MIXTURE  
**Chemical Family:** Strong Inorganic Hydroxide Solution  
**Chemical Formula:** \*\*\* PROPRIETARY \*\*\*  
**Emergency Phone:** +1-800-424-9300 (CHEMTREC)

### 2 HAZARDS IDENTIFICATION

NFPA:  
 HMIS III:

Health = 1, Fire = 0, Reactivity = 0  
 H\*1/F0/PH0



HMIS III	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARDS	0
PERSONAL PROTECTION C   Safety Glasses, Gloves, Apron	

PERSONAL PROTECTION INDEX							
A		G					
B		H					
C		I					
D		J					
E		K					
F		X	Consult your supervisor or S.O.P. for "SPECIAL" handling directions				
A		n					
O		p					
q		r					
s		Additional Information					
t		u					
w		y					
z							

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GHS Signal Word:  
DANGER

GHS Hazard Pictograms:



GHS Classifications:

Physical, Corrosive to Metals, 1  
Health, Acute toxicity, 4 Oral  
Health, Skin corrosion/irritation, 1 A  
Health, Serious Eye Damage/Eye Irritation, 1

GHS Phrases:

H290 - May be corrosive to metals  
H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage

GHS Precautionary Statements:

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
P262 - Do not get in eyes, on skin, or on clothing.  
P264 - Wash skin thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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 continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P321 - Specific treatment (see supplementary first aid instructions on this label).  
P363 - Wash contaminated clothing before reuse.  
P405 - Store locked up.  
P501 - Dispose of contents/container to an approved waste disposal plant.

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### COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients:**

Cas #	Percentage	Chemical Name
N/A	96-98%	Proprietary, non-hazardous, non-regulated
1310-73-2	2-4%	Sodium hydroxide



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### 4 FIRST AID MEASURES

- Inhalation:** Give oxygen or artificial respiration if needed. If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.
- Skin Contact:** Take off contaminated clothing and shoes immediately. Promptly flush skin with water for at least 15 minutes to ensure all chemical is removed. If reddening develops and/or persists, obtain medical attention.
- Eye Contact:** Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Get immediate medical attention. Continue rinsing eyes during transport to hospital.
- Ingestion:** Rinse mouth with water. Give 3-4 glasses of water or milk to dilute stomach contents. Do NOT induce vomiting. If vomiting occurs, give more water or milk. Never give anything by mouth to an unconscious person. Get immediate medical attention.

**Most important symptoms and effects, both acute and delayed:**

The most important known symptoms and effects are described in the labelling (see Section 2) and/or Section 11.

**Indication of any immediate medical attention and special treatment needed:**

No data available.

### 5 FIRE FIGHTING MEASURES

- Flammability:** No data available
- Flash Point:** DNA
- Flash Point Method:** DNA
- Burning Rate:** No data available
- Autoignition Temp:** No data available
- LEL:** DNA
- UEL:** DNA

**Extinguishing Media:**

Water Spray  
Carbon Dioxide  
Alcohol-Resistant Foam  
Dry Chemical

**Special Hazards Arising From the Substance or Mixture:**

Sodium Oxides

**Advice for Firefighters:**

Firefighters should wear full-face, positive-pressure respirators.

**Further Information:**

If incinerated, may release toxic fumes.

Gives off Hydrogen by reaction with reactive metals (Zinc & Aluminum) and their alloys (Brass, etc.). Hydrogen is flammable and potentially explosive. Use caution.

Use water spray to cool unopened containers.

See Section 7 for more information on safe handling.

See Section 8 for more information on personal protection equipment.

See Section 13 for disposal information.

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### 6 ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment.  
Keep from contacting skin or eyes.  
Avoid breathing vapors, mist or gas.  
Ensure adequate ventilation.  
Evacuate personnel to safe areas.

#### Environmental precautions:

Prevent further release (leakage/spillage) if safe to do so.  
Do not allow product to enter drains.  
Do not allow to drain to environment.

#### Methods and materials for containments and cleaning up:

Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust).  
Neutralizing agent like Sodium Bicarbonate may also be used to absorb/neutralize any spilled material.  
Place contaminated material into suitable, closed containers for disposal.  
Dispose of contaminated material according to Section 13.  
After spillage has been collected, area may be flushed with water or wet-brushed.  
Ensure adequate ventilation.

#### Reference to other sections:

Comply with federal, state and local regulations on reporting spills.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on proper disposal.

