

## Sodium Bicarbonate

### Section 1 - Product and Company Identification

<b>Material Name</b>	▪ <b>Sodium Bicarbonate</b>
<b>CAS Number</b>	▪ 144-55-8
<b>Chemical Category</b>	▪ Particulates not otherwise classified (PNOC)
<b>EINECS</b>	▪ 205-633-8
<b>Molecular Formula</b>	▪ NaHCO <sub>3</sub>
<b>Molecular Weight</b>	▪ 84
<b>Product Description</b>	▪ White crystalline or powdered solid with no odor.
<b>Synonyms</b>	▪ Baking Soda; Bicarbonate of Soda; Sodium Hydrogen Carbonate
<b>Manufacturer</b>	▪ Innophos PO Box 8000 259 Prospect Plains Road Cranbury, NJ 08512-8000 United States
<b>Telephone</b>	
<b>Technical</b>	▪ 609-495-2495
<u><b>Emergency</b></u>	▪ 800-424-9300 - Chemtrec
<u><b>Emergency</b></u>	▪ 615-386-7816 - Innophos Emergency Communication Team (ECT)
<u><b>Emergency</b></u>	▪ 703-527-3887 - Chemtrec - International Collect Calls
<b>Preparation Date</b>	▪ 08/22/2007
<b>Last Revision Date</b>	▪ 09/15/2010

### Section 2 - Hazards Identification

#### Emergency Overview

##### WARNING

Causes mild skin irritation. Causes eye irritation. May be harmful if swallowed.

**Prevention** Wash thoroughly after handling. Do not breathe dusts or mists.

**Response** If skin irritation occurs: Get medical advice/attention. 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. Call a POISON CENTER or doctor/physician if you feel unwell.

**Storage/Disposal** Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

<b>OSHA</b>	▪ None
<b>WHMIS</b>	▪ None

- EU GHS**
- None
  - Skin Corrosion/Irritation - Category 3, Serious Eye Damage, Eye Irritation - Category 2B, Acute Toxicity - Category 5
- Route Of Entry**
- Inhalation, Ingestion
- Medical Conditions Aggravated by Exposure**
- Disorders of the lungs, Skin

**NFPA:**



**Potential Health Effects**

**Inhalation**

- Acute (Immediate)**      ▪ May cause mild irritation.  
**Chronic (Delayed)**      ▪ No data available.

**Skin**

- Acute (Immediate)**      ▪ May cause mild irritation.  
**Chronic (Delayed)**      ▪ No data available.

**Eye**

- Acute (Immediate)**      ▪ May cause mild irritation.  
**Chronic (Delayed)**      ▪ No data available.

**Ingestion**

- Acute (Immediate)**      ▪ Low acute oral toxicity. May cause nausea, vomiting, abdominal pain and diarrhea.  
**Chronic (Delayed)**      ▪ No data available.

**Carcinogenic Effects**

- This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

See Section 12 for Ecological Information.

**Section 3 - Composition/Information on Ingredients**

Hazardous Components						
Chemical Name	CAS	%(weight)	UN;EINECS	LD50/LC50	EU Classification & R Phrases	Other
Carbonic acid sodium salt (1:1)	144-55-8	100%	205-633-8	Ingestion/Oral-Rat LD50: =4220 mg/kg	NDA	NDA

Under United States Regulations (29 CFR 1900.1200 - Hazard Communication Standard), this product is not considered hazardous. In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS). This product is not considered dangerous according to the European Directive 67/548/EEC. According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous. According to the Globally Harmonized Standard for Classification and Labeling (GHS) this product is considered hazardous.

See Section 11 for Toxicological Information.

**Section 4 - First Aid Measures**

- Inhalation**
  - Move victim to fresh air. If signs/symptoms continue, get medical attention.
- Skin**
  - IF ON SKIN: Wash with plenty of soap and water. Remove clothing and wash thoroughly before use. If skin irritation occurs: Get medical advice/attention.
- Eye**
  - In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.
- Ingestion**
  - Do not induce vomiting unless instructed to do so by a physician. If swallowed give 2-3 glasses of water if victim is conscious and alert. Do not give anything by mouth to an unconscious person. Do not leave victim unattended.
- Notes to Physician**
  - All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
- Other Information**
  - Call 911 or emergency medical service. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

See Section 2 for Potential Health Effects.

