



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

1. Identification

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

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Rooto Corporation
Factory Address	3505 W. Grand River Ave Howell, MI 48855

Emergency phone number	Chemtrec - 1-800-424-9300
------------------------	---------------------------



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

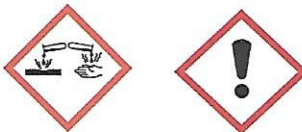
2. HAZARDS IDENTIFICATION

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 18
	Serious eye damage/eye irritation	Category 1
	Corrosive to Metals	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.
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.

Response

Remove contact lenses, if present and easy to do.
Continue rinsing. Immediately call a POISON CENTER or
Store in corrosive resistant container with a resistant inner liner.

Storage

Store locked up.

**Disposal**

Store in a well ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise
classified (HNOC)**

None known.

Supplemental information

None.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

5.Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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).



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

8. Exposure controls/personal protection

Occupational exposure limits

1.US. OSHA Table Z-1 Limits for Air Contaminants {29 CFR 19.10.1000}

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

2.US. ACGIH Threshold Limit Values

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

3.US. NIOSH: Pocket Guide to Chemical Hazards

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

Biological limit values

Appropriate engineering controls

No biological exposure limits noted for the ingredient(s). 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

Other

Respiratory protection

Wear appropriate chemical resistant gloves.
Wear appropriate chemical resistant clothing.
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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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 ³ estimated
Dynamic viscosity	4 mPa.s
Dynamic viscosity temperature	662 °F (350 °C)
Kinematic viscosity	1.878 mm ² /s estimated
Molecular formula	H-Na-O
Molecular weight	40 g/mol
Specific gravity	2.13 at 25 °C



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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	1B8, 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

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

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



IATA; IMDG





Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

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 on the U.S. EPA TSCA 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.



Rooto Corporation

3505 W. Grand River Ave. Howell, MI 48855

Tel: 517-546-8330 Fax: 517-548-5162

Safety Data Sheet

16.0ther information, including date of preparation or last revision

Issue date May 4 2015

Disclaimer

This information was developed from information on the constituent materials. No warranty is expressed or implied regarding the completeness or continuing accuracy of the information contained herein, and FPC disclaims all liability for reliance thereon. The user should satisfy himself that he has all current data relevant to his particular use.