### 7 HANDLING AND STORAGE

#### Handling Precautions:

Avoid breathing vapors or mist.  
Avoid contact with eyes, skin, or clothing.  
Use approved, original containers only.  
Keep containers closed when not in use.  
Do not expose containers to open flame, excessive heat, or direct sunlight.  
Do not puncture or drop containers.  
Handle with care and avoid spillage on the floor.  
Keep material out of reach of children.  
Keep material away from incompatible materials.  
Wash thoroughly after handling.  
Ensure adequate ventilation.

#### Storage Requirements:

Keep away from heat, sparks and flames.  
Do not store in direct sunlight.  
Store away from strong acids, strong oxidizing agents, organic materials, water, chlorinated solvents, reactive metals (Zinc & Aluminum) and their alloys (Brass), Copper and its alloys, Alkali metals (Lithium, Sodium, Potassium, etc.), Tin & Tin oxides, Lead, Phosphorous & Phosphorous Pentoxide, Nitro compounds (Nitromethane, etc.) Azides and Anhydrides.



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### EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

**Personal Protective Equip:** Eye/face protection:  
When using material use safety glasses, gloves and apron according to HMIS PP, C. All safety equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection:

Handle with gloves made from Neoprene, Nitrile or Buna rubber. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact. Dispose of contaminated gloves according to applicable laws and laboratory practices.

Body Protection:

Chemically resistant gloves, apron and safety glasses are recommended. Type of protective equipment should be selected based on concentration amount and conditions of use of this material.

Respiratory protection:

Full-face dust/vapor respirator may be required as backup to engineering controls when proper engineering controls are not in place to keep TLV and PEL limits below defined thresholds.

Control of environmental exposure:

Prevent leakage or spillage if safe to do so. Do not let material enter drains.

#### Components with workplace control parameters:

Component(s): Sodium Hydroxide

CAS No(s): 1310-73-2

USA OSHA Table Z-1 Limits for Air Contaminants (C): 2 mg/m<sup>3</sup>

USA OSHA Occupational Exposure Limits Table Z-1 Limits for Air Contaminant (TWA): 2 mg/m<sup>3</sup>

USA ACGIH (C/TLV): 2 mg/m<sup>3</sup>

USA ACGIH (CEIL/TLV): 2 mg/m<sup>3</sup>

USA NIOSH Recommended Exposure Limits (C): 2 mg/m<sup>3</sup>

#### Biological occupational exposure limits:

Contains no substances with biological occupational exposure limits values.

#### Derived No Effect Level (DNEL):

Component(s): Sodium Hydroxide

CAS No(s): 1310-73-2

Inhalation - Workers (Long-term local effects): 1 mg/m<sup>3</sup>

Inhalation - Consumers (Long-term local effects): 1 mg/m<sup>3</sup>

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### 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Clear amber/brown liquid	<b>Odor:</b>	None
<b>Physical State:</b>	Liquid	<b>Molecular Formula:</b>	MIXTURE
<b>Odor Threshold:</b>	Not determined	<b>Solubility:</b>	100%
<b>Particle Size:</b>	No data available	<b>Softening Point:</b>	Not determined
<b>Spec Grav./Density:</b>	1.090 - 1.110 g/ml (9.10 - 9.26 lbs/gal)	<b>Percent Volatile:</b>	DNA
<b>Viscosity:</b>	Not determined	<b>Heat Value:</b>	Not determined
<b>Sat. Vap. Conc.:</b>	DNA	<b>Freezing/Melting Pt.:</b>	< 0 °C (32 °F)
<b>Boiling Point:</b>	> 100 °C (212 °F)	<b>Flash Point:</b>	DNA
<b>Flammability:</b>	(solid, gas): Not flammable	<b>Octanol:</b>	Not determined
<b>Partition Coefficient:</b>	Not determined	<b>Vapor Density:</b>	Not determined
<b>Vapor Pressure:</b>	Not determined	<b>VOC:</b>	DNA
<b>pH:</b>	@ 100%: 14.0	<b>Bulk Density:</b>	Not determined
<b>Evap. Rate:</b>	Not determined	<b>Auto-Ignition Temp:</b>	Not determined
<b>Molecular weight:</b>	MIXTURE	<b>UFL/LFL:</b>	DNA
<b>Decomp Temp:</b>	Not determined		

### 10 STABILITY AND REACTIVITY

<b>Stability:</b>	Product is stable under normal conditions.
<b>Conditions to Avoid:</b>	Incompatibilities, flames, ignition sources.
<b>Materials to Avoid:</b>	Strong acids, strong oxidizing agents, organic materials, chlorinated solvents, reactive metals (Zinc & Aluminum) and their alloys (Brass), Copper and its alloys, Alkali metals (Lithium, Sodium, Potassium, etc.), Tin & Tin Oxides, Lead, Phosphorous & Phosphorous Pentoxide, Nitro compounds (Nitromethane, etc.), Azides, Anhydrides, Halogens.
<b>Hazardous Decomposition:</b>	Sodium Oxides.
<b>Hazardous Polymerization:</b>	Will not occur.

