Safety data sheet

according to Regulation (EC) No. 1907/2006

Basic 3 / Carbonate KH

Version number: GHS 1.0 Date of creation: 07.08.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Name of the substance	**Sodium bicarbonate LM**
Trade name	**Basic 3 / Carbonate KH**
Registration number (REACH)	01-2119457606-32-XXXX
EC number	205-633-8
CAS number	144-55-8
Other designations	
Product number	BKH

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

Relevant identified usesUses by consumers

Sodium bicarbonate to increase the carbonate hardness, primarily in saltwater aquariums

1.3 Details of the supplier of the safety data sheet

ARKA Biotechnologie GmbH
Mühllach 53-55 90552
Röthenbach Germany

Phone: +49 (0)911 5698610 00
Fax: +49 (0)911 5698610 29
E-mail (knowledgeable person) info@arka-biotech.de

1.4 Emergency number

Emergency information service

ARKA Biotechnology GmbH
Available by phone Mon.-Fri. from 8:00-17:00
Phone: +49 (0)911 5698610 00

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP)

The substance is not classified as hazardous according to Regulation (EC) No 1272/2008.

2.2 Labeling elements

Labeling according to Regulation (EC) No. 1272/2008 (CLP)

The substance is not classified as hazardous according to Regulation (EC) No 1272/2008 [CLP].

2.3 Other dangers

Not subject to labeling. Please observe the information in this safety data sheet.

SECTION 3: Composition/information on ingredients

3.1 Fabrics

Substance name	Sodium bicarbonate Sodium hydrogen carbonate
Index no.	not available
Registration number (REACH)	01-2119457606-32-XXXX
EC number	205-633-8
CAS number	144-55-8
Purity	≤100 %
Sum formula	NaHCO3
Molar mass	84.01 $/^{g}_{mol}$

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

No special measures required.

After inhalation

Provide fresh air. If symptoms persist, consult a doctor.

After contact with the skin

Wash skin with water/shower. If symptoms persist, consult a doctor.

After contact with the eyes

Keep eyelids open and rinse thoroughly with clean, running water for at least 15 minutes. Remove any contact lenses if possible. Continue rinsing. Consult a doctor.

After ingestion by swallowing

Rinse out your mouth and drink plenty of water. Alternatively, drink diluted lemon juice. Consult a doctor if symptoms persist.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Information on immediate medical assistance or special treatment

Symptomatic treatment.

SECTION 5: Fire-fighting measures

5.1 Extinguishing agent

Suitable extinguishing agents

Coordinate extinguishing measures with the surroundings . Product itself does not burn. Alcohol-resistant foam. Dry extinguishing agent. Carbon dioxide. Water spray.

Unsuitable extinguishing agents

None.

5.2 Special hazards arising from the substance or mixture

Non-flammable.

Hazardous combustion products

Can be released in the event of fire: Carbon dioxide (CO2). carbon monoxide

5.3 Instructions for firefighting

Fight the fire with the usual precautions from an appropriate distance. Stay in the danger zone only with self-contained breathing apparatus. Avoid skin contact by keeping a safe distance or wearing suitable protective clothing. Collect contaminated extinguishing water separately. Do not allow extinguishing water to enter drains and waterways.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Staff not trained for emergencies

Use personal protective clothing. Avoid dust formation. If dust or aerosol is generated, use respiratory protection with recognized filter type. Keep away from sources of ignition - No smoking.

Emergency services

Respiratory protective equipment must be worn when exposed to vapors, dusts, aerosols and gases. Personal protective equipment: see section 8.

6.2 Environmental protection measures

Prevent from entering the sewage system or surface and ground water. Dispose of in accordance with official regulations.

6.3 Methods and material for retention and cleaning

Instructions on how to prevent spilled materials from spreading

Pick up mechanically. Avoid dust formation. Rinse with plenty of water; treat the absorbed material according to the disposal section.

6.4 Reference to other sections

Safe handling: see chapter 7.

Information on personal protective equipment: see chapter 8.

Information on disposal: see chapter 13.

SECTION 7: Handling and storage

7.1 Protective measures for safe handling

Recommendations

Instructions for safe handling:

Avoid dust and aerosol formation. Ensure sufficient air exchange and/or extraction in the working areas. Avoid contact with eyes and skin. Do not inhale dust.

