

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/11/2016

Reviewed on 08/11/2016

1 Identification

- **Product Identifier**
- **Trade name: Rust Remover**
- **Product Number: ng-RR**
- **Relevant identified uses of the substance or mixture and uses advised against:**
Use as directed by manufacturer.
- **Product Description**
PC14 Metal surface treatment products, including galvanic and electroplating products
- **Application of the substance / the mixture: Industry-specific application.**
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
NuGeneration Technologies, LLC (dba NuGenTec)
1155 Park Avenue, Emeryville, CA 94608
salesteam@nugentec.com www.nugentec.com
1-888-996-8436 or 1-707-820-4080 for product information
- **Emergency telephone number:**
PERS Emergency Response: Domestic and Canada - 1-800-633-8253, International 1-801-629-0667

2 Hazard(s) Identification

- **Classification of the substance or mixture:**



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements:**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms:**



GHS05

- **Signal word: Danger**

- **Hazard-determining components of labeling:**

Sodium Hydroxide

Proprietary Chelating Agent

- **Hazard statements:**

H314 Causes severe skin burns and eye damage.

- **Precautionary statements:**

P260 Do not breathe dusts or mists.

P280 Wear eye protection / face protection.

P264 Wash thoroughly after handling.

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- P303+P361+P353 *If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
- P305+P351+P338 *If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
- P310 *Immediately call a POISON CENTER/doctor.*
- P321 *Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).*
- P304+P340 *IF INHALED: Remove person to fresh air and keep comfortable for breathing.*
- P363 *Wash contaminated clothing before reuse.*
- P301+P330+P331 *If swallowed: Rinse mouth. Do NOT induce vomiting.*
- P405 *Store locked up.*
- P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Unknown acute toxicity:**
20 % of the mixture consists of component(s) of unknown toxicity.
- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/Information on Ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

1310-73-2	Sodium Hydroxide ⚠ Skin Corr. 1A, H314	70-90%
	Proprietary Chelating Agent ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	4.8%
	Proprietary Salt ⚠ Eye Irrit. 2A, H319	2.2%
	Proprietary Surfactant ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Aquatic Acute 2, H401; Aquatic Chronic 3, H412	2%

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Trade name: Rust Remover**· Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

4 First-Aid Measures**· Description of first aid measures:****· General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.

· After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

· After skin contact:

Brush off loose particles from skin BEFORE rinsing with water. Flush skin with plenty of soap and water for at least 15 minutes to ensure all chemical has been removed.

If skin irritation occurs, consult a doctor.

· After eye contact:

Do NOT rub eyes. Immediately rinse opened eye(s) for at least 15 minutes under running water, lifting upper and lower lids occasionally. Seek immediate medical attention.

· After swallowing:

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

Do not induce vomiting without medical advice.

If vomiting does occur, repeat fluid administration

Seek immediate medical advice.

· Information for doctor:**· Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

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

No further relevant information available.

5 Fire-Fighting Measures**· Extinguishing media:****· Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· For safety reasons unsuitable extinguishing agents: Water with full jet**· Special hazards arising from the substance or mixture:** No further relevant information available.**· Advice for firefighters:****· Protective equipment:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

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6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**
 - Wear protective equipment. Keep unprotected persons away.
 - Ensure adequate ventilation.
 - Avoid formation of dust.
 - Avoid breathing dust.
 - Avoid contact with skin, eyes and clothing.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Powder and fragments should be cleaned up using a method that will avoid the generation of dust in the workplace atmosphere. The use of a vacuum cleaner fitted with an exhaust air filter fine enough to trap the dust is recommended.
 - Use neutralizing agent.
 - Dispose contaminated material as waste according to section 13.
 - Ensure adequate ventilation.
 - Dispose of the collected material according to regulations.
- **Reference to other sections:**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

7 Handling and Storage

- **Handling**
- **Precautions for safe handling:** Avoid creating and breathing dust/fume/gas/mist/vapors/spray.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities:**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in the original container.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
 - 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.
- **Components with occupational exposure limits:**
 - The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
 - At this time, the other constituents have no known exposure limits.

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1310-73-2 Sodium Hydroxide

PEL	Long-term value: 2 mg/m ³
REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls:**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:**



Dust mask

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material:**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· **Eye protection:**



Tightly sealed goggles

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· **Body protection:**



Protective work clothing

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Powder
Color:	Whitish
Odor:	Odorless
Odor threshold:	Not determined.

