



# Formosa Plastics Corporation

Plastics Division, RM.061, 4FL., 201, Tung Hwa N. RD., Taipei, Taiwan

Tel: +886-2-2712-2211 Fax: +886-2-2713-7012

## Safety Data Sheet

### 1. Identification

<b>Product identifier</b>	Sodium Hydroxide, Solid
<b>CAS number</b>	01310-73-2
<b>Synonyms</b>	Caustic Soda Micropearls, Caustic Soda Prills.
<b>Recommended use</b>	Raw Material
<b>Recommended restrictions</b>	None known

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

<b>Company name</b>	Formosa Plastics Corporation
<b>Factory Address</b>	100 Shui-Guan RD, Jen-wu Shiang, Kaohsiung County, Taiwan
<b>Telephone</b>	
<b>Emergency phone number</b>	+886-7-3711411 ext 5406
<b>Product Information</b>	+886-2-2712-2211 ext 6098
<b>E-mail</b>	<a href="mailto:Evenwang@fpc.com.tw">Evenwang@fpc.com.tw</a>

#### Distributor

<b>Company name</b>	Connection Chemical, LP
<b>Address</b>	104 Pheasant Run, Suite 104 Newtown, PA 18940
<b>Telephone</b>	
<b>Emergency phone number</b>	Chemtrec – Domestic +1-800-424-9300
<b>Product Information</b>	+1-215-493-4240
<b>E-mail</b>	<a href="mailto:Orders@connectionchemical.com">Orders@connectionchemical.com</a>



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### 2. HAZARDS IDENTIFICATION

<b>Physical hazards</b>	Corrosive to Metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Specific Target Organ Toxicity (Single Exposure)	Category 3

**OSHA defined hazards** Not classified.

#### GHS Label elements, including precautionary statements

**Pictogram:**



**Signal word**

Danger

**Hazard statement(s)**

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

**Precautionary statement(s)**

**Prevention**

Keep only in original packaging.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash skin thoroughly after handling.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response**

Use only outdoors or in a well-ventilated area.  
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. Immediately call a POISON CENTER or doctor/ physician.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Storage**

Immediately call a POISON CENTER or doctor/physician.  
Store in corrosive resistant container with a resistant inner liner.  
Store locked up.

<b>Disposal</b>	Sore in a well ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.



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### 3. Composition/information on ingredients

#### Substances

Chemical name	CAS No.	Wt. %
Sodium Hydroxide, Solid	1310-73-2	Approx.99

Percentage ranges of composition to protect confidentiality or due to batch variation.



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### 4. First-aid measures

**Inhalation**

Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**

Take off immediately all contaminated clothing. Rinse skin with water. Call a physician or poison control center immediately.

Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

**Eye contact**

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.

**Ingestion**

Call a physician or poison control center immediately. Rinse mouth.

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**

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

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

Provide general supportive measures and treat symptomatically.

Chemical burns: Flush with water immediately. While flushing,

remove clothes which do not adhere to affected area. Call an

ambulance. Continue flushing during transport to hospital. Keep

victim under observation. Symptoms may be delayed.

**General information**

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



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### 5. Fire-fighting measures

**Suitable extinguishing media**

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media**

Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**

During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**

Use water spray to cool unopened containers.

**Specific methods**

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

**General fire hazards**

No unusual fire or explosion hazards noted.



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### 6. Accidental release measures

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

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 touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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**

Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

#### **Environmental precautions**

Avoid discharge into drains, water courses or onto the ground.



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### 7. Handling and storage

**Precautions for safe handling**

Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage,  
including any incompatibilities**

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).





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### 8. Exposure controls/personal protection

#### Occupational exposure limits

##### 1. US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
Sodium Hydroxide, Solid (CAS 1310-73-2)	PEL	2 mg/m <sup>3</sup>

##### 2. US. ACGIH Threshold Limit Values

Material	Type	Value
Sodium Hydroxide, Solid (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

##### 3. US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Sodium Hydroxide, Solid (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

#### 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

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

##### Skin protection

###### Hand protection

Wear appropriate chemical resistant gloves.

###### Other

Wear appropriate chemical resistant clothing.

##### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

##### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

#### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.



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### 9. Physical and chemical properties

#### Appearance

Physical state Solid.  
Form Solid.  
Color Not available.

#### Odor

Not available.

#### Odor threshold

Not available.

#### pH

12 0.05% wt/wt solution

#### Melting point/freezing point

613.4 °F (323 °C)

#### Initial boiling point and boiling range

2530.4 °F (1388 °C)

#### Flash point

Not available.

#### Evaporation rate

Not available.

#### Flammability (solid, gas)

Not available.

#### Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

#### Vapor pressure

< 0.0000001 kPa at 25 °C

#### Vapor density

Not available.

#### Relative density

Not available.

#### Solubility(ies)

Solubility (water) 1110 g/l

#### Partition coefficient (n-octanol/water)

Not available.

#### Auto-ignition temperature

Not available.

#### Decomposition temperature

Not available.

#### Viscosity

Not available.

#### Other information

Density 2.13 g/cm<sup>3</sup> estimated

Dynamic viscosity 4 mPa.s

Dynamic viscosity temperature 662 °F (350 °C)

Kinematic viscosity 1.878 mm<sup>2</sup>/s estimated

Molecular formula H-Na-O

Molecular weight 40 g/mol

Specific gravity 2.13 at 25 °C



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### 10. Stability and reactivity

**Reactivity**

Reacts violently with strong acids. This product may react with oxidizing agents.

**Chemical stability**

Material is stable under normal conditions.

**Possibility of hazardous reactions**

Hazardous polymerization does not occur.

**Conditions to avoid**

Do not mix with other chemicals. Contact with incompatible materials.

**Incompatible materials**

Acids. Oxidizing agents.

**Hazardous decomposition products**

No hazardous decomposition products are known.



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### 11. Toxicological information

#### Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

#### Symptoms related to the physical, chemical and toxicological characteristics

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

#### Information on toxicological effects

##### Acute toxicity

Not available.

##### Skin corrosion/irritation

Causes severe skin burns and eye damage.

##### Serious eye damage/eye irritation

Causes serious eye damage.

##### Respiratory or skin sensitization

Respiratory sensitization

Not available.

Skin sensitization

This product is not expected to cause skin sensitization.

##### Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

##### Carcinogenicity

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

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

Not classified.

##### Specific target organ toxicity - repeated exposure

Not classified.

##### Aspiration hazard

Not available.

##### Chronic effects

Prolonged inhalation may be harmful.



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### 12. Ecological information

#### Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

#### Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

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.



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### 13. Disposal considerations

**Disposal instructions**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents and container in accordance with government 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.



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### 14. Transport information

#### DOT

UN number	UN1823
UN proper shipping name	Sodium hydroxide, solid
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	154
Packaging non bulk	212
Packaging bulk	240

#### IATA

UN number	UN1823
UN proper shipping name	Sodium hydroxide, solid
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
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	UN1823
UN proper shipping name	SODIUM HYDROXIDE, SOLID
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B

Special precautions for user

Read safety instructions, SDS and emergency procedures before handling.  
Not applicable.

**Transport in bulk according to  
Annex II of MARPOL 73/78 and  
the IBC Code  
DOT**



**IATA; IMDG**







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### 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 Listed as Active on the U.S. EPA TSCA Active Inventory List.

#### **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

#### **CERCLA Hazardous Substance List (40 CFR 302.4)**

Sodium Hydroxide, Solid (CAS 1310-73-2)

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**

Yes

#### **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.

##### **Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)**

Hazardous substance

##### **Safe Drinking Water Act (SDWA)**

Not regulated.

##### **Food and Drug**

Total food additive

##### **Administration (FDA)**

Direct food additive , GRAS food additive

**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 Hydroxide, Solid (CAS 1310-73-2)

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

Sodium Hydroxide, Solid (CAS 1310-73-2)

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

Sodium Hydroxide, Solid (CAS 1310-73-2)

**US. Rhode Island RTK**

Sodium Hydroxide, Solid (CAS 1310-73-2)

**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.



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### 16. Other information, including date of preparation or last revision

**Issue date** August 3, 2017

**Version #** Ver.1.1

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