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: NaHCO3
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 hydrogen carbonate

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

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

1.4. Emergency telephone number

Emergency number: Fire Protection Technologies 1300 742 296

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

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium bicarbonate</td>
<td>(CAS No) 144-55-8</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

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.

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.


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.


SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel


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.
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
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/m³
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

sodium bicarbonate (144-55-8)

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<tr>
<td>LD50 oral rat</td>
<td>&gt; 4000 mg/kg (Rat; FIFRA (40 CFR); Experimental value)</td>
</tr>
</tbody>
</table>

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.

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 - 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 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.