

MATERIAL SAFETY DATA SHEET

Revision #: 02

Section 1 - Product Identification & Use

Product Name: **Sodium Bicarbonate**
Synonyms: **Baking Soda**
WHMIS Classification: Not controlled
TDG Classification: Not regulated
Supplier: Advance Chemicals Ltd.
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Section 2 - Hazardous Ingredients

Hazardous Components%	(w/w)	C.A.S. No.	LD ₅₀ & LC ₅₀
Sodium bicarbonate	100	144-55-8	Single dose is non-toxic.

Section 3 - Physical Data

Physical state: solid
Boiling point: no data
Specific Gravity: 2.2 at 25°C
Freezing point: no data
pH 1% solution: 11.3
Vapour pressure: no data
Solubility in water: 8.6g/100mL at 68°F
Evaporation rate: no data
Odour & Appearance: White crystalline powder. No odour.

Section 4 - Fire or Explosion Hazard

Flammability: The product is not considered to be flammable.
Extinguishing media: Water. Wear full chemical protective clothing. Use an extinguishing media for surrounding the fire, or all purpose foam by manufacturer's recommended techniques for large fires. Use water to cool fire exposed containers to prevent vapour build-up and rupture.
Special Fire Fighting Procedures: Carbon dioxide may be generated making necessary the use of a self-contained breathing apparatus (SCBA) and full protective equipment (Bunker Gear). Carbon dioxide is an asphyxiant at levels surpassing 5% w/w. Sodium oxide, which is another thermal decomposition product of sodium bicarbonate existing at temperatures above 1564°F is a respiratory, eye, and skin irritant. Avoid inhalation, eye and skin contact with sodium oxide dusts.

Section 5 - Reactivity Data

Stability: Stable.
Hazardous Combustion/Decomposition Products: Heating above 228°F may cause dangerous levels of carbon dioxide gas to be present in confined spaces. Yields sodium oxide if exposed to temperatures above 1564°F. Avoid inhalation, eye and skin contact with sodium oxide.
Conditions to Avoid: Temperatures above 228°F.
Materials to Avoid: Reacts with acids to form carbon dioxide.

Section 6 - Toxicological Properties

Inhalation: Chronic and/or excessive exposure may produce "soda ulcers" on hands, exposed skin, and may cause perforation of the nasal septum.
Skin contact: May irritate skin.
Eye contact: May irritate or burn eyes.
Ingestion: Material is non-toxic. Small amounts (tablespoon) swallowed during handling operations not likely to cause injury; swallowing larger amounts may cause injury.
Irritancy: The material was slightly irritating to the rabbit eye, 100 mg/24H. Not a skin irritant or dermally toxic.

Section 7 - Preventative Measures

Personal Protective Equipment: Avoid contact with skin and eyes.
Respiratory protection: Dust mask required if total dust level exceeds 10 mg/m³. Use an NIOSH/MSHA approved air purifying, dust, mist and particulate respirator.
Action to take for spills & leaks: Wear chemical protective clothing, rubber gloves and suitable respiratory protection. Small spills should be swept or vacuumed up and disposed of in government approved waste containers. The spill area may then be flushed with large quantities of water. Larger spills should be contained by diking with sand, soil or other non-combustible material, then transferred into approved waste containers for proper

disposal. Do not allow spilled, or waste product to flow into waterways. Keep product out of sewers, storm drains, surface runoff water and soil. Restrict access to non-protected personnel. Comply with all government regulations on spill reporting, and handling and disposal of waste.

Disposal methods: Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, provincial and local regulatory agencies to ascertain proper disposal procedures. **Note:** Empty containers can have residues, gasses and mists, and are subject to proper waste disposal as mentioned above.

Storage & Handling Precautions: Causes eye, skin and respiratory irritation. Avoid contact with eyes and repeated contact with skin and clothing. Sodium bicarbonate reacts with acids to yield carbon dioxide gas which can accumulate in confined spaces. Do not enter such spaces until they have been well ventilated and carbon dioxide and oxygen levels have been determined to be safe. Do not ingest. Keep container tightly closed when not in use. Store upright in a cool, dry, well ventilated place away from incompatible materials. Do not use pressure to empty container. Wash thoroughly after handling. Use with adequate ventilation.

Section 8 - First Aid Measures

If inhaled: Remove victim to fresh air. Give artificial respiration if not breathing. Get immediate emergency medical attention. Keep patient warm and at rest.

In case of eye contact: Immediately flush eyes with clean luke warm water for at least twenty (20) minutes, lifting the upper and lower eye lids to ensure complete flushing action of the eyeball. Get immediate emergency medical attention. Do not transport victim until the recommended flushing period has been completed, unless eye flushing can be carried out during transport.

In case of skin contact: Immediately flush skin with plenty of clean running water for at least twenty (20) minutes. Remove contaminated clothing and shoes. If irritation persists, get emergency medical attention. Wash clothes before re-use.

In case of ingestion or swallowing: If victim is conscious, dilute stomach contents by giving one or two glasses of water or milk. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious victim. GET IMMEDIATE EMERGENCY MEDICAL ATTENTION.
Notes to Physician: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

Section 9 - Preparation Information

Advance Chemicals Limited expressly disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose with respect to the product provided. The information contained herein is offered only as a guide to the handling of this specific product, and has been prepared in good faith by technically knowledgeable personnel. This M.S.D.S. is not intended to be all inclusive, and the manner and conditions of use may involve other and additional considerations.

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