



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SODIUM CARBONATE, ANHYDROUS, PRIMARY STANDARD (ACS)
Catalog # 1698
Version # 02
Revision date 18-Nov-2009
CAS # 497-19-8
Synonym(s) SODA ASH
Manufacturer information GFS Chemicals, Inc.
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2. Hazards Identification

Emergency overview Causes eye burns. Irritating to skin. Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure Inhalation. Eye contact.

Eyes Causes eye burns. Do not get this material in contact with eyes.

Skin Causes skin irritation. Do not get this material in contact with skin.

Inhalation Inhalation of dusts may cause respiratory irritation. Do not breathe dust.

Ingestion Ingestion causes burns of the upper digestive and respiratory tracts. May be harmful if swallowed. Do not ingest.

Potential environmental effects May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

| Components | CAS # | Percent |
|------------------|----------|----------|
| SODIUM CARBONATE | 497-19-8 | 90 - 100 |

4. First Aid Measures

First aid procedures

Eye contact Flush eyes immediately with large amounts of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Skin contact Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention immediately. Wash clothing separately before reuse.

Inhalation If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Get medical attention, if needed.

Ingestion Rinse mouth. Do NOT induce vomiting. Give water or milk and get medical attention. If ingestion of a large amount does occur, call a poison control center immediately.

General advice Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties No unusual fire or explosion hazards noted. The product is not flammable.

Extinguishing media

Suitable extinguishing media Water.

Protection of firefighters

Protective equipment and precautions for firefighters In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.

Specific methods In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental Release Measures

Personal precautions Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up Should not be released into the environment. Collect dust using a vacuum cleaner equipped with HEPA filter. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Following product recovery, flush area with water.

7. Handling and Storage

Handling Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid contact with eyes. Wear personal protective equipment. In case of insufficient ventilation, wear suitable respiratory equipment. Wash thoroughly after handling. Avoid release to the environment. Handle and open container with care.

Storage Store in a well-ventilated place. Keep container tightly closed. Guard against dust accumulation of this material. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Engineering controls Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection Rubber gloves.

Eye / face protection Wear chemical goggles. Do not get this material in contact with eyes.

Skin protection No special protective equipment required.

General hygiene considerations Do not breathe dust. Avoid contact with eyes. Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice.

General Use personal protective equipment as required.

9. Physical & Chemical Properties

Appearance Powder.

Color White.

Odor Odorless.

Odor threshold Not available.

Physical state Solid.

Form Powder.

pH 12 (1 M solution)

Melting point 1563.8 °F (851 °C)

Freezing point 1563.8 °F (851 °C)

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|---|---------------------------------|
| Boiling point | Not available. |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability | Not available. |
| Flammability limits in air, upper, % by volume | Not available. |
| Flammability limits in air, lower, % by volume | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Specific gravity | 2.5 |
| Relative density | 2.5 g/cm ³ |
| Solubility (water) | soluble |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Molecular weight | 105.9900 g/mol |
| Molecular formula | Na ₂ CO ₃ |

10. Chemical Stability & Reactivity Information

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| Chemical stability | Material is stable under normal conditions. |
| Conditions to avoid | Hygroscopic, protect from moisture and moist air. |
| Incompatible materials | Oxidizing agents. Acids. |
| Hazardous decomposition products | Carbon oxides. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |

11. Toxicological Information

Acute effects

Acute Inhalation: LC 50

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|------------------|----------|-------------------------|
| SODIUM CARBONATE | 497-19-8 | Guinea pig 0.8 mg/l 2 h |
| SODIUM CARBONATE | 497-19-8 | Rat 2.3 mg/l 2 h |
| SODIUM CARBONATE | 497-19-8 | Mouse 1.2 mg/l 2 h |

Acute Oral: LD 50

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|------------------|----------|----------------|
| SODIUM CARBONATE | 497-19-8 | Rat 4090 mg/kg |
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Acute Toxicity other routes: LD 50

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| SODIUM CARBONATE | 497-19-8 | Mouse 2210 mg/kg Subcutaneous |
| SODIUM CARBONATE | 497-19-8 | Mouse 116.6 mg/kg 30 d Intraperitoneal |

Toxicology data for the preparation

Acute LD50: 116.6 mg/kg, Mouse, Other
 Acute LD50: 2210 mg/kg, Mouse, Other
 Acute LC50: 0.8 mg/l, Guinea pig, Inhalation
 Acute LC50: 1.2 mg/l, Mouse, Inhalation
 Acute LC50: 2.3 mg/l, Rat, Inhalation
 Acute LD50: 4090 mg/kg, Rat, Oral

Local effects Irritating to eyes. Inhalation of dusts may cause respiratory irritation.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

12. Ecological Information

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|--|---|---|
| Ecotoxicity | Contains a substance which causes risk of hazardous effects to the environment. | |
| Invertebrate Toxicity: EC 50 | | |
| SODIUM CARBONATE | 497-19-8 | Water flea (Ceriodaphnia dubia) 156.6 - 298.9 mg/l 48 h Not reported Intoxication |
| SODIUM CARBONATE | 497-19-8 | Water flea (Daphnia magna) 524 mg/l 4.2 d Static Intoxication |
| Micro-organisms Toxicity: LC 50 | | |
| SODIUM CARBONATE | 497-19-8 | Diatom (Nitzschia linearis) 242 mg/l 5 d Static Mortality |
| SODIUM CARBONATE | 497-19-8 | Turbellarian, flatworm (Dugesia) 360 mg/l 48 h Static Mortality |
| SODIUM CARBONATE | 497-19-8 | Turbellarian, flatworm (Dugesia) 360 mg/l 72 h Static Mortality |
| SODIUM CARBONATE | 497-19-8 | Turbellarian, flatworm (Dugesia) 384 mg/l 24 h Static Mortality |
| SODIUM CARBONATE | 497-19-8 | Turbellarian, flatworm (Dugesia) 341 mg/l 96 h Static Mortality |
| Environmental effects | An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. | |
| Persistence and degradability | Not available. | |

13. Disposal Considerations

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| Disposal instructions | Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dilute waste in large quantities of water and flush into sewer connected to wastewater treatment system in compliance with applicable laws and regulations. Dispose in accordance with all applicable regulations. |
| Waste from residues / unused products | Not applicable. |

14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

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| 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. CERCLA/SARA Hazardous Substances - Not applicable. |
|-------------------------------|---|

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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| Hazard categories | Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No |
|--------------------------|---|

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of New and Existing Chemicals (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

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

16. Other Information

Further information

HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 2
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 0
Instability: 0

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

Issue date

18-Nov-2009

This data sheet contains changes from the previous version in section(s):

This document has undergone significant changes and should be reviewed in its entirety.