

SECTION 1: IDENTIFICATION

- Product Identifier:** NanoNet Fe™
- Recommended Use:** For research & development purposes only.
- Restricted Use:** Not for commercial use.
- Company Identification:** CarboNet Nanotechnologies US Inc.
6926 Jenny Lake
Spring, TX 77379
- Emergency Contacts:** 1-855-479-9110 (U.S. Toll Free) (24 hour)

CarboNet™ Water Treatment (CarboNet) urges each customer or recipient of this SDS to study it carefully to become aware of and understand the proper use and handling of the subject product. The reader should consider consulting reference materials, and/or CarboNet technical support personnel, and/or other recognized experts, as necessary or appropriate to the use and understanding of the data contained in this SDS. To promote the safe handling, storage, and use of this product, each customer or recipient should (1) notify his or her employees, agents, contractors, and others whom he or she knows or believes will use this product, of the information in this SDS and any other information regarding product use, storage, and handling, (2) furnish this same information to each of his or her customers for the product, and (3) request his or her customers to notify their employees, customers, and other users of the product, and of this information.

SECTION 2: HAZARD(S) IDENTIFICATION

- Classification of the substance or mixture:**
This product is classified as hazardous in accordance with 29 C.F.R. Section 1910.1200.
- Skin Corrosion/Irritation:** Category 1B

LABEL ELEMENTS:

Pictograms:



- Signal Word:** Danger
- Hazard Statements:** Causes severe skin burns and eye damage.

PRECAUTIONARY STATEMENTS:

- Prevention**
Do not breathe dusts or mists.
Wash thoroughly after handling.
Wear protective gloves, protective clothing, eye protection, face protection.

Response

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing before reuse. Rinse with water/shower. Wash contaminated clothing before reuse.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center or doctor.

Specific treatment (see additional details on this label).

Storage

Store locked up.

Disposal

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

Hazards Not Otherwise Classified: None known

SECTION 3: COMPOSITION INFORMATION

This product may contain the following hazardous substances. This information is provided for hazard communications purposes. All other ingredients are not classified as hazardous.

Ingredient/Chemical Designation	CAS Registry Number	Weight Percent
Potassium hydroxide	1310-58-3	>2 - <5

Section 4: FIRST AID MEASURES**Inhalation:**

If inhaled, remove to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Immediately call a poison center or doctor.

Eyes:

If in eyes, rinse cautiously with water for several minutes. Remove any contact lenses, if present and easy to do. Immediately call a poison center or doctor.

Skin:

If on skin (or hair), take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a poison center or doctor.

Ingestion:

If swallowed, rinse mouth. Do Not induce vomiting. Immediately call a poison center or doctor.

Most important symptoms and effects, both acute and delayed:

Corrosive. Causes severe skin burns and eye damage. Symptoms include nausea, headache, and vomiting. Skin burns may not be immediately painful or visible. Refer to Section 11 – Toxicological Information.

Indication of immediate medical attention and special treatment needed, if necessary:

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5: FIRE FIGHTER MEASURES**Extinguishing media:**

Water, Foam, Dry Chemical.

Unsuitable extinguishing media:

No data available.

Special hazards arising from the substance or mixture:

Under fire conditions, toxic and corrosive fumes are emitted. Use water spray to cool containers.

Advice for fire fighters:

Wear positive pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Ventilate enclosed areas. Wear appropriate personal protective equipment and avoid direct contact. As an immediate precautionary measure, isolate spill in all directions. Keep unauthorized personnel away.

Environmental precautions:

Avoid discharge to natural waterways and sewers, and/or dilute with water.

Methods and material for containment and cleaning up:

Contain spill, absorb with inert material (sand, earth, absorbent pads, etc.). Floor may be slightly slippery, so use care to avoid falling. Transfer liquids to suitable containers for recovery, re-use, or disposal. For waste disposal, see Section 13 of the SDS.

Section 7: HANDLING & STORAGE

Precautions for safe handling:

Use only with adequate ventilation. Wear appropriate personal protective equipment and avoid direct contact. Do not breathe dust or mists. Do not swallow. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

Conditions for safe storage:

Store in well-sealed container in cool, dry area in accordance with all current regulations and standards. Keep containers closed and/or sealed when not in use. Store locked up.

Section 8: EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Limits:

CAS No.	Ingredient	Source	Value
1310-58-3	Potassium hydroxide	OSHA	Ceiling: 2 mg/m ³
		ACGIH	Ceiling: 2 mg/m ³
		NIOSH	Ceiling: 2 mg/m ³

EXPOSURE CONTROLS:**Respiratory:**

Use a NIOSH/MSHA approved respirator if exposure limits are exceeded, symptoms are experienced, or for conditions where heating and the presence of vapors or misting may occur. Follow the OSHA respirator regulations found in 29 CFR 1910.134.

