SAFETY DATA SHEET

1. Identification

Product identifier: SODIUM CARBONATE

Other means of identification
Product No.: 3642, 7528, 7527, 7521, 3606, 3605, 3604, 3602, 4923, 29704, 29420

Recommended use and restriction on use
  Recommended use: Not available.
  Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer
  Company Name: Avantor Performance Materials, Inc.
  Address: 3477 Corporate Parkway, Suite 200
            Center Valley, PA 18034
  Telephone: Customer Service: 855-282-6867
  Fax: Contact Person: Environmental Health & Safety
  e-mail: info@avantormaterials.com

Emergency telephone number:
  24 Hour Emergency: 908-859-2151
  Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard classification

Health hazards
  Acute toxicity (Inhalation - dust and mist) Category 4
  Skin corrosion/irritation Category 2
  Serious eye damage/eye irritation Category 2A
  Specific target organ toxicity - single exposure Category 3

Unknown toxicity
  Acute toxicity, dermal 100 %

Unknown toxicity
  Chronic hazards to the aquatic environment 100 %

Label elements

Hazard symbol:
Signal word: Warning

Hazard statement:
- Harmful if inhaled.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause respiratory irritation.

Precautionary statement

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling.

Response:
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see this label).

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical identity</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>Content in percent (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM CARBONATE</td>
<td>497-19-8</td>
<td>99 - 100%</td>
<td></td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

Inhalation: Move to fresh air. Get medical attention.

Skin contact: Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed
Symptoms: Harmful if inhaled. Irritating to eyes, respiratory system and skin.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General fire hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

<table>
<thead>
<tr>
<th>Suitable extinguishing media:</th>
<th>Use fire-extinguishing media appropriate for surrounding materials.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsuitable extinguishing media:</td>
<td>None known.</td>
</tr>
</tbody>
</table>

Specific hazards arising from the chemical: None known.

Special protective equipment and precautions for firefighters

<table>
<thead>
<tr>
<th>Special fire fighting procedures:</th>
<th>Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special protective equipment for fire-fighters:</td>
<td>Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.</td>
</tr>
</tbody>
</table>

6. Accidental release measures

<table>
<thead>
<tr>
<th>Personal precautions, protective equipment and emergency procedures:</th>
<th>Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods and material for containment and cleaning up:</td>
<td>Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.</td>
</tr>
<tr>
<td>Notification Procedures:</td>
<td>Inform authorities if large amounts are involved.</td>
</tr>
<tr>
<td>Environmental precautions:</td>
<td>Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.</td>
</tr>
</tbody>
</table>

7. Handling and storage

<table>
<thead>
<tr>
<th>Precautions for safe handling:</th>
<th>Avoid inhalation of dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions for safe storage, including any incompatibilities:</td>
<td>Keep container tightly closed. Store in a well-ventilated place. Store in a dry place. Store locked up.</td>
</tr>
</tbody>
</table>
8. Exposure controls/personal protection

Control parameters

Occupational exposure limits
None of the components have assigned exposure limits.

Appropriate engineering controls
No data available.

Individual protection measures, such as personal protective equipment

General information:
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Eye/face protection:
Wear safety glasses with side shields (or goggles).

Skin protection
Hand protection: Chemical resistant gloves
Other: Wear suitable protective clothing.

Respiratory protection:
In case of inadequate ventilation use suitable respirator. Air-purifying respirator with a high efficiency particulate filter.

Hygiene measures:
Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and chemical properties

Appearance

Physical state: Solid
Form: Powder
Color: White
Odor: Odorless
Odor threshold: No data available.
pH: 11.4 - 11.7 (25 °C) Aqueous solution
Melting point/freezing point: 851 °C
Initial boiling point and boiling range: Decomposes
Flash Point: Not applicable
Evaporation rate: No data available.
Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): No data available.
Flammability limit - lower (%): No data available.
Explosive limit - upper (%): No data available.
Explosive limit - lower (%): No data available.
Vapor pressure: No data available.
Vapor density: No data available.
Relative density: 2.53 (20 °C)
Solubility(ies)

Solubility in water: Soluble
Solubility (other): No data available.
Partition coefficient (n-octanol/water): No data available.
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.

Other information
Molecular weight: 105.99 g/mol (CH2O3.2Na)

10. Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid: Excessive heat. Moisture.
Hazardous decomposition products: Sodium oxides Carbon monoxide Carbon dioxide

11. Toxicological information

Information on likely routes of exposure
Ingestion: May be harmful if swallowed.
Inhalation: Irritating to respiratory system.
Skin contact: Causes skin irritation.
Eye contact: Causes serious eye irritation.

Information on toxicological effects
Acute toxicity (list all possible routes of exposure)
Oral Product: LD 50 (Rat): 4,090 mg/kg
Dermal Product: No data available.
Inhalation Product: LC 50 (Mouse, 2 h): 1.2 mg/l
LC 50 (Guinea pig, 2 h): 0.8 mg/l
Repeated dose toxicity Product: No data available.
Skin corrosion/irritation Product: Causes skin irritation.
Serious eye damage/eye irritation Product: Causes serious eye irritation.
Respiratory or skin sensitization
Product: Not a skin sensitizer.

Carcinogenicity
Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

No carcinogenic components identified

Germ cell mutagenicity
In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No components toxic to reproduction

Specific target organ toxicity - single exposure
Product: Respiratory tract irritation.

Specific target organ toxicity - repeated exposure
Product: None known.

Aspiration hazard
Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:
Acute hazards to the aquatic environment:

Fish
Product: LC 50 (Bluegill (Lepomis macrochirus), 96 h): 300 mg/l

Aquatic invertebrates
Product: EC 50 (Water flea (Ceriodaphnia dubia), 48 h): 156.6 mg/l

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and degradability

Biodegradation
Product: Expected to be readily biodegradable.
BOD/COD ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration factor (BCF)
Product: The product is not bioaccumulating.

Partition coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in soil: The product is water soluble and may spread in water systems.

Other adverse effects: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4): None present or none present in regulated quantities.

Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories

[X] Acute (Immediate) [ ] Chronic (Delayed) [ ] Fire [ ] Reactive [ ] Pressure Generating

SARA 302 Extremely hazardous substance
None present or none present in regulated quantities.

SARA 304 Emergency release notification
None present or none present in regulated quantities.
SARA 311/312 Hazardous chemical
Chemical identity: SODIUM CARBONATE
Threshold Planning Quantity: 500 lbs

SARA 313 (TRI reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US state regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:
- Australia AICS: On or in compliance with the inventory
- Canada DSL Inventory List: On or in compliance with the inventory
- EINECS, ELINCS or NLP: On or in compliance with the inventory
- Japan (ENCS) List: On or in compliance with the inventory
- China Inv. Existing Chemical Substances: Not in compliance with the inventory.
- Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory
- Canada NDSL Inventory: On or in compliance with the inventory
- Philippines PICCS: On or in compliance with the inventory
- US TSCA Inventory: On or in compliance with the inventory
- New Zealand Inventory of Chemicals: On or in compliance with the inventory
- Japan ISHL Listing: On or in compliance with the inventory
- Japan Pharmacopoeia Listing: Not in compliance with the inventory

16. Other information, including date of preparation or last revision

NFPA Hazard ID

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue date: 05-12-2014
SDS_US - SDS000000960
Revision date: No data available.
Version #: 1.0
Further information: No data available.

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