



# sodium bicarbonate

## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Substance
Substance name	: sodium bicarbonate
Chemical name	: Sodium Bicarbonate
CAS No	: 144-55-8
Product code	: 203S, RC-091, RC-092
Formula	: NaHCO <sub>3</sub>
Synonyms	: ALKAKARB / baking soda / BICAR / bicarbonate of soda / C:Natron (= sodium bicarbonate) / carbonic acid monosodium salt / COL EVAC / colevac / DESSIKARB / JUSONIN / monosodium carbonate / NEUT / SODA BICARB / SODA MINT / sodium hydrogen carbonate / sodium hydrogencarbonate
BIG no	: 10648

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: Fire extinguishing medium Food industry: auxiliary substance
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#### 1.3. Details of the supplier of the safety data sheet

##### Fire Protection Technologies

1/251 Ferntree Gully Road Mt  
Waverley Victoria, 3149 Australia  
[enquiries@fire-protection.com.au](mailto:enquiries@fire-protection.com.au)

#### 1.4. Emergency telephone number

Emergency number : Fire Protection Technologies **1300 742 296**

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Not classified

#### 2.2. Label elements

##### GHS-US labeling

No labeling applicable

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Name	Product identifier	%	Classification (GHS-US)
sodium bicarbonate (Main constituent)	(CAS No) 144-55-8	100	Not classified

Full text of H-phrases: see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Consult a doctor/medical service.
First-aid measures after eye contact	: Rinse with water. Take victim to a doctor/medical service if irritation persists. Take victim to an ophthalmologist if irritation persists.

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First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Consult a doctor/medical service if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : AFTER INHALATION OF DUST: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Coughing.

Symptoms/injuries after skin contact : Slight irritation.

Symptoms/injuries after eye contact : Slight irritation.

Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: ON CONTINUOUS EXPOSURE/CONTACT: Vomiting. Abdominal pain. Diarrhoea. Dizziness. Change in the haemogramme/blood composition.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Nausea. Headache. Dizziness. Change in the haemogramme/blood composition. Affection of the renal tissue. Red skin. Tingling/irritation of the skin.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

suitable extinguishing media : Adapt extinguishing media to the environment.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD. Non combustible.

Explosion hazard : DIRECT EXPLOSION HAZARD. Not applicable. INDIRECT EXPLOSION HAZARD. Not applicable.

Reactivity : Decomposes slowly in moist air and on exposure to temperature rise: release of harmful gases/vapours (carbon dioxide). Reacts violently with (some) acids.

### 5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. See "Material-Handling" to select protective clothing.

Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.

Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection" .

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.

Methods for cleaning up : Stop dust cloud by humidifying with water. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Wash down leftovers with plenty of water. Wash clothing and equipment after handling.

Other information : Dispose of materials or solid residues at an authorized site.

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### 6.4. Reference to other sections

For further information refer to section 8 : Exposure-controls/personal protection".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Avoid raising dust. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.
- Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. water/moisture.
- Storage area : Store in a dry area. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: stainless steel. nickel. MATERIAL TO AVOID: No data available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Materials for protective clothing : GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: butyl rubber. PVC. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.
- Hand protection : Gloves.
- Eye protection : Safety glasses. In case of dust production: protective goggles.
- Skin and body protection : Protective clothing.
- Respiratory protection : Dust production: dust mask with filter type P1.
- Environmental exposure controls : Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Crystalline solid. Crystalline powder. Grains.
- Color : White
- Odor : Odourless
- Odor threshold : No data available
- pH : 8 (5 %; 8.4; 9.3 %)
- pH solution : 5 %
- Melting point : No data available
- Freezing point : Not applicable
- Boiling point : No data available
- Flash point : Not applicable
- Relative evaporation rate (butyl acetate=1) : No data available
- Flammability (solid, gas) : No data available
- Explosion limits : Not applicable
- Explosive properties : No data available
- Oxidizing properties : No data available
- Vapor pressure : < 0.1 hPa (20 °C)

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Relative density	: Not applicable
Relative vapor density at 20 °C	: No data available
Density	: 2160 kg/m <sup>3</sup>
Molecular mass	: 84.01 g/mol
Solubility	: Moderately soluble in water. Substance sinks in water. Water: 93.4 g/l (20 °C)
Log Pow	: -4.01 (Estimated value)
Self ignition temperature	: Not applicable
Decomposition temperature	: 165 °C
Viscosity	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available

### 9.2. Other information

Minimum ignition energy	: Not applicable
VOC content	: Not applicable (inorganic)
Other properties	: Hygroscopic. Substance has basic reaction.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Decomposes slowly in moist air and on exposure to temperature rise: release of harmful gases/vapours (carbon dioxide). Reacts violently with (some) acids.

### 10.2. Chemical stability

Hygroscopic.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>sodium bicarbonate (144-55-8)</b>	
LD50 oral rat	> 4000 mg/kg (Rat; FIFRA (40 CFR); Experimental value)

Skin corrosion/irritation	: Not classified pH: 8 (5 %; 8.4; 9.3 %)
Serious eye damage/irritation	: Not classified pH: 8 (5 %; 8.4; 9.3 %)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: AFTER INHALATION OF DUST: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Coughing.

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Symptoms/injuries after skin contact	: Slight irritation.
Symptoms/injuries after eye contact	: Slight irritation.
Symptoms/injuries after ingestion	: AFTER ABSORPTION OF HIGH QUANTITIES: ON CONTINUOUS EXPOSURE/CONTACT: Vomiting. Abdominal pain. Diarrhoea. Dizziness. Change in the haemogramme/blood composition.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Nausea. Headache. Dizziness. Change in the haemogramme/blood composition. Affection of the renal tissue. Red skin. Tingling/irritation of the skin.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.1.
Ecology - water	: Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (48h) > 1000 mg/l). Harmful to bacteria.

#### 12.2. Persistence and degradability

sodium bicarbonate (144-55-8)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
ThOD	Not applicable (inorganic)

#### 12.3. Bioaccumulative potential

sodium bicarbonate (144-55-8)	
Log Pow	-4.01 (Estimated value)
Bioaccumulative potential	Not bioaccumulative.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste treatment methods	: Waste treatment methods.
Waste disposal recommendations	: Remove waste in accordance with local and/or national regulations. Recycle/reuse. Precipitate/make insoluble. Remove to an authorized dump. Do not discharge into the sewer. Do not discharge into surface water. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.
Additional information	: LWCA (the Netherlands): KGA category 05. Can be considered as non hazardous waste according to Directive 2008/98/EC.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT  
No dangerous good in sense of transport regulations

#### TDG

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### sodium bicarbonate (144-55-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

No additional information available

##### National regulations

No additional information available

#### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

NFPA health hazard

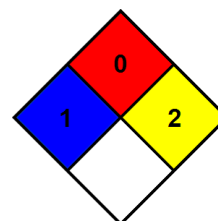
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

: 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.



SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*