

Safety Data Sheet

Section 1: Identification

Product Name: Sodium Bicarbonate

Synonyms:

Company Identification:

Origination Inc.
1300 McKnight Road North
Maplewood, MN 55119

For information, call: 1-800-625-6079

Emergency Number: 1-800-625-6079

For CHEMTREC assistance, call: 1-800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2: Hazard(s) Identification

Classification of the substance or mixture HCS 2012 (29 CFR 1910.1200): Not a hazardous product according to the OSHA Globally Harmonized System (GHS)

Label elements HCS 2012 (29 CFR 1910.1200): Not a hazardous product according to the OSHA Globally Harmonized System (GHS)

Additional Labeling: The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 2 %

Other hazards which do not result in classification: None.

Section 3: Composition / Information on Ingredients

Hazardous Ingredients and Impurities

| Chemical Name | Identification number CAS-No. | Concentration [%] |
|---------------------------------|----------------------------------|-------------------|
| Carbonic acid sodium salt (1:1) | 144-55-8 | >= 98 |

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Mixture: Not applicable, this product is a substance.

Section 4: First Aid Measures

Description of first-aid measures

In case of inhalation: Move to fresh air. If symptoms persist, call a physician.

In case of skin contact: Wash off with soap and water.

In case of eye contact: Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

In case of ingestion: Rinse mouth with water. If symptoms persist, call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

In case of inhalation effects: No hazards to be specially mentioned.

In case of skin contact: No hazards to be specially mentioned. *Repeated or prolonged exposure.* Contact with dust can cause mechanical irritation or drying of the skin.

In case of eye contact: Dust contact with the eyes can lead to mechanical irritation.

In case of ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

Notes to physician: When symptoms persist or in all cases of doubt seek medical advice.

Section 5: Fire Fighting Measures

Flash point: Not applicable, inorganic

Autoignition temperature: The product is not flammable.

Flammability / Explosive limit: No data available.

Extinguishing media

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: None.

Special hazards arising from the substance or mixture Specific hazards during fire-fighting: Not combustible.

Hazardous combustion products: None

Advice for firefighters

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Evacuate personnel to safe areas. Avoid dust formation.

Advice for emergency responders: Use personal protective equipment. Sweep up to prevent slipping hazard. Prevent further leakage or spillage.

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Environmental precautions: Do not flush into surface water or sanitary sewer system. Prevent any mixture with an acid into the sewer/drain (gas formations).

Methods and materials for containment and cleaning up: Pick up and transfer to properly labeled containers. Keep in suitable, closed containers for disposal.

Reference to other sections: Refer to protective measures listed in sections 7 and 8.

Section 7: Handling and Storage

Precautions for safe handling: Ensure adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep away from incompatible products. Wash hands before breaks and at the end of workday. Hygiene measures. When using do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities Technical measures/Storage conditions: Store in original container. Keep in a dry place. Keep in properly labeled containers. Keep container closed. Keep away from incompatible products.

Packaging Material: Suitable material: paper, polyethylene. Polypropylene – woven plastic material.

Unsuitable material: No data available.

Specific end use: No data available.

Section 8: Exposure Controls, Personal Protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

| Ingredients | Value type | Value | Basis |
|--|---|----------------------|----------------------------------|
| Carbonic acid sodium salt (1:1) | TWA | 10 mg/m ³ | Solvay Acceptable Exposure Limit |
| Particles not otherwise specified (PNOS) | National Institute for Occupational Safety and Health Includes all inert or nuisance dusts, whether mineral, inorganic, not listed specifically in 1910.1000., See Appendix D - Substances with No Established RELs | | |
| Particles not otherwise specified (PNOS) | TWA 15 mg/m ³ Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants Form of exposure: total dust All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3. | | |

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| | |
|--|---|
| Particles not otherwise specified (PNOS) | TWA 5 mg/m ³ Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants Form of exposure : respirable fraction All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3. |
| Particles not otherwise specified (PNOS) | TWA 10 mg/m ³ American Conference of Governmental Industrial Hygienists Form of exposure : Inhalable fraction |
| Particles not otherwise specified (PNOS) | TWA 3 mg/m ³ American Conference of Governmental Industrial Hygienists Form of exposure : Respirable fraction |

Exposure Controls Control measures

Engineering measures: Provide appropriate exhaust ventilation at places where dust is formed. Apply technical measures to comply with the occupational exposure limits.

