



SODIUM BICARBONATE

PRODUCT INFORMATION

CHEMICAL NAME: Sodium bicarbonate
CHEMICAL FAMILY: Inorganic salts
SYNONYMS: Baking soda, bicarbonate of soda, Airtech
SHIPPING NAME: Sodium bicarbonate
MOLECULAR FORMULA: NaHCO_3
PIN - (UN/NA): Not applicable WHMIS: Not applicable
PRODUCT USE: Leavening agent, cleaner ingredient, bath salt ingredient, water softener, diaper rinse ingredient, feed additive.
MANUFACTURER:

SUPPLIER: Panther Industries Inc.
Box 628
Davidson, Sask. S0G 1A0
EMERGENCY TELEPHONE NUMBER: (306)567-2814

HAZARDOUS INGREDIENTS

INGREDIENTS:	WEIGHT %	C.A.S. REGISTRY #
Sodium bicarbonate	100	144-55-8

PHYSICAL DATA

PHYSICAL STATE: Solid
ODOUR AND APPEARANCE: White odourless solid
ODOUR THRESHOLD: Not applicable VAPOUR PRESSURE: Data not available
VAPOUR DENSITY: Not applicable EVAPORATION RATE: Not applicable
BOILING POINT: Not applicable
MELTING POINT: $>270^\circ\text{C}$ decomposes pH: 8.3 (1% solution)
SOLUBILITY IN WATER BY WEIGHT: (@ 20°C) 9%
MOLECULAR WEIGHT: 84.00 SPECIFIC GRAVITY: ($\text{H}_2\text{O} = 1$) 2.20
% VOLATILE BY VOLUME: Data not available
BULK DENSITY: .88 g/mL
COEFFICIENT OF WATER/OIL DISTRIBUTION: Data not available

FIRE AND EXPLOSION DATA

CONDITIONS OF FLAMMABILITY: Non-flammable
MEANS OF EXTINGUISHING: Product does not burn. This material is used as a dry powder extinguishing agent. Use appropriate extinguishing media for material that is supplying the fuel to the fire.
FLASH POINT: Not applicable UPPER FLAMMABLE LIMIT(% by vol): Not applicable
LOWER FLAMMABLE LIMIT(% by vol): Not applicable
AUTO IGNITION TEMPERATURE: Not applicable
HAZARDOUS COMBUSTION PRODUCTS: If extremely large quantities are involved, significant levels of carbon dioxide may be generated. Soda ash, another decomposition product, exists at temperatures greater than 93°C .
SPECIAL FIRE FIGHTING PROCEDURES: Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
EXPLOSION HAZARDS: Not applicable



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REACTIVITY DATA

STABILITY: Stable under normal conditions. Moisture and heat sensitive. Above 87C, carbon dioxide gas is generated.

HAZARDOUS POLYMERIZATION: Will not occur

INCOMPATIBILITY: Incompatible with acids except under controlled conditions.

HAZARDOUS REACTIONS/DECOMPOSITIONS: Reacts with acids to release carbon dioxide and heat.

HEALTH HAZARD DATA

INHALATION: May cause cough and mild respiratory irritation.

SKIN CONTACT: May cause mild skin irritation.

EYE CONTACT: Causes mild eye irritation.

INGESTION: Sodium bicarbonate is a GRAS (generally recognized as safe) food ingredient. Excessive consumption may cause nausea, vomiting and abdominal pains. Doses over 5 g/kg body weight can cause alkalosis and expansion in extracellular fluid volume with edema.

CHRONIC EXPOSURE EFFECTS: Repeated exposure may lead to contact dermatitis.

Skin irritation may be aggravated in persons with existing skin lesions. Prolonged contact with dusts or vapours may cause conjunctivitis. Breathing of dust may aggravate acute or chronic asthma and other chronic pulmonary disease.

EXPOSURE LIMITS:

ACGIH-TLV TWA = 10mg/m³, total dust

OSHA-PEL TWA = 15mg/m³, total dust

OSHA-PEL TWA = 5mg/m³, respirable dust

IRRITANCY: Non-irritating (mild irritant in severe cases of overexposure)

MUTAGENICITY: Data not available

CARCINOGENICITY: Not considered to be carcinogenic as per ACGIH, IARC, OSHA, and NTP.

SENSITIZATION: Skin irritation may be aggravated in persons with skin lesions.

REPRODUCTIVE TOXICITY: Data not available

TOXICOLOGICALLY SYNERGISTIC MATERIALS: Not available

TERATOGENICITY: Data not available

ANIMAL TOXICITY DATA:

LD50(rat,oral) > 4300 mg/kg (20% slurry)

LD50(rat,oral) = 6000 mg/kg (50% slurry)

Eye(rabbit) = non-irritating

Skin(rabbit) = non-irritating

FIRST AID MEASURES

INHALATION: Remove victim to fresh air. If not breathing, administer artificial respiration. If breathing is difficult, administer oxygen. Seek immediate medical attention if there is irritation.

SKIN CONTACT: Immediately wash affected area with plenty of soap and water, while removing contaminated clothing and shoes. Seek medical attention if irritation occurs and persists.

EYE CONTACT: Hold eyelids open and flush with a steady, gently stream of water for at least 15 minutes. Seek immediate medical attention.

INGESTION: If patient is conscious and alert, give large amounts of water/milk. Do not give anything by mouth to an unconscious or convulsing person. Seek medical attention if discomfort persists or large amounts were ingested.



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NOTES TO PHYSICIAN: No specific antidote is available. Treat symptomatically. Large doses, particularly in patients with renal insufficiency, may produce systemic alkalosis and/or expansion in the extracellular fluid volume with edema.

PREVENTATIVE MEASURES

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved filter mask for dusts and mists.
SKIN PROTECTION: Protective clothes and gloves not necessary, but will prevent skin dryness and irritation. Chemical resistant boots.
EYE/FACT PROTECTION: Chemical goggles or safety glasses should be worn when product is handled in large quantities. Contact lenses should not be worn; they may contribute to severe eye injury.
SPECIAL HANDLING PROCEDURES: Use sensible industrial hygiene and housekeeping practices. Avoid dust formations. Wash thoroughly after handling. Avoid situations that could lead to harmful exposure.
STORAGE REQUIREMENTS: Store in a cool, dry, well-ventilated place. Keep container tightly closed, and away from incompatible materials. Long term storage may result in caking.
ENGINEERING CONTROLS: Use general or local mechanical exhaust ventilation to control dust and to meet TLV requirements.

ENVIRONMENTAL PROTECTION DATA

STEPS IN THE EVENT OF A LEAK OR SPILL:
Clean up spillage using shovels. Scoop up loose material and place it in appropriately labeled containers for salvage or disposal.
ENVIRONMENTAL EFFECTS: LC50(Culex sp.larvae or mosquito,48 hour) = 2000 mg/L
DEACTIVATING CHEMICALS: Hydrochloric acid, acetic acid
WASTE DISPOSAL METHODS: Dispose of in accordance with local, provincial and federal regulations. Neutralization and discharge to sewer may be acceptable.

PREPARATION INFORMATION

MSDS PREPARED BY: Technical Department
Panther Industries Inc.
TELEPHONE NUMBERS: (306) 567-2814
DATE PREPARED/REVISED: Nov 04 2007
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REFERENCES: 1. Manufacturer's MSDS.