SAFETY DATA SHEET

Prepared by: N Jenkins
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Version: BPM 715 – 1.1

Section 1 – Product and Company Identification

1.1 Product Name: ISOLUTE AL – B

1.2 Product Code: 9715

1.3 Recommended Use: Laboratory chemical

Uses advised against: Not for therapeutic or diagnostic use

1.4 Company Name:
Biotage GB Limited,
Dyffryn Business Park,
Hengoed, CF82 7TS
UK

1.5 Contact details:

Europe
Telephone: +46 18 56 59 11
8:00a.m. – 5:00p.m. CET
e-mail: eu-1-pointsupport@biotage.com

North America
Telephone: +1 800 446 4752
8:00a.m. – 5:00p.m. EST
Press (3) at the auto attendant
e-mail: us-1-pointsupport@biotage.com

Japan
Telephone: +81 3 5627 3123
9:00a.m. – 6:00p.m. local time
e-mail: jp-1-pointsupport@biotage.com

China
Telephone: +86 21 2898 6655
8:30a.m. – 5:30p.m. local time
e-mail: cn–1–pointsupport@biotage.com

Section 2 – Hazards Identification

2.1 Classification of the product
This product is not classified as dangerous according to Directive 67 / 548 / EEC

2.2 Label elements
This substance does not need to be labelled in accordance with EC directives or respective national laws

2.3 Other hazards
None

Section 3 – Composition/Information on Ingredients

Name:	**ISOLUTE AL – B**
Synonyms:	Aluminium oxide
Formula:	Al_2O_3
Molecular weight:	101.96

CAS – No.	EC – No.	Index – No.	Classification	Concentration
1344 – 28 – 1	215 – 691 – 6	-	-	-

Section 4 – First Aid Measures

4.1 Inhalation: If inhaled, move affected person to fresh air. If breathing is difficult give oxygen. If breathing has stopped give artificial respiration. Seek medical attention

4.2 Skin Contact: Wash with soap and plenty of water

4.3 Eye Contact: Wash thoroughly with plenty of water for at least 15 minutes, separating the eyelids with the fingers. If eye irritation persists, seek medical attention

4.4 Ingestion: Wash out mouth with water if person is conscious. Never give anything by mouth to an unconscious person. Afterwards drink plenty of water

Section 5 – Fire-Fighting Measures

5.1 Suitable Extinguishing Media
Use dry chemical, CO2, water spray or alcohol foam extinguishers appropriate to surrounding conditions. Do not use halocarbon extinguishers

5.2 Unusual Fire Hazards and Explosion Hazards
This material is not flammable

5.3 Special protective equipment for Fire Fighters
Wear self contained breathing apparatus for fire fighting if necessary

Section 6 – Accidental Release Measures

6.1 Personal precautions

Ventilate the area thoroughly and shut off sources of ignition. Use protective equipment as described in Section 8. Avoid raising dust. Avoid breathing dust

6.2 Environmental Precautions

Do not let product enter drains

6.3 Methods and materials for containment and cleaning up

Pick up without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7 – Handling and Storage

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage

Keep container tightly closed in a dry and well – ventilated place. Store in a cool place, out of direct sunlight and away from incompatible substances

Section 8 – Exposure Controls / Personal Protection

Components with workplace control parameters

Components	CAS No.	Value	Control Parameters	Update	Basis
Aluminium oxide	1344 – 28 – 1	TWA	10 mg / m^3	06 / 04 / 2005	EH40 Occupational Exposure Limits
		TWA	4 mg / m^3	06 / 04 / 2005	EH40 Occupational Exposure Limits
Remarks	For the purposes of these limits, respirable dust and inhalable dust are those fractions of the airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, as amended by the ISO / CEN convention. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10mg/m^3 8 – hour TWA of inhalable dust or 4mg/m^3 8 – hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Advice on control is given in EH44 and in the great majority of workplaces reasonable control measures will normally keep exposures below these levels. However some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it eleicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit – setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned workplace exposure limit, all relevant limits should be complied with. Where no specific short – term exposure is listed, a figure three times the long – term exposure should be used.				

