

Creation Date 21-May-2010

Revision Date 10-Feb-2024

Revision Number 3

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

### 1.1. Product identifier

|                           |                                                   |
|---------------------------|---------------------------------------------------|
| Product Description:      | <u>Aluminum sec-butoxide</u>                      |
| Cat No. :                 | <b>30721</b>                                      |
| Synonyms                  | Aluminium sec-butoxide                            |
| CAS No                    | 2269-22-9                                         |
| EC No                     | 218-871-2                                         |
| Molecular Formula         | C <sub>12</sub> H <sub>27</sub> Al O <sub>3</sub> |
| REACH registration number | -                                                 |

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

|                      |                          |
|----------------------|--------------------------|
| Recommended Use      | Laboratory chemicals     |
| Uses advised against | No Information available |

### 1.3. Details of the supplier of the safety data sheet

|         |                                                                                                                                                                                                              |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Company | Avocado Research Chemicals Ltd.<br>(Part of Thermo Fisher Scientific)<br>Shore Road, Heysham<br>Lancashire, LA3 2XY,<br>United Kingdom<br>Office Tel: +44 (0) 1524 850506<br>Office Fax: +44 (0) 1524 850608 |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                |                                |
|----------------|--------------------------------|
| E-mail address | begel.sdsdesk@thermofisher.com |
|----------------|--------------------------------|

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

#### Physical hazards

Flammable liquids

Category 3 (H226)

#### Health hazards

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Acute oral toxicity  
Acute dermal toxicity

Category 4 (H302)  
Category 3 (H311)

## Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Danger

## Hazard Statements

H226 - Flammable liquid and vapor  
H302 - Harmful if swallowed  
H311 - Toxic in contact with skin

## Precautionary Statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
P403 + P235 - Store in a well-ventilated place. Keep cool  
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P312 - Call a POISON CENTER or doctor if you feel unwell  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P280 - Wear protective gloves/protective clothing

## 2.3. Other hazards

Decomposes in contact with water  
Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

| Component                | CAS No    | EC No             | Weight % | GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|--------------------------|-----------|-------------------|----------|-----------------------------------------------------------------------------------------|
| 2-Butanol, aluminum salt | 2269-22-9 | EEC No. 218-871-2 | >95      | Flam. Liq. 3 (H226)<br>Acute Tox. 4 (H302)<br>Acute Tox. 3 (H311)                       |

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Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|                                           |                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                     | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.                                                                                                                                                                                                                              |
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.                                                                                                                                     |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.                                                                                                                                                                                                                    |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Call a physician or poison control center immediately.                                                                                                                                                                                                                                                 |
| <b>Inhalation</b>                         | Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| <b>Self-Protection of the First Aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.                                                                                                                                                                               |

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

None reasonably foreseeable. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting; Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation; Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated

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

**Notes to Physician** Treat symptomatically. Symptoms may be delayed.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Suitable Extinguishing Media

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

#### Extinguishing media which must not be used for safety reasons

Water.

### 5.2. Special hazards arising from the substance or mixture

Flammable. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air. Reacts violently with water.

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## Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Burning produces obnoxious and toxic fumes.

### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

### 6.2. Environmental precautions

Should not be released into the environment.

### 6.3. Methods and material for containment and cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Do not expose spill to water. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and flame. Corrosives area. Flammables area. Keep under nitrogen. Keep container tightly closed in a dry and well-ventilated place. Keep away from water or moist air.

Technical Rules for Hazardous Substances (TRGS) 510      Class 3  
Storage Class (LGK) (Germany)

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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## 8.1. Control parameters

### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component                                     | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|-----------------------------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| 2-Butanol, aluminum salt<br>2269-22-9 ( >95 ) |                              |                                 |                                | DNEL = 300mg/kg<br>bw/day         |

| Component                                     | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|-----------------------------------------------|----------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
| 2-Butanol, aluminum salt<br>2269-22-9 ( >95 ) |                                  |                                     |                                    | DNEL = 161mg/m <sup>3</sup>           |

### Predicted No Effect Concentration (PNEC)

No information available.

## 8.2. Exposure controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### Eye Protection

Goggles (European standard - EN 166)

#### Hand Protection

Protective gloves

| Glove material                                                   | Breakthrough time                    | Glove thickness | EU standard | Glove comments        |
|------------------------------------------------------------------|--------------------------------------|-----------------|-------------|-----------------------|
| Nitrile rubber<br>Viton (R)<br>Neoprene<br>Natural rubber<br>PVC | See manufacturers<br>recommendations | -               | EN 374      | (minimum requirement) |

#### Skin and body protection

Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g.