## Section 5 - Fire Fighting Measures

- Extinguishing Media**
  - Not combustible. Use extinguishing media suitable for surrounding fire.
- Unsuitable Extinguishing Media**
  - No data available.
- Firefighting Procedures**
  - Keep unauthorized personnel away.
- Unusual Fire and Explosion Hazards**
  - Non-combustible.
- Hazardous Combustion Products**
  - Oxides of carbon.
- Protection of Firefighters**
  - Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

## Section 6 - Accidental Release Measures

- Personal Precautions**
  - Ventilate enclosed areas. Do not touch or walk through spilled material.
- Emergency Procedures**
  - Keep unauthorized personnel away.
- Environmental Precautions**
  - Do not flush to drain. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.
- Containment/Clean-up Measures**
  - Sweep or vacuum up and place in an appropriate closed container. Avoid generating dust. Clean up residual material by washing area with water. Collect washings for disposal.
- Prohibited Materials**
  - None known.

## Section 7 - Handling and Storage

- Handling**
  - Avoid direct or prolonged contact with skin and eyes. Avoid breathing dust.
- Storage**
  - Store in a tightly closed container. Store in a cool/low-temperature, well-ventilated, dry place.
- Special Packaging Materials**
  - No data available
- Incompatible Materials or Ignition Sources**
  - No data available

## Section 8 - Exposure Controls/Personal Protection

### Personal Protective Equipment

#### Pictograms



#### Respiratory

- For limited exposure use an N95 dust mask. For prolonged exposure use an air-

purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

**Eye/Face**

**Hands**

**Skin/Body**

**General Industrial Hygiene Considerations**

**Engineering Measures/Controls**

- Wear safety goggles.
- Wear appropriate gloves.
- Wear long sleeves and/or protective coveralls.
- Wash hands before eating.
- Dilution ventilation. Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Exposure Limits/Guidelines						
	Result	ACGIH	Argentina	Canada Ontario	Canada Quebec	China
Sodium Bicarbonate	STELs	Not established	Not established	Not established	Not established	16 mg/m <sup>3</sup> STEL (free SiO <sub>2</sub> <10%, except asbestos and toxic substances. Use PC-STEL of silica When free SiO <sub>2</sub> >10%, total)  <i>as Particulates not otherwise classified</i>
	TWAs	10 mg/m <sup>3</sup> TWA (inhalable particles, recommended); 3 mg/m <sup>3</sup> TWA (respirable particles, recommended)  <i>as Particulates not otherwise classified</i>	10 mg/m <sup>3</sup> TWA (inhalable fraction, particulate matter containing no asbestos and less than 1% crystalline silica); 3 mg/m <sup>3</sup> TWA (respirable fraction, particulate matter containing no asbestos and less than 1% crystalline silica)  <i>as Particulates not otherwise classified</i>	10 mg/m <sup>3</sup> TWAEV (inhalable particulate); 3 mg/m <sup>3</sup> TWAEV (respirable particulate)  <i>as Particulates not otherwise classified</i>	10 mg/m <sup>3</sup> TWAEV (total dust, containing no asbestos and less than 1% crystalline silica)  <i>as Particulates not otherwise classified</i>	8 mg/m <sup>3</sup> TWA (free SiO <sub>2</sub> <10%, except asbestos and toxic substances. Use PC-TWA of silica When free SiO <sub>2</sub> >10%, total)  <i>as Particulates not otherwise classified</i>

Exposure Limits/Guidelines (Con't.)						
	Result	Indonesia	Malaysia	New Zealand	OSHA	OSHA Vacated
Sodium Bicarbonate	TWAs	10 mg/m <sup>3</sup> NAB (not containing asbestos and the crystal content is <1%, inhalable particulate); 3 mg/m <sup>3</sup> NAB (not containing asbestos and the crystal content is <1%, respirable particulate)  <i>as Particulates not otherwise classified</i>	10 mg/m <sup>3</sup> TWA (particulate matter containing no asbestos and <1% crystalline silica, inhalable fraction); 3 mg/m <sup>3</sup> TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)  <i>as Particulates not otherwise classified</i>	10 mg/m <sup>3</sup> TWA (inspirable dust); 3 mg/m <sup>3</sup> TWA (respirable dust)  <i>as Particulates not otherwise classified</i>	15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)  <i>as Particulates not otherwise classified</i>	15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)  <i>as Particulates not otherwise classified</i>