8.1 Personal protective equipment

Respiratory protection

Respiratory protection is not required. For nuisance exposures use type N95 (US) or type P1 (EU EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Hand protection

Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89 / 686 / EEC and the standard EN 374 derived from it. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the outer surface of the glove) to avoid skin contact with product. Dispose of gloves after use in accordance with applicable regulations and good laboratory practice. Wash and dry hands

Eye protection

Safety glasses with side – shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)

Skin and body protection

Choose body protection in relation to its type, the concentration and the amount of dangerous substances, and to the specific workplace

Hygiene measures

Handle in accordance with good laboratory hygiene and safe practice. Wash hands before breaks and at the end of the workday

Section 9 – Physical and Chemical Properties

9.1 Appearance

Form	Powder, 50 – 200μm diameter
Colour	White / off – white

9.2 Safety data

pH	9.7 (48g/L water suspension, 20^0C)
Melting point	2 038^{0}C
Boiling point	2 980^{0}C
Flash point	No data available
Ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Water solubility	Insoluble

Section 10 – Stability and Reactivity

10.1 Chemical stability

Stable under recommended storage conditions

10.2 Conditions to avoid

Exposure to moisture. Bulk dust when damp with water may heat spontaneously

10.3 Materials to avoid

Strong acids, strong bases, chlorine trifluoride, ethylene oxide, halogenated hydrocarbons, oxygen difluoride, sodium nitrate, vinyl compounds

10.4 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions – aluminium oxide, carbon oxides

Section 11 – Toxicological Information

To the best of our knowledge, the toxicological properties of this material have not been fully investigated

(a) Acute toxicity

No data available

(b) Skin corrosion / irritation

No data available

(c) Serious eye damage / eye irritation

No data available

(d) Respiratory or skin sensitisation

No data available

(e) Germ cell mutagenicity

No data available

(f) Carcinogenicity

No data available

(g) Reproductive toxicity

No data available

(h) Specific target organ toxicity – single exposure

No data available

(i) Specific target organ toxicity – repeated exposure

No data available

(j) Aspiration hazard

No data available

(k) Potential health effects

This product has no known adverse effect on human health

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation
Ingestion	May be harmful if swallowed
Skin	May cause skin irritation
Eyes	May cause eye irritation

Section 12 – Ecological Information

The eco- toxicological properties of this material have not been fully investigated

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bio – accumulative potential

Does not bioaccumulate

12.4 Mobility in soil

No data available

12.5 PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

Section 13 – Disposal Considerations

13.1 Product

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber

13.2 Contaminated packaging

Dispose of as unused product

Section 14 – Transport Information

Not classified as dangerous goods by ADR / RID, IMDG, or IATA

Section 15 – Regulatory Information

Not a hazardous substance according to Regulation (EC) No. 1272 / 2008. This product is not classified as dangerous according to Directive 67 / 548 / EEC
Caution: This substance has not been fully tested (EC)

Country Specific

Germany: WGK: 3 (Self – classification)

US (TSCA) Manufactured for research and development only. Note: Chemical substances that are manufactured or imported in small quantities solely for use in research and development are not subject to the notification requirements of the Toxic Substance Control Act (TSCA), 15 USC 2604 (h) et seq. Reference – 40 CFR 720.36

Section 16 – Other Information

This substance must only be handled by, or under close supervision of those qualified in the handling and use of potentially hazardous substances. This Safety Data Sheet is offered without charge to the clients of Biotage and it is issued only as a guide for safe handling, use, storage, disposal and release. Information contained on this sheet is the most current available to Biotage at the time of preparation but does not purport to be all inclusive or a guarantee as to the properties of the material supplied. Biotage makes no warranties or representations as to the accuracy and completeness of the information contained herein. Biotage shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

Key to Abbreviations
CAS: Chemical Abstract Service. **NIOSH**: National Institute for Occupational Safety & Health. **ADR / RID**: Agreement on Dangerous Goods by Road / Regulations Concerning the transport of Dangerous Goods by Rail. **IMDG**: International Maritime Dangerous Goods Code. **IATA**: International Air Transport Association.