Eyes:

Chemical safety goggles and/or full face shield.

Skin:

Wear appropriate impermeable gloves. Wear long sleeves, apron, coveralls, and/or laboratory coat.

Engineering Controls:

Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Ensure that handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dusts or mists into the work area.

Other Work Practices:

Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet. Promptly remove soiled clothing. An eyewash station and emergency shower must be available to the work station.

Section 9: PHYSICAL & CHEMICAL PROPERTIES

Appearance	Water-based liquid
Color	Amber color
Odor	Mild/Sweet
Odor threshold	No information available
pH	12 - 14
Melting point / freezing point	0°C (32°F)
Initial boiling point and boiling range	100°C (212°F)
Flash Point	None
Evaporation rate	<0.01
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	No information available
Vapor pressure	<0.01 (mmHg)
Vapor Density	>1 (air = 1)
Relative Density	1 g/cm ³
Specific Gravity	0.95 – 1.10
Solubility in Water	Soluble
Partition coefficient n-octanol/water (Log Kow)	Not known
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	25 cps at 25°C

Section 10: STABILITY & REACTIVITY

Reactivity:

Un-reactive.

Chemical stability:

Stable under normal conditions.

Possibility of hazardous reactions:

Will not occur.

Conditions to avoid:

Freezing could cause product to stratify, and product should be mixed gently prior to using.

Incompatible materials:

Strong oxidizers, strong acids, and materials with reactive hydroxyl compounds.

Hazardous decomposition products:

None known.

Section 11: TOXICOLOGICAL INFORMATION

Likely routes of exposure: Inhalation, skin and eye contact.

Symptoms related to characteristics: Causes severe skin burns and eye damage.

Delayed and immediate effects (short and long term): Corrosive, causes severe skin burns and eye damage.

Classification	Category	Hazard Description
Acute toxicity (oral)	--	ATEmix >5,000 mg/kg (see note)
Acute toxicity (dermal)	--	No applicable information found.
Acute toxicity (inhalation)	--	No applicable information found.
Skin corrosion/irritation	1B	Causes severe skin burns.
Serious eye damage/irritation	1	Causes eye damage.

Respiratory sensitization	--	No applicable information found.
Skin sensitization	--	No applicable information found.
Germ cell mutagenicity	--	No applicable information found.
Carcinogenicity	--	No applicable information found.
Reproductive toxicity	--	No applicable information found.
STOT-single exposure	--	No applicable information found.
STOT-repeated exposure	--	No applicable information found.
Aspiration hazard	--	No applicable information found.

Note: When no route-specific LD50 data is available, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Carcinogenic Effects: This product does not contain any ingredients listed as a carcinogen or potential carcinogen by OSHA, NTP, or IARC.

Section 12: ECOLOGICAL CONSIDERATIONS

Ecological Toxicity:

No data available for this product.

Aquatic Ecotoxicity:

No data available for this product.

Persistence and degradability:

No data available on the degradability of this product.

Bioaccumulative potential:

No applicable information found.

Mobility in soil:

No applicable information found.

Other adverse effects:

No applicable information found.

Section 13: DISPOSAL CONSIDERATIONS

Description of Waste Residues: Disposal of content and/or container in accordance with local, regional, national, and/or international regulations.

Disposal Method: Disposal of content and/or container in accordance with local, regional, national, and/or international regulations.

Container Disposal: Disposal of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14: TRANSPORTATION INFORMATION

Land transport (DOT)

UN 1814

Potassium hydroxide, solution

Class 8

PG II

Sea transport (IMDG)

UN 1814

Potassium hydroxide, solution

Class 8

PG II

Air transport (ICAO/IATA)

UN 1814

Potassium hydroxide, solution

Class 8

PG II

Marine pollutant: No**Section 15: REGULATORY INFORMATION**

Regulatory Overview: The regulatory data in Section 15 are not intended to be all-inclusive; only selected regulations are represented.

Toxic Substances Control Act (TSCA): Excluded. R&D Purposes only.

SARA Title III Section 311/312 Hazardous Categories (40 CFR Section 370.21)

Acute:	Yes
Chronic:	No
Fire:	No
Reactive:	No
Sudden Release:	No

CERCLA Hazardous Substances:

Potassium hydroxide: RQ 1,000 lbs.

Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive/developmental toxicity. For more information, go to www.P65Warnings.ca.gov.

Section 16: OTHER INFORMATION

Date Prepared: February 2020

Sections revised: First issue

Abbreviations:

OSHA: Occupational Safety and Health Administration

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

DOT: Department of Transportation (i.e., 49 C.F.R. Parts 105 – 180)

IMDG: International Maritime Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

SARA: Superfund Amendments and Reauthorization Act

Additional information on uses can be made available by contacting sds@carbonet.com

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