

## 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
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### 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 64/548/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 <sub>3</sub>	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 PROCEDURES

### 4.1 Description of first aid procedures

#### 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 300ml.)  
Obtain medical advice if necessary.

## SECTION 5: FIRE-FIGHTING PROCEDURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

The product is not combustible, all extinguisher products can be used.  
Use extinguishing procedures that are appropriate to 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 fire-fighters

No special precautions required.

## SECTION 6: ACCIDENTAL RELEASE PROCEDURES

### 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 (CO<sub>2</sub> gas formation)

### 6.3 Methods for containment and clean-up

In all cases avoid dust accumulation  
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  
Minimise 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 occupation 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 cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Recommended storage temperature 5-30 °C  
Storage class (TRGS 510): Flammable Liquids

## SECTION 8: LIMITATION AND MONITORING OF EXPOSURE/PERSONAL PROTECTIVE EQUIPMENT

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/m<sup>3</sup> (total dust) (8hr TWA)  
4mg/m<sup>3</sup> (respirable dust) (8hr TWA)

DNEL<sub>Long-term</sub> - After assessment of the physiochemical, toxicokinetic and physiological role of sodium bicarbonate, a DNEL<sub>Long-term</sub> derivation is considered unnecessary.

DNEL<sub>Acute</sub> - sodium bicarbonate is considered to be of no toxicological concern, in acute studies no local irritation was noted. A DNEL<sub>Acute</sub> derivation is considered unnecessary.

PNEC - The lowest L(E)C<sub>50</sub> value is > 100 mg/l (48-h EC<sub>50</sub> with Daphnia magna is 3,100mg/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 control 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 (EN 166) 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 e.g. 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
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 LD<sub>50</sub>, 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.

#### 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, <i>Lepomis macrochirus</i>	: 96hr-LC <sub>50</sub> , 7100 mg/l
Fish, <i>Lepomis macrochirus</i>	: 96hr-NOEC, 5200 mg/l
Invertebrates, <i>Daphnia magna</i>	: 48hr-LC <sub>50</sub> , 4100 mg/l
Invertebrates, <i>Daphnia magna</i>	: 48hr-NOEC 3100 mg/l
Invertebrates, <i>Daphnia magna</i>	: 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 Results of 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(es)

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.

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