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sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

## Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

## Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** Organic gases and vapours filter Type A Brown conforming to EN14387

## Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

When RPE is used a face piece Fit Test should be conducted

## Environmental exposure controls

No information available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

|                                         |                                                |                                          |
|-----------------------------------------|------------------------------------------------|------------------------------------------|
| Physical State                          | Viscous liquid Liquid                          |                                          |
| Appearance                              | Light yellow                                   |                                          |
| Odor                                    | No information available                       |                                          |
| Odor Threshold                          | No data available                              |                                          |
| Melting Point/Range                     | No data available                              |                                          |
| Softening Point                         | No data available                              |                                          |
| Boiling Point/Range                     | 200 - 206 °C / 392 - 402.8 °F                  | @ 30 mmHg                                |
| Flammability (liquid)                   | Flammable                                      | On basis of test data                    |
| Flammability (solid,gas)                | Not applicable                                 | Liquid                                   |
| Explosion Limits                        | <b>Lower</b> 1.7 Vol%<br><b>Upper</b> 9.8 Vol% |                                          |
| Flash Point                             | 27 °C / 80.6 °F                                | <b>Method -</b> No information available |
| Autoignition Temperature                | 406 °C / 762.8 °F                              |                                          |
| Decomposition Temperature               | No data available                              |                                          |
| pH                                      | No information available                       |                                          |
| Viscosity                               | 1800 mPa.s at 20 °C                            |                                          |
| Water Solubility                        | Decomposes                                     |                                          |
| Solubility in other solvents            | No information available                       |                                          |
| Partition Coefficient (n-octanol/water) |                                                |                                          |
| Vapor Pressure                          | 23 hPa @ 195 °C                                |                                          |
| Density / Specific Gravity              | 0.960                                          |                                          |
| Bulk Density                            | Not applicable                                 | Liquid                                   |
| Vapor Density                           | No data available                              | (Air = 1.0)                              |
| Particle characteristics                | Not applicable (liquid)                        |                                          |

### 9.2. Other information

|                      |                                        |
|----------------------|----------------------------------------|
| Molecular Formula    | C12 H27 Al O3                          |
| Molecular Weight     | 246.33                                 |
| Explosive Properties | explosive air/vapour mixtures possible |

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## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

No

### 10.2. Chemical stability

Moisture sensitive. Air sensitive.

### 10.3. Possibility of hazardous reactions

#### Hazardous Polymerization Hazardous Reactions

Hazardous polymerization does not occur.  
None under normal processing. Reacts violently with water.

### 10.4. Conditions to avoid

Exposure to air. Incompatible products. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition. Exposure to moisture.

### 10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Halogens. Metals.

### 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Burning produces obnoxious and toxic fumes.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Product Information

#### (a) acute toxicity;

Oral

Category 4

Dermal

Category 3

Inhalation

Based on available data, the classification criteria are not met

| Component                | LD50 Oral         | LD50 Dermal          | LC50 Inhalation |
|--------------------------|-------------------|----------------------|-----------------|
| 2-Butanol, aluminum salt | >2000 mg/kg (Rat) | >2000 mg/kg (Rabbit) | -               |

#### (b) skin corrosion/irritation;

No data available

#### (c) serious eye damage/irritation;

No data available

#### (d) respiratory or skin sensitization;

Respiratory

No data available

Skin

No data available

#### (e) germ cell mutagenicity;

No data available

#### (f) carcinogenicity;

No data available

There are no known carcinogenic chemicals in this product.

#### (g) reproductive toxicity;

No data available

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|                                            |                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (h) STOT-single exposure;                  | No data available                                                                                                                                                                                                                                                                                                                                |
| Results / Target organs                    | Central nervous system (CNS).                                                                                                                                                                                                                                                                                                                    |
| (i) STOT-repeated exposure;                | No data available                                                                                                                                                                                                                                                                                                                                |
| Target Organs                              | None known.                                                                                                                                                                                                                                                                                                                                      |
| (j) aspiration hazard;                     | No data available                                                                                                                                                                                                                                                                                                                                |
| Other Adverse Effects                      | The toxicological properties have not been fully investigated.                                                                                                                                                                                                                                                                                   |
| Symptoms / effects, both acute and delayed | Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. |

## 11.2. Information on other hazards

|                                 |                                                                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Endocrine Disrupting Properties | Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors. |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

|                     |                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------|
| Ecotoxicity effects | Do not empty into drains. Reacts with water so no ecotoxicity data for the substance is available. |
|---------------------|----------------------------------------------------------------------------------------------------|

### 12.2. Persistence and degradability

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| Persistence                           | Persistence is unlikely, based on information available.    |
| Degradability                         | Decomposes in contact with water.                           |
| Degradation in sewage treatment plant | Decomposes in contact with water. No information available. |

### 12.3. Bioaccumulative potential

Product does not bioaccumulate due to reaction with water

### 12.4. Mobility in soil

Decomposes in contact with water Is not likely mobile in the environment.

