

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name SODIUM BICARBONATE I/PDR 8014F
Chemical Name Sodium hydrogencarbonate
Synonyms Bicarbonate of Soda, Baking Soda, Soda Bicarb.

1.2 Uses of the product

Identified Uses Dental polishing agent for professional use.

Uses Advised Against None known

1.3 Details of the supplier of the safety data sheet

Supplier Medivance Instruments Ltd.
Barretts Green Road
Harlesden
London
NW10 7AP
T +44 (0) 20 8965 2913
F +44 (0) 20 8963 1270
enquiries@velopex.com

1.4 Emergency telephone number

020 8965 2913

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008

Not Classified

Classification according to Dangerous Substances Directive 67/548/EEC

Not Classified

2.2 Label elements

Labelling according to Regulation (EC) 1272/2008

No labelling requirements

2.3 Other hazards

The substance does not meet the criteria for a PBT or vPvB substance

No other hazards identified

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Main constituent	Formula	CAS Number	EC Number	Wt. Percent
Sodium bicarbonate	NaHCO ₃	144-55-8	205-633-8	97-99 w/w
Silane, reaction products with synthetic amorphous silica, fumed, crystalline-free		68611-44-9	271-893-4	1-3 w/w

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice

No known delayed effects

Following inhalation

Move person to fresh air and keep at rest

Following skin contact

Wash skin with soap and water

If irritation occurs and persists seek medical advice

Following eye contact

Remove contact lenses if worn

Rinse eye thoroughly with eye wash solution or clean water for at least 10 minutes

Eyelids should be held away from the eyeball to ensure thorough rinsing

Obtain medical attention if necessary

After 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

5.1 Extinguishing media

Suitable extinguishing media

The product is not combustible, all extinguisher products can be used

Use extinguishing measures that are appropriate local circumstances and the surrounding environment

Unsuitable extinguishing media

None

5.2 Special hazards arising from the substance or mixture

None

5.3 Advice for firefighters

No special precautions required

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 personal precautions

For non-emergency personnel

Keep dust levels to a minimum

Wear suitable protective equipment (see Section 8)

6.2 Environmental precautions

Avoid discharges into the environment (rivers, water courses, sewers etc.)

Avoid any mixture with an acid into sewer/drains (CO₂ gas formation)

6.3 Methods for containment and clean up

In all cases avoid dust formation

Use vacuum suction, or shovel into bags

store material in a suitable, correctly labelled closed container, preferably for re-use, otherwise for disposal

6.4 References 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

7.1 Precautions for safe handling

Protective measures

Keep dust levels to a minimum
Minimize dust generation
Atmospheric levels should be controlled in compliance with the workplace exposure limit (see Section 8.1)
Wear protective equipment (see Section 8.2)

Advice on general occupational hygiene

Good personal and housekeeping practices
No drinking, eating and smoking at the workplace

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool dry place, (preferably at a temperature below 25°C and humidity less than 65%)
Store in original, closed and correctly labelled container
Keep away from acids

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

The information below relates to Sodium Bicarbonate in its pure form.

8.1 Control parameters

Occupational Exposure Limits

Not listed by H&SE (Guidance Note EH40) or ACGIH. However, for good hygiene practice the inert dust Workplace Exposure Limits (WEL) should be adopted

WEL Recommended Limits: 10mg/m³ (total dust) (8hr TWA)
 4mg/m³ (respirable dust) (8hr TWA)

DNEL's/PNEC

DNEL_{Long-term} - after assessment of the physicochemical, toxicokinetic and physiological role of sodium bicarbonate, a DNEL_{Long-term} derivation is considered unnecessary

DNEL_{Acute} - sodium bicarbonate is considered to be of no toxicological concern, in acute studies no local irritation was noted. A DNEL_{Acute} derivation is considered unnecessary

PNEC - The lowest L(E)C₅₀ value is > 100 mg/l (48-h EC₅₀ with Daphnia magna is 3,100 mg/l) and the lowest chronic value is > 0.1 mg/l (21-d NOEC with Daphnia magna is >576 mg/l). Therefore, sodium bicarbonate is not classified according to EU Directive 67/548/EEC or EU Classification, Regulation, Labelling and Packaging of Substances and Mixtures (CLP) Regulation (EC) No. 1272/2008.

8.2 Exposure controls

Appropriate engineering controls

If user operations generate dust, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne dust levels below recommended exposure limits

Personal protection

Eye/face protection

In case of contact with the eye, 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 protective gloves for frequent or prolonged contact

Skin/body protection

No special protective equipment required

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 type 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

9.1 Information on basic physical and chemical properties

Appearance	: white crystalline powder
Odour	: odourless
Odour threshold	: not applicable
pH	: 8.4 (saturated solution, study result, EU Method A.6)
Melting point	: decomposes above 50°C (information from peer reviewed handbook)
Boiling point	: not applicable (decomposes on heating)
Flash point	: not applicable (inorganic substance)
Evaporation rate	: not applicable
Flammability	: non-flammable (study result, EU Method A.10)
Upper flammability limit	: non-flammable
Lower flammability limit	: non-flammable
Vapour pressure	: not applicable
Vapour Density	: not applicable
Relative density	: 2.21 – 2.23 @20°C (study result, EU Method A.3)
Water solubility	: 93.4g/l @20°C (study result, EU Method A.6)
Partition coefficient	: not applicable (inorganic substance)
Auto-ignition temperature	: non-flammable
Decomposition temperature	: starts to decompose above 50°C
Viscosity	: not applicable (solid)
Explosive properties	: non-explosive (no chemical groups associated with explosive properties)
Oxidising properties	: non-oxidising (based on the chemical structure of the substance and oxidation states of the constituent elements)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Decomposes slowly on exposure to water

Reacts with acids, evolving carbon dioxide

10.2 Chemical stability

Stable under recommended storage and handling conditions (see Section 7)

10.3 Possibility of hazard reactions

No hazardous reactions known.