Information on fire and explosion protection and the fire class:

No special precautions required. This product is not flammable.

7.2 Conditions for safe storage, taking into account incompatibilities

Store in a cool and dry place. Store in a place protected from the weather. Keep container tightly closed in a dry, cool and well-ventilated place. Product is hygroscopic. Avoid moisture. Protect against water.
Suitable material for containers/systems: paper, multilayer, polyethylene (PE), steel, enameled steel.
Keep away from food and drink.
Storage class according to TRGS 510: 13/11

Incompatible substances or mixtures

Do not store together with acid. Keep away from foodstuffs and animal feed. Do not store together with metals.

7.3 Specific end uses

No information available.

SECTION 8: Exposure controls/personal protective equipment

8.1 Parameters to be monitored

Additional information on limit values

The general dust limits of 3 mg/m³ for the respirable (A-dust) and 10 mg/m³ for the inhalable (E-dust) fraction must be observed. The lists valid at the time of preparation were used as a basis.

8.2 Exposure controls and monitoring

8.2.1 Protective and hygiene measures

Wash hands before breaks and at the end of work. Do not eat, drink, smoke or sniff while working. Keep away from food, drink and animal feed. Remove soiled, soaked clothing immediately. Do not inhale dust. Avoid contact with skin and eyes.

8.2.2 Individual protective measures (personal protective equipment)

Eye/face protection

Wear safety goggles in case of heavy dust formation. Avoid contact with the eyes.

Skin protection

Wear light protective clothing. Remove contaminated clothing and wash before reuse.

Hand protection

Rubber gloves for prolonged contact.

Type of material

Nitrile rubber, butyl rubber, fluororubber, chloroprene.

Material thickness

0.11 mm.

Breakthrough time of the glove material

>480 minutes (permeation level: 6)

Other protective measures

Please observe the information provided by the hemp shoe supplier with regard to permeability and breakthrough time. Also take into account the specific local conditions under which the product is used, such as risk of cuts, abrasion and contact time.

Respiratory protection

Not required if room is well ventilated. Use FFP1 particle-filtering half mask in case of dust formation.

8.2.3 Limiting and monitoring environmental exposure

Use suitable containers to avoid contamination of the environment. Prevent penetration into the sewage lization or into surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties Appearance

Physical state	solid (powder)
color	white
odor	odorless
Other physical and chemical parameters	
pH value (at 20°C)	8.0 5% solution
Melting point/freezing point	approx. 270°C Decomposition
Spontaneous combustion	not spontaneously flammable
Flash point	not applicable
Evaporation ratenot	determined
Flammability (solid, gaseous)	not flammable
Explosion limits of dust/air mixtures	not determined
Vapor pressurenot	determined
Density	2.2 g/cm³ at 20 °C
Bulk density	1000 kg/m³
Solubility(ies)	
Water solubility	95.5 g/l at 20 °C
Partition coefficient	
n-octanol/water (log KOW) Auto-ignition	No information available
temperature Viscosity	not determined
Explosive properties	not relevant (solid) none
Oxidizing properties	none

9.2 Other information

Product is hygroscopic.

SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts violently with acids at room temperature, producing carbon dioxide gas (CO2).

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Exothermic reaction, risk of bursting.

10.4 Conditions to avoid

Avoid dust formation. Protect from heat, humidity and water. Store in a dry place.

10.5 Incompatible materials

Acids, fluorine, potassium-sodium alloy, monoammonium phosphate, various metals.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification according to GHS (1272/2008/EC, CLP) Acute toxicity

LC50/inhalative/4.5 h/rat = >4.74 mg/l

Exposure path	End point	Value	Species	Source
orally	LD50	4220 mg/kg	Rat	RTECS

Irritant and corrosive effect

Skin: slight irritation

Has a degreasing effect on the skin.

Eyes: minimal irritation.

Sensitizing effects

No sensitizing effect known.

Specific target organ toxicity at single exposure

In vitro gene mutation test on bacteria (Salmonella typhimurium) showed no evidence of mutation.

Animal studies showed no carcinogenic or mutagenic effects.

Other information on tests

The product has a low skin irritation potential. It may cause irritation to the eyes and respiratory tract.
Ingestion of large quantities of sodium bicarbonate may lead to reversible digestive disorders.

Other information

Information on toxicology refers to the pure product.