**Exposure Limits/Guidelines (Con't.)**

	Result	Singapore	United States - California
Sodium Bicarbonate	TWAs	10 mg/m3 PEL <i>as Particulates not otherwise classified</i>	10 mg/m3 PEL (total dust); 5 mg/m3 PEL (respirable fraction) <i>as Particulates not otherwise classified</i>

#### Key to abbreviations

PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

STEL = Short Term Exposure Limits are based on 15-minute exposures

TWAEV = Time-Weighted Average Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

ACGIH = American Conference of Governmental Industrial Hygiene

OSHA = Occupational Safety and Health Administration

NAB = Threshold Values (Indonesia)

## Section 9 - Physical and Chemical Properties

### Physical Form

- Solid

### Appearance/Description

- White crystalline or powdered solid with no odor.

Color : White		Odor : Odorless	
Taste : NDA		Odor Threshold : NDA	
Boiling Point:	NDA	Vapor Pressure:	NDA
Melting Point:	NDA	Vapor Density:	NDA
Specific Gravity:	1.19 to 2.22	Evaporation Rate:	NDA
Density:	74.2915 to 138.5943 lb(s)/ft <sup>3</sup>	VOC (Wt.):	NDA
Bulk Density:	0.98 g/cm <sup>3</sup>	VOC (Vol.):	NDA
pH:	8.5 (@ 1 wt/wt%)	Volatiles (Wt.):	NDA
Water Solubility:	Hydrolyzes	Volatiles (Vol.):	NDA
Solvent Solubility:	NDA	Flash Point:	NDA
Viscosity:	NDA	Flash Point Test Type:	NDA
Half-Life:	NDA	UEL:	NDA
Octanol/Water Partition coefficient:	NDA	LEL:	NDA
Coefficient of water/oil distribution:	NDA	Autoignition:	NDA
Bioaccumulation Factor:	NDA	Bioconcentration Factor:	NDA
Biochemical Oxygen Demand BOD/BOD <sub>5</sub> :	NDA	Chemical Oxygen Demand:	NDA
Persistence:	NDA	Degradation:	NDA

## Section 10 - Stability and Reactivity

### Stability

- Stable under normal temperatures and pressures.

### Hazardous Polymerization

- Hazardous polymerization not indicated.

### Conditions to Avoid

- Dusting conditions. Elevated temperatures. Extreme humidity. Heat. Moisture.

### Incompatible Materials

- Strong acids, strong oxidizing agents.

### Hazardous Decomposition Products

- Oxides of carbon. Carbon dioxide.

## Section 11 - Toxicological Information

Sodium Bicarbonate				144-55-8					
Test Type	Dosage	Units	Route	Species	Duration	Results	Test Class	Target Organs	Comments
Irritation			Skin	Rabbit	NDA	NDA	Mild irritation	NDA	NDA
Acute Toxicity	> 4.74	mg/L	Inhalation	Rat	NDA	LC50	NDA	NDA	NDA
Acute Toxicity	4220	mg/kg	Ingestion/Oral	Rat	NDA	LD50	NDA	NDA	NDA
Acute Toxicity	20	mg/kg	Ingestion/Oral	Man	5 Day(s) Intermittent	TDL <sub>o</sub>	NDA	NDA	NDA
Irritation	100	mg	Eye	Rabbit	30 Second(s)	NDA	Mild irritation	NDA	NDA
Irritation	30	mg	Skin	Human	3 Day(s)	NDA	Mild irritation	NDA	NDA

### Key to abbreviations

TD = Toxic Dose

LD = Lethal Dose

LC = Lethal Concentration

## Section 12 - Ecological Information

Sodium Bicarbonate			144-55-8			
Dosage	Units	Species	Species Description	Duration	Results	Comments
7700	mg/L	Fish	Rainbow Trout	95 Hour(s)	LC50	NDA
7100	mg/L	Fish	Bluegill Sunfish	95 Hour(s)	LC50	NDA
4100	mg/L	Water Flea	Daphnia magna	48 Hour(s)	EC50	NDA

### Ecological Fate

- Product decomposes rapidly on contact with moisture to form the corresponding acid.