· **pH-value @ 20 °C (68 °F):** >13

· **Change in condition**

Melting point/Melting range:	360 °C (680 °F)
Boiling point/Boiling range:	1390 °C (2534 °F)

· **Flash point:** None

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure @ 20 °C (68 °F):** 0 hPa

· **Density:**

Relative density:	Not determined.
Vapor density:	Not applicable.
Evaporation rate:	Not applicable.

· **Solubility in / Miscibility with:**

Water @ 20 °C (68 °F): 1120 g/l

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic:	Not applicable.
Kinematic:	Not applicable.

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- **Solvent content:**
 - Organic solvents:** 0.0 %
 - Solids content:** 97.8 %
- **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

1310-73-2 Sodium Hydroxide		
Oral	LD50	2000 mg/kg (rat)
Proprietary Chelating Agent		
Oral	LD50	630-1260 mg/kg (rat)
Proprietary Salt		
Oral	LD50	4090 mg/kg (rat)
Inhalative	LC50/96 hours	300 mg/l (Fathead Minnow)
Proprietary Surfactant		
Oral	LD50	2000-5000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)

- **Primary irritant effect:**
- **On the skin:** Strong caustic effect on skin and mucous membranes.
- **On the eye:**
 - Strong caustic effect.
 - Strong irritant with the danger of severe eye injury.
 - Corrosive effect.
 - Causes serious eye irritation.
- **Additional toxicological information:**
 - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - Corrosive

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Irritant

Swallowing will lead to a corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**

Group 1 - Carcinogenic to humans

Group 2A - Probably carcinogenic to humans

Group 2B - Possibly carcinogenic to humans

Group 3 - Not classifiable as to its carcinogenicity to humans

Group 4 - Probably not carcinogenic to humans

None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

1310-73-2 Sodium Hydroxide

EC50 40 mg/l (daphnia)

Proprietary Salt

EC50 227 mg/l (daphnia)

· **Persistence and degradability:** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential:** No further relevant information available.

· **Mobility in soil:** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· **Results of PBT and vPvB assessment:**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects:** No further relevant information available.

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13 Disposal Considerations

- **Waste treatment methods:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packagings**
- **Recommendation:**
Disposal must be made according to official regulations.
Dispose of as unused product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport Information

- **UN-Number:** UN3262
- **DOT, ADR, IMDG, IATA** UN3262
- **UN proper shipping name:** UN3262 Corrosive solid, basic, inorganic, n.o.s. (Sodium Hydroxide)
- **DOT, ADR** UN3262 Corrosive solid, basic, inorganic, n.o.s. (Sodium Hydroxide)
- **IMDG, IATA** CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Sodium Hydroxide)
- **Transport hazard class(es):**
- **DOT**



- **Class:** 8 Corrosive substances
- **Label:** 8

· **ADR**



- **Class:** 8 (C6) Corrosive substances
- **Label:** 8

· **IMDG, IATA**



- **Class:** 8 Corrosive substances
- **Label:** 8

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· Packing group:	I
· DOT, ADR, IMDG, IATA	Not applicable.
· Environmental hazards:	Warning: Corrosive substances
· Special precautions for user:	88
· Danger code (Kemler):	F-A, S-B
· EMS Number:	Alkalis
· Segregation groups:	B
· Stowage Category	SG35 Stow "separated from" acids.
· Segregation Code	
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations:	On passenger aircraft/rail: 1 kg On cargo aircraft only: 25 kg
<hr/>	
· ADR	
· Excepted quantities (EQ):	Code: E0 Not permitted as Excepted Quantity
<hr/>	
· IMDG	
· Limited quantities (LQ):	0
· Excepted quantities (EQ):	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE), 8, I

15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed or exempt from listing.

- **California Proposition 65:**

- **Chemicals known to cause cancer:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

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· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **New Jersey Right-to-Know List:**

1310-73-2 Sodium Hydroxide

· **New Jersey Special Hazardous Substance List:**

1310-73-2 Sodium Hydroxide CO, R1

· **Pennsylvania Right-to-Know List:**

1310-73-2 Sodium Hydroxide

· **Pennsylvania Special Hazardous Substance List:**

1310-73-2 Sodium Hydroxide E

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS05

· **Signal word: Danger**

· **Hazard-determining components of labeling:**

Sodium Hydroxide
Proprietary Chelating Agent

· **Hazard statements:**

H314 Causes severe skin burns and eye damage.

· **Precautionary statements:**

P260 Do not breathe dusts or mists.
 P280 Wear eye protection / face protection.
 P264 Wash thoroughly after handling.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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Trade name: Rust Remover

P363 Wash contaminated clothing before reuse.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision:** 08/11/2016 / -

· Abbreviations and acronyms:

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

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