### 11 TOXICOLOGICAL INFORMATION

**Component(s):** Sodium Hydroxide  
**CAS No(s):** 1310-73-2

**Acute Toxicity:**

LD50 Dermal - Rabbit: 1,350 mg/kg  
 LDL Oral - Rabbit: 500 mg/kg

**Skin Corrosion/Irritation:** Rabbit skin - Corrosive (24 h).

**Serious Eye Damage/Eye Irritation:** Rabbit eyes - Corrosive (24 h).

**Respiratory or Skin Sensitation:** Will no occur.

**Germ Cell Mutagenicity:** No data available.

**Carcinogenicity:**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.



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ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive Toxicity:** No data available.

**Specific Target Organ Toxicity - Single Exposure:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure:** No data available.

**Aspiration Hazard:** No data available.

**Additional Information:**

Component: Sodium Hydroxide

RTECS: WB4900000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin.

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## ECOLOGICAL INFORMATION

**Component(s):** Sodium Hydroxide

**CAS No(s):** 1310-73-2

**Toxicity:**

*Toxicity to fish:*

LC50 - *Gambusia affinis* (Mosquito Fish): 125 mg/l (96 h)

LC50 - *Oncorhynchus mykiss* (Rainbow Trout): 45.4 mg/l (96 h)

*Toxicity to daphnia and other aquatic invertebrates:*

Immobilization EC50 - *Daphnia*: 40.38 mg/l (48 h)

**Persistence and Degradability:**

Not applicable to inorganic substances.

**Bioaccumulative potential:**

No data available

**Mobility in Soil:**

No data available

**Results of PBT and vPvB assessment:**

Not required/conducted

**Other Adverse Effects:**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

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### 13 DISPOSAL CONSIDERATIONS

Product: Hazardous wastes shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution, release into the environment or damage to people and animals. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated Packaging: Dispose of as unused product.

### 14 TRANSPORT INFORMATION

DOT Class: Corrosive (8) #8  
UN #: UN 1824, Class: 8, Proper Shipping Name: Sodium Hydroxide solution

#### DOT (US)

UN Number: 1824  
Class: 8  
Packing Group: II  
ERG #: 154  
Proper Shipping Name: Sodium Hydroxide solution  
Reportable Quantity (RQ): 2000 lbs  
Marine Pollutant: No  
Poison Inhalation Hazard(s): No

#### IMDG

UN Number: 1824  
Class: 8  
Packing Group: II  
EMS-No: F-A, S-B  
Proper Shipping Name: Sodium Hydroxide solution  
Marine Pollutant: No

#### IATA

UN Number: 1824  
Class: 8  
Packing Group: II  
ERG #: 154  
Proper Shipping Name: Sodium Hydroxide solution



### 15 REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

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\*Sodium hydroxide (1310732 45%) CERCLA, CSWHS, MASS, NJHS, OSHAWAC, PA, SARA311/312, TSCA, TXAIR

REGULATORY KEY DESCRIPTIONS

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CERCLA = superfund clean up substance



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CSWS = Clean Water Act Hazardous substances  
MASS = MA Massachusetts Hazardous Substances List  
NJHS - New Jersey Right to Know Hazardous Substances  
OSHAWAC = OSHA Workplace Air Contaminants  
PA = PA Right-To-Know List of Hazardous Substances  
SARA311/312 = SARA 311/312 Toxic Chemicals  
TSCA = Toxic Substances Control Act  
TXAIR = TX Air Contaminants with Health Effects Screening Level

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### OTHER INFORMATION

#### Disclaimer:

The data in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material in any process. The information set forth herein is furnished free of charge and is based on technical data that Applied Chemical Innovations, LLC believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside of Applied Chemical Innovations, LLC's control, Applied Chemical Innovations, LLC makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under, or a recommendation to infringe upon, any patents.

#### Preparation Information:

GHS Conversion Services  
[www.ghsconversionservices.com](http://www.ghsconversionservices.com)  
(414) 336-2546