Chemifloc Ltd.

SAFETY DATA SHEET
Sodium Carbonate

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010.

Section 1: Identification of the substance and of the company/undertaking

Identification of the substance or mixture

Product Name:	Sodium Carbonate
Chemical Name:	Sodium Carbonate
Registration Number:	01-2119485498-19-0018
Synonyms:	Disodium carbonate, soda ash
Chemical Formula :	Na_2CO_3
Date of first issue:	26-09-2011
Version number	03
Revision date:	24-03-2016
Supersedes date:	04-03-2016

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

Identified uses	- Treatment for potable water, industrial water and residual water. - Washing and cleaning products.
Uses advised against	None

Details of the supplier of the safety data sheet

Supplier:	Chemifloc Ltd Smithstown, Shannon, Co. Clare, Rep. of Ireland. Tel: 00353 61 708699 Fax: 00353 61 708698 e-mail: info@chemifloc.ie

Emergency Telephone Number: National Poison Information Centre, 00353 1 8379964

Section 2: Hazards Identification

Classification of the substance

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classificatory applies.

Classification according to Regulation (EC) no 1272/2008 as amended

Eye Irritant 2

Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Sodium Carbonate

Signal word	Warning
Hazard statements	H319: Causes serious eye irritation.

Precautionary statements

P264: Wash hands and face thoroughly after handling .
P280: Wear protective gloves, protective clothing, eye protection and face protection.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.

Other hazards The substance does not meet the criteria for PBT or vPvB (see section 12).
No other hazards identified.

Section 3: Composition/Information on Ingredients

Substance:
Name: Sodium Carbonate

Name	EC number	CAS number	Concentration	Clasification Directive	Clasification Regulation (EC) 1272/2008
Sodium carbonate	207-838-8	497-19-8	>99%	H319	Eye Irritant 2

Section 4: First Aid Measures

Description of first aid measures

General information:
No known delayed effects

In case of inhalation:
Remove to fresh air, keep warm and at rest.
If symptoms persist, seek medical attention.

After skin contact:
Remove contaminated clothing and wash before re-use.
Wash off with soap and water.
If symptoms persist, seek medical attention.

After eye contact:
Remove contact lenses if present.
Irrigate eye thoroughly with eye wash solution or clean water for at least 15 minutes.
Eyelids should be held away from the eyeball to ensure thorough rinsing.
If eye irritation persists seek medical attention.

In case of ingestion:
DO NOT induce vomiting.
Wash out mouth with water and give plenty of water to drink (at least 300 ml.).
Obtain medical advice if necessary.

Section 5: Firefighting measures

Extinguishing media:

Suitable extinguishing media:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media:
None.
Special hazards arising from the substance or mixture
None.
Advice for firefighters
No special precautions required.

Section 6: Accidental release measures

Personal Precautions:
For non-emergency personnel:
Keep dust levels to a minimum.
Wear suitable protective equipment (see Section 8).

Environmental Precautions:
Prevent uncontrolled discharges into the environment (rivers, water courses, sewers etc.).
Avoid any mixture with an acid into sewer/drains (CO2 gas formation).

Methods for containment and clean up:
In all cases avoid dust formation.
Use vacuum suction, or shovel into bags.
Collect as much as possible in a suitable clean container, preferably for re-use, otherwise for disposal (See Section 13).

Reference to other sections:
For more information on exposure controls/personal protection or disposal considerations, please see section 8 and 13.

Section 7: Handling and storage

Precautions for Safe Handling:
Protective measures:
Keep dust levels to a minimum.
Ensure adequate ventilation.
Wear protective equipment (see Section 8.2).
Keep away incompatible materials**.**

Advice on general occupational hygiene:
Good personal and housekeeping practices to be used.
No drinking, eating or smoking at the workplace.

Conditions for safe storage, including any incompatibilities:
Store in a dry place.
Store in original, closed and correctly labelled container.
Store away from incompatible materials.

Section 8: Exposure controls / personal protection

Control Parameters:
Occupational Exposure Standards:
Not listed by H&SE (Guidance Note EH40) or ACGIH.
Recommended Limits:
WEL 10mg/m3 (total dust) (8hr TWA).
4mg/m3 (respirable dust) (8hr TWA).

DNEL's/PNEC:

Exposure route of relevance	**DNELs (local effects)**			
	Workers		**General population**	
	Long term	**Acute**	**Long term**	**Acute**
Inhalation	**10 mg/m^3**			

PNEC:
The lowest L(E)C50 value is > 100 mg/l (48h EC50 is 200 mg/l in daphnids (Ceriodaphnia sp)). Therefore sodium carbonate need not be classified according to Directive 67/548/EEC and EU Classification, Labelling and Packaging of Substances and Mixtures (CLP) Regulation (EC) No. 1272/2008.
Environmental Classification is not warranted.
Exposure Controls:
Appropriate engineering controls Åprovide appropriate exhaust ventilation at places where dust is formed.

