



## Material Safety Data Sheet

Creation Date 29-Jan-2010

Revision Date 29-Jan-2010

Revision Number 1

### 1. PRODUCT AND COMPANY IDENTIFICATION

|                        |   |
|------------------------|---|
| <b>Product Name</b>    | <b>Sodium bicarbonate</b>   |
| <b>Cat No.</b>         | <b>BP328-1; BP328-500; S233-3; S233-10; S233-50; S233-300LB; S233-500; S631-3; S631-10; S631-50; S635-3; S637-12; S637-50; S637-212</b> |
| <b>Synonyms</b>        | Sodium hydrogen carbonate; Sodium acid carbonate; Carbonic acid, monosodium salt (Crystalline/Powder/Certified ACS/USP/FCC/EP/BP/WP/JP) |
| <b>Recommended Use</b> | Laboratory chemicals  |
| <b>Company</b>         | <b>Emergency Telephone Number</b>   |
| Fisher Scientific      | CHEMTREC®, Inside the USA: 800-424-9300   |
| One Reagent Lane       | CHEMTREC®, Outside the USA: 703-527-3887  |
| Fair Lawn, NJ 07410    |   |
| Tel: (201) 796-7100    |   |

### 2. HAZARDS IDENTIFICATION

#### WARNING!

#### Emergency Overview

Irritating to eyes and skin. May cause irritation of respiratory tract. May cause adverse kidney effects.

**Appearance** White

**Physical State** Powder

**odor** odorless

#### Target Organs

Eyes, Skin, Central nervous system (CNS), Kidney, Blood, Heart, Liver

#### Potential Health Effects

#### Acute Effects

#### Principle Routes of Exposure

##### Eyes

Irritating to eyes.

##### Skin

Irritating to skin. May be harmful in contact with skin.

##### Inhalation

May cause irritation of respiratory tract. May be harmful if inhaled.

##### Ingestion

May be harmful if swallowed. May cause adverse kidney effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

#### Chronic Effects

Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse liver effects.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Haz/Non-haz

| Component          | CAS-No   | Weight % |
|--------------------|----------|----------|
| Sodium bicarbonate | 144-55-8 | 99       |

### 4. FIRST AID MEASURES

|                           |  |
|---------------------------|--|
| <b>Eye Contact</b>        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention. |
| <b>Skin Contact</b>       | Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.                       |
| <b>Inhalation</b>         | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.    |
| <b>Ingestion</b>          | Do not induce vomiting. Obtain medical attention.  |
| <b>Notes to Physician</b> | Treat symptomatically.   |

### 5. FIRE-FIGHTING MEASURES

|   |  |
|---|--|
| <b>Flash Point</b>                      | Not applicable   |
| <b>Method</b>                           | No information available.  |
| <b>Autoignition Temperature</b>         | No information available.  |
| <b>Explosion Limits</b>                 |  |
| <b>Upper</b>                            | No data available  |
| <b>Lower</b>                            | No data available  |
| <b>Suitable Extinguishing Media</b>     | Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.. |
| <b>Unsuitable Extinguishing Media</b>   | No information available.  |
| <b>Hazardous Combustion Products</b>    | No information available.  |
| <b>Sensitivity to mechanical impact</b> | No information available.  |
| <b>Sensitivity to static discharge</b>  | No information available.  |

#### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**NFPA** Health 2 Flammability 0 Instability 1 Physical hazards N/A

### 6. ACCIDENTAL RELEASE MEASURES

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|   |  |
|---|--|
| <b>Personal Precautions</b>                 | Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. |
| <b>Environmental Precautions</b>            | Should not be released into the environment.   |
| <b>Methods for Containment and Clean Up</b> | Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.                               |

## 7. HANDLING AND STORAGE

|                 |  |
|-----------------|--|
| <b>Handling</b> | Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. |
| <b>Storage</b>  | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Protect from moisture.                                     |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

|                             |   |
|-----------------------------|---|
| <b>Engineering Measures</b> | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. |
| <b>Exposure Guidelines</b>  | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.     |