### 12.5. Results of PBT and vPvB assessment

Decomposes in contact with water. Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

### 12.6. Endocrine disrupting properties

|                                 |                                                                           |
|---------------------------------|---------------------------------------------------------------------------|
| Endocrine Disruptor Information | This product does not contain any known or suspected endocrine disruptors |
|---------------------------------|---------------------------------------------------------------------------|

### 12.7. Other adverse effects Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

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## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

|                                            |                                                                                                                                                                                                                                          |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste from Residues/Unused Products</b> | Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.                                                                   |
| <b>Contaminated Packaging</b>              | Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition. |
| <b>European Waste Catalogue (EWC)</b>      | According to the European Waste Catalog, Waste Codes are not product specific, but application specific.                                                                                                                                 |
| <b>Other Information</b>                   | Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.                                  |

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

|                                         |                                 |
|-----------------------------------------|---------------------------------|
| <b>14.1. UN number or ID number</b>     | UN1992                          |
| <b>14.2. UN proper shipping name</b>    | Flammable liquid, toxic, n.o.s. |
| <b>Technical Shipping Name</b>          | 2-Butanol, aluminum salt        |
| <b>14.3. Transport hazard class(es)</b> | 3                               |
| <b>Subsidiary Hazard Class</b>          | 6.1                             |
| <b>14.4. Packing group</b>              | III                             |

### ADR

|                                         |                                 |
|-----------------------------------------|---------------------------------|
| <b>14.1. UN number or ID number</b>     | UN1992                          |
| <b>14.2. UN proper shipping name</b>    | Flammable liquid, toxic, n.o.s. |
| <b>Technical Shipping Name</b>          | 2-Butanol, aluminum salt        |
| <b>14.3. Transport hazard class(es)</b> | 3                               |
| <b>Subsidiary Hazard Class</b>          | 6.1                             |
| <b>14.4. Packing group</b>              | III                             |

### IATA

|                                         |                                 |
|-----------------------------------------|---------------------------------|
| <b>14.1. UN number or ID number</b>     | UN1992                          |
| <b>14.2. UN proper shipping name</b>    | Flammable liquid, toxic, n.o.s. |
| <b>Technical Shipping Name</b>          | 2-Butanol, aluminum salt        |
| <b>14.3. Transport hazard class(es)</b> | 3                               |
| <b>Subsidiary Hazard Class</b>          | 6.1                             |
| <b>14.4. Packing group</b>              | III                             |

|                                                                      |                                  |
|----------------------------------------------------------------------|----------------------------------|
| <b>14.5. Environmental hazards</b>                                   | No hazards identified            |
| <b>14.6. Special precautions for user</b>                            | No special precautions required. |
| <b>14.7. Maritime transport in bulk according to IMO instruments</b> | Not applicable, packaged goods   |

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## SECTION 15: REGULATORY INFORMATION

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

#### International Inventories

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS), Taiwan (TCSI), Japan (ISHL), New Zealand (NZIoC), Japan (ISHL). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component                | CAS No    | EINECS    | ELINCS | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|--------------------------|-----------|-----------|--------|-----|-------|------|----------|------|------|
| 2-Butanol, aluminum salt | 2269-22-9 | 218-871-2 | -      | -   | X     | X    | KE-03873 | X    | X    |

| Component                | CAS No    | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|--------------------------|-----------|------|-----------------------------------------------|-----|------|------|-------|-------|
| 2-Butanol, aluminum salt | 2269-22-9 | X    | ACTIVE                                        | X   | -    | X    | X     | X     |

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

#### Authorisation/Restrictions according to EU REACH

Not applicable

| Component                | CAS No    | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--------------------------|-----------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 2-Butanol, aluminum salt | 2269-22-9 | -                                                                   | -                                                                             | -                                                                                                     |

#### Seveso III Directive (2012/18/EC)

| Component                | CAS No    | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|--------------------------|-----------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 2-Butanol, aluminum salt | 2269-22-9 | Not applicable                                                                            | Not applicable                                                                           |

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

| Component                | CAS No    | OECD HPV       | Restriction of Hazardous Substances (RoHS) | Basel Convention (Hazardous Waste) |
|--------------------------|-----------|----------------|--------------------------------------------|------------------------------------|
| 2-Butanol, aluminum salt | 2269-22-9 | Not applicable | Not applicable                             | Not applicable                     |

#### Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

#### Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

#### National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

#### WGK Classification

Water endangering class = 3 (self classification)

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## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

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

H302 - Harmful if swallowed

H311 - Toxic in contact with skin

H226 - Flammable liquid and vapor

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Chemical incident response training.

### Prepared By

Health, Safety and Environmental Department

### Creation Date

21-May-2010

### Revision Date

10-Feb-2024

### Revision Summary

SDS sections updated.

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**This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.**

## Disclaimer

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

**End of Safety Data Sheet**