Individual protection measures

Respiratory protection: Use only respiratory protection that conforms to international/ national standards. Use NIOSH approved respiratory protection.

Hand protection: Impervious gloves

Eye protection: Safety goggles

Skin and body protection: No special protective equipment required.

Hygiene measures: When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

Appearance

Form: crystalline, powder

Physical State: Solid

Color: White

Odor: Odorless

Odor Threshold: Not available.

pH: 8.4 (ca. 8.4 g/l) (77 °F (25 °C)) Water 8.6 (ca. 52 g/l) pKa: 6.3

Melting point/range: Decomposition: Yes

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Boiling point/boiling range: Thermal decomposition: yes

Flash point: Not applicable, inorganic.

Evaporation rate (Butylacetate = 1): Not data available.

Flammability (solid, gas): This product is not flammable.

Flammability / Explosive limit: Explosiveness: Not expected.

Autoignition temperature: This product is not flammable.

Vapor pressure: Thermal decomposition

Vapor density: Not applicable

Density: 2.21 kg/dm³

Bulk Density: 500-1,300 kg/m³

Relative density: 2.21 – 2.23 (68 °F (20 °C))

Solubility: Water solubility: 69 g/l (32 °F (0 °C)) 93 g/l (68 °F (20 °C)) 165 g/l (140 °F (60 °C))

Solubility in other solvents

Other: soluble

Alcohol: slightly soluble

Partition coefficient: n-octanol/water: Not applicable, inorganic

Thermal decomposition: > 122 °F (> 50 °C)

Viscosity Viscosity, dynamic : Not applicable

Explosive properties

Oxidizing properties: Not expected

Other information Molecular weight: 84.01 g/mol

Section 10: Stability and Reactivity

Reactivity: Incompatible with acids. Decomposes slowly on exposure to water.

Chemical Stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: None.

Conditions to avoid: Exposure to moisture. To avoid thermal decomposition, do not overheat.

Incompatible materials: Acids.

Hazardous decomposition products: None.

Section 11: Toxicological Information

Acute dermal toxicity Acute toxicity (other routes of administration): No data available.

Skin corrosion/irritation: Rabbit. Slight irritation, Method: OECD Test Guideline 404. Unpublished reports.

Serious eye damage/eye irritation: Rabbit. Slight irritation, Method: OECD Test Guideline 405. Unpublished reports.

Respiratory or skin sensitization: No data available.

Mutagenicity

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Genotoxicity in vitro: Strain: Escherichia coli with and without metabolic activation. Negative method: according to a standardized method published data. Ames test with metabolic activation negative method: (Salmonella typhimurium – revers mutation assay) Published data.

Genotoxicity in vivo: No data available.

Carcinogenicity: No data available.

This product does not contain any ingredient designated as probable or suspected human carcinogens by: NTP IARC OSHA ACHIG

Toxicity for reproduction/fertility: No data available.

Developmental Toxicity/Teratogenicity: Rat, female. Application Route: Oral. NOAEL teratogenicity: > 340 mg/kg.

STOT: Method: according to a standardized method Highest dose tested.

STOT-single exposure: The product is not considered to be embryotoxic / fetotoxic. Unpublished reports. Rabbit, female. Application Route: Oral. NOAEL teratogenicity: > 330 mg/kg Method: according to a standardized method. Highest dose tested. The product is not considered to be embryotoxic / fetotoxic. Unpublished reports. Routes of exposure: Oral, Inhalation. The substance or mixture is not classified as specific target organ toxicant, single exposure. Internal evaluation

STOT-repeated exposure: No data available.

Aspiration toxicity: No data available.