Apply technical measures to comply with the occupational exposure limits.

Personal protection:

Eye/face protection:

Wear eye/face protection rated to protect eyes against dust (EN166) eg.safety eye shields with dust protection, goggles or face visor

Hand protection:

Wear suitable chemical resistant protective gloves that comply with the specification of EC Directive 89/686/EEC and the related standard EN374. Suitable materials, Neoprene or natural rubber.

Skin/body protection:

Dust impervious protective suit, rubber or plastic safety boots.

Respiratory protection:

In the case of high dust levels wear suitable respiratory protective equipment eg.dust mask or respirator, that conform to national/international standard, EN143. Recommended filter tpe P2.

Environmental Exposure Controls:

Contain any spillage.

Avoid discharges to the environment.

Dispose of any rinse water in accordance with local and national regulations.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

General information (Appearance, odour)

Physical State	White Powder
Odour	Odourless

Important health safety and environmental information

pH	>11 (saturated solution, study result, OECD Guideline105).	
Melting/freezing point	851^{o}C	
Boiling point	not applicable (melting point >300^{o}C)	
Flash point	Non flammable	
Flammibility (solid, gas)	not applicable	
Explosive properties		
- **Lower explosive limit**	Non explosive.	
- **Upper explosive limit**		
Oxidising Properties	Non oxidizing.	
Vapour Pressure	Not applicable.	
Relative Density	2.52 @ 20^{o}C	(study result, EU Method A.3**)**
Viscosity	Not applicable.	
Solubility(ies)		
Water solubility	212.5 g/l @20^{o}C.	(study result, OECD Guideline 105)

Section 10: Stability and reactivity

Reactivity

Decomposes by reaction with strong acids to evolve carbon dioxide.

Chemical stability

Stable under recommended storage conditions (see Section 7).

Possibility of hazardous reactions

None.

Conditions to avoid

Contact with acids unless under controlled conditions.

Exposure to moisture.

Incompatible materials

Finely divided aluminium.

Hazardous decomposition products

None.

Section 11: Toxicological information

Information on Toxicological Effects:

Toxicity endpoints	Details of the effects assessment
Acute toxicity	Oral : LD50, rat 2800mg/kg bw Dermal :LD50, rabbit >2000mg/kg bw, Method: EPA 16 CFR 1500.40 Inhalation : LC50, rat 2300 mg/m3air Method: based on OECD Guideline 403 Values exceed the cut off limit of 2000mg/kg established by EU Directive 67/548/EEC and EU Classification, Labelling and Packaging of Substances and Mixtures (CLP) Regulation (EC) No. 1272/2008 Classification for acute toxicity: is not warranted
Irritation/ Corrosion	Eye Irritation : irritating Method: OECD Guideline 405 Skin Irritation : not irritating Method: OECD Guideline 404 Respiratory irritation : not irritating Based on available data Classification for Eye irritancy : Xi, R36 (irritating to eyes) according to Directive 67/548/EEC. :Category 2, H319 (causes serious eye irritation) according to CLP Regulation (EC) 1272/2008. Classification for Skin irritancy : is not warranted. Classification for Respiratory irritancy : is not warranted.
Sensitisation	No data available on the sensitisationof sodium carbonate. Sodium carbonate is considered not to have any sensitising properties, based on the physiological role of both its constituent ions and its longterm historical and wide dispersive use in industrial processesand consumer products. Classification for sensitisation : is not warranted.
Repeated dose toxicity	Oral : Sodium carbonate dissociates into ions that are present physiologically in relatively high levels in vertebrates. Therefore, repeated dose toxicity studies are considered (scientifically) unnecessary, in accordance with column 2 of REACH Annex VIII and IX. Furthermore, sodium carbonate is used as a food additive, which confirms that the substance has a low Repeated dose toxicity. Dermal : Sodium carbonate dissociates into ions that are present physiologically in relatively high levels in vertebrates. Therefore, repeated dose toxicity studies are considered (scientifically) unnecessary, in accordance with Column 2 of REACH Annex VIII and IX Inhalation : Sodium carbonate dissociates into ions that are present physiologically in relatively high levels in vertebrates. Therefore, repeated dose toxicity studies are considered (scientifically) not necessary, In accordance with column of REACH Annex VIII and IX. Classification for repeated dose toxicity: is not warranted
Mutagenicity	In vitro ï The availablein vitrotests (SOS chromotest with sodium carbonate and Ames test with sodium bicarbonate) were negative. Furthermore sodium bicarbonate is naturally present in cells and both the structure of sodium bicarbonate and sodium carbonate do not indicate a genotoxic potential. Therefore, there is no reason to evaluate the potential genotoxicity of sodium carbonate further and no genotoxic effects are expected. Classification for mutagenicity is not warranted.
Carcinogenicty	No data available for carcinogenicity of sodium carbonate. Although the substance has a wide and varied use, there are no indications that it can induce hyperplasia, pre-neoplastic lesions or is mutagenic. Therefore, a carcinogenicity study is considered unnecessary. Classification for carcinogenicity is not warranted
Reproductive toxicity	Fertility : No data available Developmental toxicity : In accordance with Section 1 of REACH Annex XI, testing does not appear scientifically necessary, as the substance will usually not reach the foetus or the male and female reproductive organs when exposed orally, dermally or by inhalation, as it does not become available systemically. As such, it is considered not useful to perform a reproduction study. Classification for reproductive toxicity according to Regulation (EC) 1272/2008 is not required