### Persistence/Degradability

- No data available.

### Bioaccumulation Potential

- No data available.

### Mobility in Soil

- No data available.

## Section 13 - Disposal Considerations

### Product

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## Section 14 - Transportation Information

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

### DOT - United States - Department of Transportation

Shipping Name: Not Regulated

### TDG - Canada - Transport of Dangerous Goods

Shipping Name: Not Regulated

### IMO/IMDG - International Maritime Transport

Shipping Name: Not Regulated

**ADN - Europe Transport of Dangerous Goods by Road/Inland Waterway**

Shipping Name: Not Regulated

**IATA - International Air Transport Association**

Shipping Name: Not Regulated

**ADR - Europe Transport of Dangerous Goods by Road/Inland Waterway**

Shipping Name: Not Regulated

**RID - Europe Transport of Dangerous Goods by Railways**

Shipping Name: Not Regulated

**Section 15 - Regulatory Information**

SARA Hazard Classifications . None

State Right To Know				
Component	CAS	MA	NJ	PA
Carbonic acid sodium salt (1:1)	144-55-8	No	No	No

Inventory						
Component	CAS	Australia AICS	Canada DSL	Canada NDSL	China	EU EINECS
Carbonic acid sodium salt (1:1)	144-55-8	Yes	Yes	No	Yes	Yes

Inventory (Con't.)						
Component	CAS	EU ELNICS	Japan ENCS	Korea KECL	New Zealand	Philippines PICCS
Carbonic acid sodium salt (1:1)	144-55-8	No	Yes	Yes	Yes	Yes

Inventory (Con't.)		
Component	CAS	TSCA
Carbonic acid sodium salt (1:1)	144-55-8	Yes

## Australia

### Labor

#### Australia - Hazardous Substances - Substances Requiring Health Surveillance

None Listed

#### Australia - High Volume Industrial Chemicals List

- Sodium Bicarbonate  
(Chemical Name-Sodium bicarbonate) 144-55-8
- Carbonic acid sodium salt (1:1) 144-55-8 100%

#### Australia - List of Designated Hazardous Substances - Classification

None Listed

### Environment

#### Australia - National Pollutant Inventory (NPI) Substance List

None Listed

#### Australia - Ozone Protection Act - Scheduled Substances

None Listed

#### Australia - Priority Existing Chemical Program

None Listed

## Canada

### Labor

#### Canada - WHMIS - Classifications of Substances

- Sodium Bicarbonate  
(Chemical Name-Sodium bicarbonate) 144-55-8 Uncontrolled product according to WHMIS classification criteria
- Carbonic acid sodium salt (1:1) 144-55-8 100% Uncontrolled product according to WHMIS classification criteria

#### Canada - WHMIS - Ingredient Disclosure List

None Listed

### Environment

#### Canada - CEPA - Priority Substances List

None Listed

## Europe

### Other

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

None Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

None Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

None Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

None Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

None Listed

## Mexico

### Other

#### Mexico - Hazard Classifications

None Listed

#### Mexico - Regulated Substances

None Listed



## United States

### Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

None Listed

U.S. - OSHA - Specifically Regulated Chemicals

None Listed

### Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

None Listed

## United States - California

### Environment

U.S. - California - Proposition 65 - Carcinogens List

None Listed

U.S. - California - Proposition 65 - Developmental Toxicity

None Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

None Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

None Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

None Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

None Listed

## United States - Pennsylvania

### Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

None Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

None Listed

## United States - Rhode Island

### Labor

U.S. - Rhode Island - Hazardous Substance List

- Sodium Bicarbonate as Particul Toxic

## Other Information

- FDA Status: This product meets the compositional requirements of: 21 CFR 184.1736 SODIUM BICARBONATE

## Section 16 - Other Information

### Preparation Date

- 08/22/2007

### Last Revision Date

- 09/15/2010

### Disclaimer/Statement of Liability

- The information herein is given in good faith but no warranty, expressed or implied, is made.

#### Key to abbreviations

NDA = No Data Available