SECTION 12: Environmental information

12.1 Toxicity

(Acute) aquatic toxicity

Terrestrial organisms (honey bee): LC50: > 24ug/bee 48h

Subacute to chronic toxicity:

Aquatic organisms (Daphnia magma): NOEC: > 576 mg/l 21d

Aquatic plants (algae): At a concentration of 45 mg/l, improved algae growth can be observed.

Aquatic toxicity	Dose	Species	Source	Exposure period
Acute fish toxicity	LC50 7.700 mg/l	Gambusia affinis		
Acute algal toxicity	ErC50 8,250-9,000 mg/l	Lepomis machrocirus		
Acute crustacean toxicity	EC50 2,350 /mgl	Large water flea (Daphnia magna)		

12.2 Persistence and degradability

Inorganic product, cannot be eliminated from the water by biological purification processes

12.3 Bioaccumulative potential

No data is available.

12.4 Mobility in soil

No data is available.

12.5 Results of the PBT and vPvB assessment

Not applicable.

12.6 Other harmful effects

According to the information available to us, the product does not have any harmful effects on the environment if handled properly and used as intended.

Water hazard class WGK = 1 slightly hazardous to water

Must not be allowed to enter the sewage system, surface water or groundwater in large undiluted quantities.

SECTION 13: Disposal instructions

13.1 Waste treatment processes

Product residues must be disposed of in accordance with the Waste Directive 2008/98/EC and national and regional regulations .

Information relevant for waste treatment

Keep only in the original container. Do not mix with other waste. Recycling/recovery of inorganic materials.

Information relevant for disposal via wastewater

Do not allow to enter drains.

Waste treatment of containers/packaging

Dispose of in accordance with local regulations. Completely emptied packaging can be recycled. Contaminated packaging must be treated in the same way as the substance.

Notes

Please observe the relevant national or regional regulations. Waste must be separated in such a way that it can be treated separately by the municipal or national waste disposal facilities.

SECTION 14: Transport information

14.1	**UN number**	No dangerous goods as defined by national and international transport regulations (not subject to transport regulations)
14.2	**UN proper shipping name**	not relevant
14.3	**Transport hazard classes**	
	Class	-
14.4	**Packaging group**	not relevant
14.5	**Environmental hazards**	none (not hazardous to the environment according to dangerous goods regulations)

14.6 Special precautions for the user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15: Legislation

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Additional notes

The substance is not classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP], Directive 67/548/EEC, 1999/45/EC and does not require labeling.

National regulations (Germany)

- **Ordinance on Installations for the Handling of Substances Hazardous to Water**

(AwSV) Water hazard class (WGK): 1 (slightly hazardous to water) - listed substance (VwVwS)

Status WGK self-classification

- **Storage**

Storage class (LGK): 13 (non-combustible solids)

TRGS 510 Storage of hazardous substances in portable containers.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this substance.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of the abbreviations used
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
AGW	Occupational exposure limit
CAS	Chemical Abstracts Service (database of chemical compounds and their unique key, the CAS Registry Number)
CLP	Regulation (EC) No. 1272/2008 on classification, labeling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction (carcinogenic, mutagenic or toxic for reproduction)
DFG	German Research Foundation List of MAK and BAT values, Senate Commission for the Examination of Health Hazardous Substances, Wiley-VCH, Weinheim
DMEL	Derived minimal effect level (derived exposure level with minimal impairment)
DNEL	Derived No-Effect Level (derived exposure level without impairment)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
Index no.	The index number is the identification code given in Part 3 of Annex VI to Regulation (EC) No 1272/2008.
KZW	Short-term value
LGK	Storage class according to TRGS 510, Germany
MARPOL	International Convention for the Prevention of Pollution from Ships (abbreviation of "Marine Pollu- tant")
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration (estimated no-effect concentration)
ppm	Parts per million (parts per million)
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals (Registration, Evaluation, Authorization and Restriction of Chemicals)
SMW	Shift average
TRGS	Technical Rules for Hazardous Substances (Germany)
TRGS 900	Occupational exposure limits (TRGS 900)
VbF	Ordinance on flammable liquids (Austria)
vPvB	Very Persistent and very Bioaccumulative (very persistent and very bioaccumulative)

Important literature and data sources

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU-GHS)

Disclaimer

This information is based on our current state of knowledge. This SDS has been compiled exclusively for this product and is intended solely for this product.