

W. R. GRACE
MATERIAL SAFETY DATA SHEET

Product Name: SODASORB®
MSDS ID Number: C-00086

MSDS Date: 3/11/2003

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Names: SODASORB® 4-8 IND L
SODASORB® 4-8 IND F
SODASORB® 4-8 IND H
SODASORB® 4-8 IND HP
SODASORB® 4-8 REG HP
SODASORB® 4-8 REG L
SODASORB® 6-12 IND H
SODASORB® 6-12 IND L
SODASORB® 6-12 REG H

MSDS Number: C-00086
Cancelled MSDS Number: C-00081
MSDS Date: 3/11/2003
Chemical Description: Inorganic Solid Blend
Product Use: Alkaline carbon dioxide absorbent
CAS # (Chemical Abstracts Service Number): Mixture-NA

Manufactured by:

DAREX
W.R.Grace & Co.-Conn.
62 Whittemore Avenue
Cambridge, MA 02140

In Case of Emergency Call: (617) 876-1400

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient | CAS# | Percent (max) |
|---------------------|-------------|----------------------|
| Calcium hydroxide | 001305-62-0 | 50-100 |
| Potassium hydroxide | 001310-58-3 | 1-10 |
| Sodium hydroxide | 001310-73-2 | 1-10 |

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview:

Caution!
Causes severe eye irritation.
Causes skin irritation.
May be harmful if ingested.

HMIS Rating:

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| | |
|--------------------------------|-------------------|
| Health: | 2 |
| Flammability: | 0 |
| Reactivity: | 0 |
| Personal Protective Equipment: | B (See Section 8) |

Potential Health Effects:

Inhalation:

Dust can cause irritation and injury to the respiratory system
Prolonged or repeated overexposure can cause damage to the mucous membranes.
Effects include: No other effects expected unless listed below.

Eye Contact:

Eye contact can cause severe irritation.
Prolonged eye contact can result in permanent damage.
Risk of serious damage to eyes.

Skin Contact:

Skin contact causes irritation.
Prolonged skin contact can result in permanent damage.
Pre-existing skin diseases may be aggravated.

Skin Absorption:

Not expected to be harmful if absorbed through the skin.

Ingestion:

Harmful if ingested.
Effects include: Nausea, pain, vomiting, diarrhea, bleeding and tissue ulceration.

SECTION 4 - FIRST AID MEASURES:

Skin Contact:

Wash with soap and water.
If discomfort or irritation persists, consult a physician.
Remove contaminated clothing and wash before reuse.

Eye Contact:

Flush eyes with water for at least 15 minutes while holding eyelids open.
Get immediate medical attention.

Ingestion:

Do not induce vomiting.
Never give anything by mouth to an unconscious person.
If discomfort or irritation persists, consult a physician.
Dilute with weak vinegar solution or a 5% solution of ammonia chloride if available. If not, dilute with large quantities of water.

Inhalation:

If symptoms develop, get fresh air. If symptoms persist, consult a physician.
If breathing has stopped, give artificial respiration then oxygen if needed.

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SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

| | |
|-----------------------------------|----------------|
| Flash Point: | Not Flammable |
| Flash Point Method: | Not Applicable |
| Lower Explosion Limit: | Not Available |
| Upper Explosion Limit: | Not Available |
| Auto-Ignition Temperature: | Not Available |

NFPA Rating:

| | |
|----------------------|---|
| Health: | 2 |
| Flammability: | 0 |
| Reactivity: | 0 |

Extinguishing Media: In case of fire, use water spray, dry chemical, Carbon dioxide or foam.

Special Fire Fighting Procedures:
None

Unusual Fire and Explosion Hazards:
None unless noted below.

SECTION 6 - ACCIDENTAL RELEASE MEASURES:

Spills/Leaks:

Carefully shovel or sweep up spilled material and place in suitable container for recycle or disposal.

SECTION 7 - HANDLING AND STORAGE

Precautionary Measures:

Avoid contact with eyes, skin and clothing.

Do not take internally.

Wear gloves and eye protection when handling SODASORB. Wear a dust mask, if necessary.

Avoid creating airborne dust, especially when pouring or handling loose material.

Keep from freezing, which may reduce CO₂ absorption performance and increase fines. SODASORB that has been frozen should be completely thawed before use.

Do not leave SODASORB exposed to air for extended periods of time, since this will cause moisture loss and reduce CO₂ absorption performance.

Avoid prolonged storage under direct ultraviolet light since this depletes dye contained in Indicator SODASORB.

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SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

EXPOSURE GUIDELINES (US)

| Ingredient | ACGIH TLV | | | OSHA PEL | | | Other |
|---------------------|----------------|------|--------------------|---|------|---------|-------|
| | TWA | STEL | Ceiling | TWA | STEL | Ceiling | |
| Calcium hydroxide | 5 mg/m3 TWA | - | - | 5 mg/m3 TWA (not in effect as a result of reconsider ation) | - | | |
| Potassium hydroxide | - | - | 2 mg/m3 Ceiling | - | - | | |
| Sodium hydroxide | - | - | 2 mg/m3 Ceiling | - | - | | |

EXPOSURE GUIDELINES (CANADA)

Employers should consult local Provincial regulatory limits for exposure guidelines which may vary locally.