10.4 Conditions to avoid

Contact with acids unless under controlled conditions

Heating above 50°C – thermal decomposition commences

Exposure to moisture

10.5 Incompatible materials

Acids

10.6 Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: TOXICOLOGICAL INFORMATION

The information below relates to Sodium Bicarbonate in its pure form.

11.1 Information on toxicological effects

Acute Toxicity

Oral LD₅₀, rat : >4000 mg/kg

Inhalation, rat : 4.74 mg/l (low toxic potential)

Not classified according to EU Directive 67/548/EEC and CLP Regulation (EC) No. 1272/2008

Skin Corrosion/Irritation

Non-irritant

Not classified according to EU Directive 67/548/EEC and CLP Regulation (EC) No. 1272/2008

Serious eye damage/irritation

Non-irritant

Not classified according to EU Directive 67/548/EEC and CLP Regulation (EC) No. 1272/2008

Respiratory or skin sensitisation

Considered not to have any sensitising properties, based on the physiological properties of both its constituent ions and the lack of any reported issues

Not classified according to EU Directive 67/548/EEC and CLP Regulation (EC) No. 1272/2008

Germ cell mutagenicity

All test results have proven negative. Sodium bicarbonate is naturally present in cells and the structure does not indicate a genotoxic potential. Therefore sodium bicarbonate is considered not to be genotoxic

Not classified according to EU Directive 67/548/EEC and CLP Regulation (EC) No. 1272/2008

Carcinogenicity

No evidence of sodium bicarbonate having carcinogenic effects

Not classified according to EU Directive 67/548/EEC and CLP Regulation (EC) No. 1272/2008

Reproductive toxicity

No data on reproduction toxicity available. However, based on the normal physiological role of sodium and bicarbonate ions, no toxicity on mammalian or human reproduction is expected

Not classified according to EU Directive 67/548/EEC and CLP Regulation (EC) No. 1272/2008

SECTION 12: ECOLOGICAL INFORMATION

The information below relates to Sodium Bicarbonate in its pure form.

12.1 Toxicity

Fish, *Lepomis macrochirus* : 96hr-LC₅₀, 7100 mg/l

Fish, *Lepomis macrochirus* : 96hr-NOEC, 5200 mg/l

Invertebrates, *Daphnia magna* : 48hr-LC₅₀, 4100 mg/l

Invertebrates, *Daphnia magna* : 48hr-NOEC 3100 mg/l

Invertebrates, *Daphnia magna* : 21day-NOEC >576 mg/l

12.2 Persistence and degradability

In water : Not applicable (quickly dissociates)

In soil : Not applicable (inorganic substance)

In sediment : Not applicable (inorganic substance)

12.3 Bioaccumulative potential

: Not applicable (inorganic substance)

12.4 Mobility in soil

: Not applicable (partition coefficient measurement not required, inorganic substance)

12.5 PBT and vPvB assessment

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

12.6 Other harmful effects

: No other adverse effects are identified

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

If recycling spilled product is not practicable, dispose of in compliance with local or national regulations

Dissolve in water and neutralise with an acid, under controlled conditions

Do not dispose of directly with acids

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 bicarbonate is not classified as hazardous for transport

14.1 UN Number

Not regulated

14.2 UN proper shipping name

Not regulated

14.3 Transport hazard class

Land Transport	: ADR/RID	Not restricted
Inland Waterway Transport	: ADN	Not regulated
Sea Transport	: IMO/IMDG	Not regulated
Air Transport	: ICAO-TI/IATA-DGR	Not regulated

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations

Water Hazard Class : WGK 1, VwVwS (Germany)

TSCA Inventory : Listed

15.2 Chemical Safety Assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been undertaken on sodium bicarbonate

SECTION 16: OTHER INFORMATION

16.1 Indication of changes

Section 1 – change of logo

16.2 Abbreviations and acronyms

WEL	: Workplace exposure limit
ACGIH	: American Conference of Industrial Hygiene
TWA	: Time Weighted Average
DNEL	: Derived no effect level
NOEC	: No Observed Effect Concentration
PBT	: Persistent, Bioaccumulative, Toxic
vPvB	: very Persistent, very Bioaccumulative
PNEC	: Predicted No Effect Concentration
ADR	: European Agreement Concerning the International Carriage of Dangerous Goods by Road
RID	: International Rule for Transport of Dangerous Substances by Rail
ADN	: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterway
IMO/IMDG	: International Maritime Organization/International Maritime Dangerous Goods Code
ICAO/IATA	: International Civil Aviation Organization/International Air Transport Association
OECD	: Organisation for Economic Co-operation and Development
SIDS	: Screening Information Data Set

16.3 Key literature references and sources of data

Data is taken from the Chemical Safety Report (CSR) and/or OECD SIDS report for sodium bicarbonate

16.4 Further information

The substance(s) covered in this document do not legally require a Safety Data Sheet (SDS).

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products.

Issued by	Chemistry Manager
Revision Date	01/06/2015
Revision	GHS1

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