

MATERIAL SAFETY DATA SHEET

Sodium Bicarbonate

MSDS Ref. No.: 144-55-8
Date Approved: 05/MAY 2016
Revision No.: 4

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Sodium Bicarbonate food grade
SYNONYMS: Baking Soda, Bicarbonate of Soda

SUPPLIER

EMERGENCY TELEPHONE NUMBERS

Orison Chemicals Limited
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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

- White, odorless, granular solid.
- Product is non-combustible.
- Reacts with acids to release carbon dioxide gas and heat.

POTENTIAL HEALTH EFFECTS: No significant health effects anticipated.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt. %	EC No.	EC Class
Sodium Bicarbonate	144-55-8	100	205-633-8	Not classified

4. FIRST AID MEASURES

EYES: Flush with plenty of water. Get medical attention if irritation occurs and persists.

SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Drink plenty of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

NOTES TO MEDICAL DOCTOR: Internal toxicity is low. Treatment is symptomatic and supportive.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water, water fog, carbon dioxide (CO₂), dry chemical

FIRE / EXPLOSION HAZARDS: None

FIRE FIGHTING PROCEDURES: None

FLAMMABLE LIMITS: Not applicable

HAZARDOUS COMBUSTION PRODUCTS: None

SENSITIVITY TO IMPACT: None

SENSITIVITY TO STATIC DISCHARGE: None

6. ACCIDENTAL RELEASE MEASURES

COMMENTS: PERSONAL PRECAUTIONS: Refer to Section 8 "Exposure Controls / Personal Protection".

CLEAN-UP: This product, if spilled, can be recovered and re-used if contamination does not present a problem. Vacuum or sweep up the material. If the spilled product is unusable due to contamination, consult state or federal environmental agencies for acceptable disposal procedures and locations. See Section 13 "Disposal Considerations".

NOTIFICATION REQUIREMENTS: Federal regulations do not require notification for spills of this product. State and local regulations may contain different requirements; consult local authorities.

7. HANDLING AND STORAGE

HANDLING: Use air conveying/mechanical systems for bulk transfer to storage. For manual handling of bulk transfer use mechanical ventilation to remove airborne dust from railcar, ship or truck. Use approved respiratory protection when ventilation systems are not available. Selection of respirator based on the dust cloud generated.

STORAGE: Protect from excessive heat and moisture. Store away from acids.

COMMENTS: Use general room dilution or local exhaust ventilation when excessive dust is expected in the work environment.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Where possible, provide general mechanical and/or local exhaust ventilation to prevent release of airborne dust into the work environment.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Appropriate eye and face protection equipment (ANSI Z87 approved) should be selected for the particular use intended for this material. Safety glasses with side shields are recommended.

RESPIRATORY: Whenever dust in the worker's breathing zone cannot be controlled with ventilation or other engineering means, workers should wear respirators or dust masks approved by NIOSH/MSHA, EU CEN or comparable certification organization to protect them against airborne dust.

PROTECTIVE CLOTHING: Dry product is generally non-irritating to intact skin. However, this product can be irritating where skin has been damaged and can create skin irritation after long exposures when moisture is present. Under such conditions, gloves and long-sleeved clothing are recommended to minimize skin contact.

COMMENTS:

ADDITIONAL EXPOSURE GUIDELINES:

Federal guidelines treat the ingredient(s) in this product as a nuisance dust, as no product-specific guidelines have been issued for exposure. As with all nuisance dusts, worker breathing zone concentrations should be measured by validated sampling and analytical methods. The following limits (OSHA and MSHA) apply to this material:

Particulates Not Otherwise Regulated:

OSHA (PEL / TWA): 15 mg/m³ (total dust); 5 mg/m³ (resp fraction)

MSHA (PEL / TWA): 10 mg/m³ (total dust)

The information noted above provides general guidance for handling this product. Specific work environments and material handling practices will dictate the selection and use of personal protection equipment (PPE).

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:	Odorless
APPEARANCE:	White, granular solid.
AUTOIGNITION TEMPERATURE:	Not applicable
BOILING POINT:	Not applicable
COEFFICIENT OF OIL / WATER:	Not available
DENSITY / WEIGHT PER VOLUME:	0.88 g/mL
EVAPORATION RATE:	Not applicable (Butyl Acetate = 1)
FLASH POINT:	Non-combustible
MELTING POINT:	Decomposes
ODOR THRESHOLD:	Not applicable
OXIDIZING PROPERTIES:	Not applicable
PERCENT VOLATILE:	Not available
pH:	8.3 (1% solution)
SOLUBILITY IN WATER:	% by wt. @ 20°C (68°F): 9.0
SPECIFIC GRAVITY:	(H ₂ O = 1) 2.20
VAPOR DENSITY:	Not applicable (Air = 1)
VAPOR PRESSURE:	Not available

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Contact with acids except under controlled conditions.
STABILITY:	Stable
POLYMERIZATION:	Will not occur
INCOMPATIBLE MATERIALS:	Reacts with acids to release carbon dioxide gas and heat.
HAZARDOUS DECOMPOSITION PRODUCTS:	None

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Non-irritating (rabbit) J. Amer. Coll. Toxicol. 1987

SKIN EFFECTS: Non-irritating (rabbit) J. Amer. Coll. Toxicol. 1987

DERMAL LD₅₀: No data available for the product.

ORAL LD₅₀: 20% slurry: 4,300 mg/kg (rat)
50 % slurry: 6,000 mg/kg (rat)
Gosselin, Smith & Hodge, Clinical Tox. of Comm. Products, 1984

INHALATION LC₅₀: No data available for the product.

TARGET ORGANS: None

ACUTE EFFECTS FROM OVEREXPOSURE: This product, when dry, is generally non-irritating to intact skin. However, when moisture is present, it can be irritating to damaged skin and can create irritation after long exposures. This product is approved for use as a food ingredient and is Generally Recognized As Safe (GRAS). No significant acute toxicological effects expected.

CHRONIC EFFECTS FROM OVEREXPOSURE: Administration of large doses of sodium bicarbonate to patients with renal insufficiency can produce systemic alkalosis.

CARCINOGENICITY:

NTP:	Not listed
IARC:	Not listed
OSHA:	Not listed
OTHER:	(ACGIH) Not listed

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: 48 hr LC₅₀ = 2000 mg/L (Culex sp. larvae or mosquito)

CHEMICAL FATE INFORMATION: No data available for the product.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: When this product is discarded or disposed of, as purchased, it is neither a characteristic nor a listed hazardous waste according to US Federal RCRA regulations (40 CFR 261). As a non-hazardous waste the material may be disposed of in a landfill in accordance with government regulations; check local or state regulations for applicable requirements prior to disposal. Any processing, usage, alteration, chemical additions to, or contamination of, the product may alter the disposal

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

PROPER SHIPPING NAME:	Not regulated
PRIMARY HAZARD CLASS / DIVISION:	Not applicable
UN/NA NUMBER:	None
LABEL(S):	Not applicable
PLACARD(S):	Not applicable
MARKING(S):	Not applicable
ADDITIONAL INFORMATION:	Hazardous Substance/RQ: Not applicable 49 STCC Number: Not applicable

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

ADDITIONAL INFORMATION:	Not regulated
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ADR - EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD

ADDITIONAL INFORMATION:	Not regulated
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15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A):
Not listed

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370):

The Threshold Planning Quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs;

16. OTHER INFORMATION

HMIS

Health	0
Flammability	0
Physical Hazard	0
Personal Protection (PPE)	B

Protection = B (Safety glasses and gloves)