Engineering Controls: Not generally required.

Personal Protective Equipment:

Respiratory Protection: Wear approved respiratory protection to prevent employee exposure from exceeding the limits specified in Section 2.

Skin Protection: Rubber or other impervious gloves should be worn to prevent skin contact.

Eye Protection: Safety goggles should be worn to prevent eye contact.

Work/Hygienic Practices: Use good personal hygiene practices.
None beyond those noted above.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--------------------------|
| Physical State: | Solid |
| Appearance/Odor: | Odorless White Granules |
| Odor Threshold: (ppm) | Not Available |
| pH: | Not Available |
| Vapor Pressure: (Mm Hg) | Not Applicable |
| Vapor Density: (Air = 1) | Not Applicable |
| Solubility In Water: (%w/w) | Slight |
| Specific Gravity: (Water = 1) | Not Applicable |
| Evaporation Rate: | Not Applicable |
| Boiling Point: | Not Applicable |
| Freezing Point: | Not Available |
| Melting Point: | Not Applicable |
| Density: (g/ml) | Not Applicable |
| Volatiles (including water) % by Weight: | 12 - 19 as moisture loss |
| O/W Partition Coefficient: | Not Determined |
| Volatile Organic Content: (lb/gal less water) | Not Applicable |
| Volatile Organic Content: (kg/l less water) | Not Applicable |

SECTION 10 - STABILITY AND REACTIVITY

| | |
|--|------------------------------|
| Chemical Stability: | Stable |
| Conditions To Avoid: | None known for this product. |
| Hazardous Polymerization: | Will not polymerize. |
| Hazardous Decomposition Products: | None known for this product. |

SECTION 11 - TOXICOLOGICAL INFORMATION

| <u>Ingredient(No data unless listed.)</u> | <u>CAS Number</u> | <u>LD50 and LC50</u> |
|--|--------------------------|---|
| Calcium hydroxide | 001305-62-0 | Oral LD50 Rat: 7340 mg/kg; Oral LD50 Mouse: 7300 mg/kg |
| Potassium hydroxide | 001310-58-3 | Oral LD50 Rat: 273 mg/kg |

SODASORB was determined to be non-corrosive using the InVitro International CORROSITEX test protocol to determine corrositivity.

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Carcinogenicity:

| Ingredient | IARC Group 1 | IARC Group 2A | IARC Group 2B | NTP Known | NTP Suspect | OSHA |
|---------------------|--------------|---------------|---------------|-----------|-------------|------|
| Calcium hydroxide | No | No | No | No | No | No |
| Potassium hydroxide | No | No | No | No | No | No |
| Sodium hydroxide | No | No | No | No | No | No |

Mutagenicity: Not applicable.
Teratogenicity: Not applicable.
Reproductive Toxicity: Not applicable.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Fate: No data available for product.
Ecotoxicity: No data available for product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Procedures:

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing waste for disposal. According to EPA (40 CFR §261), waste of this product is not defined as hazardous. Dispose of waste in accordance with all applicable regulations.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Compounds, Gas Absorbing, NOI
UN/NA Number: Not Applicable
Domestic Hazard Class: Nonhazardous
Surface Freight Classification: Compounds, Gas Absorbing, NOI
Label/Placard Required: Not Applicable

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SECTION 15 - REGULATORY INFORMATION

REGULATORY CHEMICAL LISTS:

CERCLA (Comprehensive Response Compensation and Liability Act):
(None present unless listed below)

| <u>Chemical Name</u> | <u>CAS #</u> | <u>Wt %</u> | <u>CERCLA RQ</u> |
|----------------------|--------------|-------------|------------------|
|----------------------|--------------|-------------|------------------|

SARA Title III (Superfund Amendments and Reauthorization Act)

SARA Section 312/Tier I & II Hazard Categories:

| | |
|--------------------------|-----|
| Health Immediate (acute) | Yes |
| Health Delayed (chronic) | No |
| Flammable | No |
| Reactive | No |
| Pressure | No |

302 Reportable Ingredients (Identification Threshold 1%.):

| <u>Chemical Name</u> | <u>CAS #</u> | <u>Wt %</u> | <u>SARA 302 TPQ</u> |
|----------------------|--------------|-------------|---------------------|
|----------------------|--------------|-------------|---------------------|

313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

| <u>Chemical Name</u> | <u>CAS #</u> | <u>Wt %</u> |
|----------------------|--------------|-------------|
|----------------------|--------------|-------------|

WHMIS Classification(s): D2

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

State Regulatory Information:

California Proposition 65: This product does not contain substances known to the state of California to cause cancer, birth defects or other reproductive harm.