Section 12: Ecological Information

Aquatic Compartment

Acute toxicity to fish: LC50 - 96 h: 7,100 mg/l - Lepomis macrochirus (Bluegill sunfish) flow-through test
Analytical monitoring: yes Method: according to a standardized method Unpublished internal reports Not harmful to fish (LC50 > 100 mg/L)

Acute toxicity to daphnia and other aquatic invertebrates: EC50 - 48 h : 4,100 mg/l - Daphnia magna (Water flea) flow-through test

Analytical monitoring: Yes

Method: According to a standardized method. Unpublished internal reports. Not harmful to aquatic invertebrates. (EC50 > 100 mg/L)

Chronic toxicity to daphnia and other aquatic invertebrates: NOEC: > 576 mg/l - 21 Days - Daphnia magna (Water flea) semi-static test. Analytical monitoring: no. Method: OECD Test Guideline 211. Highest concentration tested. Published data. No adverse chronic effect observed up to and including the threshold of 1 mg / L

Persistence and degradability

Biodegradation Biodegradability: Not applicable, inorganic substance.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Results of PBT and vPvB assessment: Not applicable, inorganic substance.

Other adverse effects: No data available.

Ecotoxicity assessment

Acute aquatic toxicity: Not harmful to aquatic life (LC/EC50 > 100 mg/L)

Chronic aquatic toxicity: No adverse chronic effect observed up to and including the threshold of 1 mg / L.

Section 13: Disposal Considerations (non-mandatory)

Waste treatment methods

Product Disposal: Contact waste disposal services. Neutralize with acid. If recycling is not practicable, dispose of in compliance with local regulations. Dilute with plenty of water. In accordance with local and national regulations.

Waste Code: Environmental Protection Agency. Hazardous Waste: No.

Advice on cleaning and disposal of packaging: Where possible recycling is preferred to disposal or incineration. Clean container with water. Dispose of rinse water in accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

Section 14: Transport Information

DOT: Not regulated

TDG: Not regulated

NOM: Not regulated

IMDG: Not regulated

IATA: Not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

Section 15: Regulatory Information

| Inventory Information | Status |
|--|------------------------------------|
| United States TSCA Inventory | - Listed on Inventory |
| Mexico INSQ (INSQ) | - In compliance with the inventory |
| Canadian Domestic Substances List (DSL) | - Listed on Inventory |
| New Zealand. Inventory of Chemical Substances | - In compliance with the inventory |
| Australia Inventory of Chemical Substances (AICS) | - Listed on Inventory |
| Japan. CSCL - Inventory of Existing and New Chemical Substances | - Listed on Inventory |
| Korea. Korean Existing Chemicals Inventory (KECI) | - Listed on Inventory |
| China. Inventory of Existing Chemical Substances in China (IECSC) | - Listed on Inventory |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | - Listed on Inventory |

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Federal Regulations

US. EPA EPCRA SARA Title III

SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)

| | |
|-----------------------------------|----|
| Fire Hazard | no |
| Reactivity Hazard | no |
| Sudden Release of Pressure Hazard | no |
| Acute Health Hazard | no |
| Chronic Health Hazard | no |

Section 313 Toxic Chemicals (40 CFR 372.65): This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355): No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355): This material does not contain any components with a SARA 302 RQ.

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355): This material does not contain any components with a section 304 EHS RQ.

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

This material does not contain any components with a CERCLA RQ.

State Regulations: US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Section 16: Additional Information

NFPA (National Fire Protection Association) - Classification

| | |
|---------------------------|-----------|
| Health | 1 slight |
| Flammability | 0 minimal |
| Instability or Reactivity | 0 minimal |
| Special Notices | None |

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

| | |
|--------------|---|
| Health | 1 slight |
| Flammability | 0 minimal |
| Reactivity | 0 minimal |
| PPE | Determined by User; dependent on local conditions |

Further information: Product evaluated under the US GHS format.

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Prepared by: Origination, Inc.

Prepared: May, 2015

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