Section 12: Ecological information

Toxicity

Acute toxicity to fish

LC_{50} (96hr) for freshwater fish : 300 mg/l

Chronic toxicity to fish

Study scientifically unjustified, sodium carbonate dissociates readily into sodium and carbonate ions in an aquatic environment. Both ions originallyexist in nature, and their concentrations in surface water are dependent on various factors, such as geological parameters, weathering and human activities. Therefore, there is a continuous source of both ions into the environment and have been measured extensively in aquatic ecosystems.

Acute toxicity to crustaceans

EC50 (48h) for freshwater invertebrates : 200-227 mg/l

Chronic toxicity to crustaceans

Study scientifically unjustified, sodium carbonate dissociates readily into sodium and carbonate ions in an aquatic environment. Both ions originally exist in nature, and their concentrations in surface water are dependent on various factors, such as geological parameters, weathering and human activities. Therefore, there is a continuous source of both ions into the environment and have been measured extensively in aquatic ecosystems.

Acute toxicity to algae and other aquatic plants

Study scientifically unjustified, sodium carbonate dissociates readily into sodium and carbonate ions in an aquatic environment. Both ions originally exist in nature, and their concentrations in surface water are dependent on various factors, such as geological parameters, weathering and human activities. Therefore, there is a continuous source of both ions into the environment and have been measured extensively in aquatic ecosystems.

Toxicity to soil macro-organisms

In accordance with REACH Annex XI a study is not required as in water sodium carbonate is dissociated into sodium and carbonate ions, both of which will not adsorb on particulate matter. Furthermore, exposure of the soil compartment is unlikely.

Toxicity to terrestrial plants

In accordance with REACH Annex XI a study is not required as in water sodium carbonate is dissociated into sodium and carbonate ions, both of which will not adsorb on particulate matter. Furthermore, exposure of the soil compartment is unlikely.

Persistence and degradeability

In water : Not applicable (quickly dissociates)
In soil : Not applicable (inorganic substance)
In sediment : Not applicable (inorganic substance)

Bioaccumulative Potential

Not bioaccumulative (inorganic substance that in water dissociates into sodium and carbonate ions, which do not accumulate in living tissues).

Mobility in Soil

If sodium carbonate is emitted to soil it can escape to atmosphere as carbon dioxide, precipitate as a metal carbonate, form complexes or stay in solution.

Results of PBT and vPvB Assessment

According to Annex XIII of REACH Regulation inorganic substances do not require assessment.

Other Adverse Effects

No other adverse effects are identified.

Section 13: Disposal considerations

Waste treatment methods

- If recycling or re-use is not practicable, dispose of in compliance with local or national regulations.
- Neutralise with acid under controlled conditions.
- Dilute with plenty of water

Packaging:

- Where possible, recycling is preferred to disposal or incineration.
- Clean container with water, dispose of rinse water in accordance with local or national regulations.
- Must be incinerated in a registered incineration plant with permit from the local authorities.

Section 14: Transport information

Sodium carbonate is not classified as hazardous for transport.

ADR	Not classified as dangerous in the meaning of transport regulations.
IATA	Not classified as dangerous in the meaning of transport regulations.
IMDG	Not classified as dangerous in the meaning of transport regulations.

Section 15: Regulatory information

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

EU Regulations
Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances.

Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work.

Chemical Safety Assessment
A Chemical Safety Assessment has been carried out for the components of this substance.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances(PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

Section 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H319	Causes serious eye irritation.

Training advice Not available

Further information
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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