SAFETY DATA SHEET
POTASSIUM BICARBONATE

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

1.1. Product identifier

Product name	POTASSIUM BICARBONATE
Product number	P64
Synonyms; trade names	POTASSIUM HYDROGEN CARBONATE
REACH registration number	01-2119532640-48-XXXX
CAS number	298-14-6
EC number	206-059-0

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

Identified uses	Adhesive. Sealant. Adsorbent. Coatings and paints, thinners, paint removers. Fillers, putties, plasters, modelling clay. Finger paints. Fertilisers. Chemical intermediate. pH regulating agents. Leather tanning, dye, finishing, impregnation and care products. Paper making. Washing and cleaning products (including solvent based products). Water treatment. Some grades of this substance are available for feed/food use; Food additive. (E501 ii) Feed material. (11.5.4)
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier	Norkem Limited, Norkem House, Bexton Lane, Knutsford, Cheshire, WA16 9FB. UK. T: + 44 (0)1565 755550 F: + 44 (0)1565 755496 datasheet@norkem.com

1.4. Emergency telephone number

Emergency telephone	T: 01270 502891 (English-language only response)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified

2.2. Label elements

EC number	206-059-0
Hazard statements	NC Not Classified

2.3. Other hazards

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This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	POTASSIUM BICARBONATE
REACH registration number	01-2119532640-48-XXXX
CAS number	298-14-6
EC number	206-059-0
Composition comments	Purity > 99%

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse with water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

General information	No specific symptoms known.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	The product is non-combustible.

5.3. Advice for firefighters

Protective actions during firefighting	Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid inhalation of dust. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions	Avoid the spillage or runoff entering drains, sewers or watercourses.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up Avoid generation and spreading of dust. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water.

6.4. Reference to other sections

Reference to other sections For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Avoid handling which leads to dust formation. Mechanical ventilation or local exhaust ventilation may be required.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Take off contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.
Store at temperatures between 2°C and 25°C.
Store away from the following materials: Acids. Solvent.

Storage class The product is non-combustible.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

8.2. Exposure controls

Protective equipment



Appropriate engineering controls Provide adequate ventilation. Use mechanical ventilation if there is a risk of handling causing formation of airborne dust.

Eye/face protection Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374.
It is recommended that gloves are made of the following material: Nitrile rubber.
Thickness: 0.11 mm
Breakthrough time: > 480 minutes.
The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

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Other skin and body protection	Provide eyewash station and safety shower. Wear appropriate clothing to prevent skin contamination.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Particulate filter, type P2. Particulate filters should comply with European Standard EN143. Disposable filtering half mask respirators should comply with European Standard EN149 or EN405.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Crystals. or Powder.
Colour	White.
Odour	Odourless.
Odour threshold	Not applicable.
pH	pH (concentrated solution): 8.0-8.6, 50g/l (20°C)
Melting point	No information available. See decomposition.
Initial boiling point and range	No information available. See decomposition.
Flash point	Not relevant.
Evaporation rate	No information available.
Flammability (solid, gas)	Scientifically unjustified.
Vapour pressure	Technically not feasible.
Relative density	2.17 @ 20°C
Solubility(ies)	Soluble in water. 362 g/l water @ 25°C
Partition coefficient	Not applicable. Substance is inorganic.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	~ 100°C
Viscosity	Not applicable.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Molecular weight	100.12 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	The following materials may react with the product: Strong acids.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Contact with acid liberates carbon dioxide (CO_2).

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10.4. Conditions to avoid

Conditions to avoid Avoid heat. Avoid contact with the following materials: Water. Moisture. Acids.

10.5. Incompatible materials

Materials to avoid Acids.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of the following substances: Carbon. Potassium.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} > 2000 mg/kg, Oral, Rat
Test method(s): equivalent or similar to OECD 401.
Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50}) LD_{50} > 2000 mg/kg, Dermal, Rabbit
Test method(s): equivalent or similar to OECD 402.
Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) LC_{50} (4.5h) > 4.88 mg/l, Inhalation, Rat
Test method(s): equivalent or similar to OECD 403.
Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Not irritating.
Test method(s): FDA, Appraisal of the Safety of Chemicals in Food, Drugs and Cosmetics, 1959.
Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.
Test method(s): FDA, Appraisal of the Safety of Chemicals in Food, Drugs and Cosmetics, 1959.
Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Buehler test: - Guinea pig: Not sensitising.
Test method(s): equivalent or similar to OECD 406.
Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative.
Chromosome aberration: Negative.
Read-across data. Dipotassium carbonate
Test method(s): equivalent or similar to OECD 471.
&
Test method(s): equivalent or similar to OECD 473.
Based on available data the classification criteria are not met.

Carcinogenicity

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Carcinogenicity No evidence of carcinogenicity in animal studies.
Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - development Developmental toxicity: - NOEL: 290 mg/kg/day, Oral, Mouse
Developmental toxicity: - NOEL: 180 mg/kg/day, Oral, Rat
Read-across data. Dipotassium carbonate
Test method(s): equivalent or similar to OECD 414.
Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL (30 month) 2667 mg/kg/day, Oral, Rat, Female
Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

General information :

Inhalation Dust in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

Skin contact Powder may irritate skin.

Eye contact Particles in the eyes may cause irritation and smarting.

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met.

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hours: 1300 mg/l, Oncorhynchus mykiss (Rainbow trout)
Test method(s):
US FIFRA Guideline 72-1.

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: 650 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product contains only inorganic substances which are not biodegradable.

Biodegradation Not applicable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not applicable. Substance is inorganic.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

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Other adverse effects Avoid the spillage or runoff entering drains, sewers or watercourses.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Waste class Product waste key number: 06 03 14 = Wastes from the manufacture, formulation, supply and use of salts and their solutions and metallic oxides.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Guidance Introduction to Local Exhaust Ventilation HS(G)37.
Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

An Exposure Scenario has not been prepared as a CSR was not required for registration.

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SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE: Acute Toxicity Estimate.
BCF: Bioconcentration Factor.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
EC_{50}: 50% of maximal Effective Concentration.
IATA: International Air Transport Association.
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
LOEC: Lowest Observed Effect Concentration.
MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
OECD: Organisation for Economic Co-operation and Development.
PBT: Persistent, Bioaccumulative and Toxic substance.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
SVHC: Substances of Very High Concern.
UN: United Nations.
vPvB: Very Persistent and Very Bioaccumulative.

General information

The following information is provided to conform with article 13 of the EC Directive on Packaging and Packaging Waste 94/62/EC:
• Wherever possible we use returnable packaging and pallets. Details of these are on our Sales Contracts
• For any non-returnable packaging the cost of disposal is at your expense, but we do have a list of reprocessors available
• In most cases, but not all, we are able to supply products in returnable packaging but the additional cost of this will be for the customer’s expense. Please ask for details with your specific requirements
• Any products supplied in returnable packaging is clearly marked to this effect.

Key literature references and sources for data

European Chemicals Agency, http://echa.europa.eu/ - REACH disseminated dossier.

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