*NIOSH IDLH: Immediately Dangerous to Life or Health*

### **Personal Protective Equipment**

#### **Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

#### **Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

#### **Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                     |                           |
|-------------------------------------|---------------------------|
| <b>Physical State</b>               | Powder                    |
| <b>Appearance</b>                   | White                     |
| <b>odor</b>                         | odorless                  |
| <b>Odor Threshold</b>               | No information available. |
| <b>pH</b>                           | 8.3 0.1M aq. solution     |
| <b>Vapor Pressure</b>               | No information available. |
| <b>Vapor Density</b>                | No information available. |
| <b>Viscosity</b>                    | No information available. |
| <b>Boiling Point/Range</b>          | No information available. |
| <b>Melting Point/Range</b>          | 270°C / 518°F             |
| <b>Decomposition temperature °C</b> | > 50°C                    |
| <b>Flash Point</b>                  | Not applicable            |
| <b>Evaporation Rate</b>             | No information available. |
| <b>Specific Gravity</b>             | No information available. |
| <b>Solubility</b>                   | Slightly soluble in water |
| <b>log Pow</b>                      | No data available         |
| <b>Molecular Weight</b>             | 84.01                     |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Molecular Formula** C H Na O3

## 10. STABILITY AND REACTIVITY

**Stability** Moisture sensitive. heat sensitive.

**Conditions to Avoid** Avoid dust formation. Incompatible products. Exposure to moist air or water. Excess heat. Temperatures above 50°C.

**Incompatible Materials** Strong oxidizing agents, Acids

**Hazardous Decomposition Products** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sodium oxides

**Hazardous Polymerization** Hazardous polymerization does not occur

**Hazardous Reactions .** Thermal decomposition.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### **Component Information**

| Component          | LD50 Oral          | LD50 Dermal | LC50 Inhalation |
|--------------------|--------------------|-------------|-----------------|
| Sodium bicarbonate | 4220 mg/kg ( Rat ) | Not listed  | Not listed      |

**Irritation** Irritating to eyes and skin

**Toxicologically Synergistic Products** No information available.

### Chronic Toxicity

**Carcinogenicity** There are no known carcinogenic chemicals in this product

**Sensitization** No information available.

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals.

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

**Developmental Effects** Developmental effects have occurred in experimental animals.

**Teratogenicity** No information available.

**Other Adverse Effects** See actual entry in RTECS for complete information.

**Endocrine Disruptor Information** No information available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

| Component          | Freshwater Algae    | Freshwater Fish | Microtox   | Water Flea          |
|--------------------|---------------------|-----------------|------------|---------------------|
| Sodium bicarbonate | EC50: 650 mg/L/120h | Not listed      | Not listed | EC50: 2350 mg/L/48h |

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available

**Mobility** No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

| Component          | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | CHINA | KECL          |
|--------------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|---------------|
| Sodium bicarbonate | X    | X   | -    | 205-633-8 | -      |     | X     | X    | X    | X     | KE-31360<br>X |

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

**N** - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

**P** - Indicates a commenced PMN substance

**R** - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

**S** - Indicates a substance that is identified in a proposed or final Significant New Use Rule

**T** - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

**XU** - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

**Y1** - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

**Y2** - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

**TSCA 12(b)** Not applicable

#### **SARA 313**

Not applicable

#### **SARA 311/312 Hazardous Categorization**

|  |    |
|--|----|
| <b>Acute Health Hazard</b>               | No |
| <b>Chronic Health Hazard</b>             | No |
| <b>Fire Hazard</b>                       | No |
| <b>Sudden Release of Pressure Hazard</b> | No |
| <b>Reactive Hazard</b>                   | No |

#### **Clean Water Act**

Not applicable

#### **Clean Air Act**

Not applicable

#### **OSHA**

Not applicable

#### **CERCLA**

Not Applicable

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **State Right-to-Know**

Not applicable

#### **U.S. Department of Transportation**

|                             |   |
|-----------------------------|---|
| Reportable Quantity (RQ):   | N |
| DOT Marine Pollutant        | N |
| DOT Severe Marine Pollutant | N |

#### **U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

### **Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**

Non-controlled

**16. OTHER INFORMATION**

**Prepared By** Regulatory Affairs  
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**Revision Summary** "\*\*\*\*", and red text indicates revision

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**