

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 18-Oct-2010

Revision Date 22-Jan-2024

Revision Number 3

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

1.1. Product identifier

| Product Description: Cat No. : Synonyms CAS No EC No Molecular Formula REACH registration number | (-)-Dibenzoyl-L-tartaric acid monohydrate A16180 Tartaric acid, dibenzoate; Diben; Butanedioic acid, 2,3-bis(benzoyloxy)-, (R-(R*,R*))- 62708-56-9 220-374-0 C18 H14 O8 . H2 O - |
|--|---|
| 1.2. Relevant identified uses of the | substance or mixture and uses advised against |
| Recommended Use Uses advised against | Laboratory chemicals. No Information available |
| 1.3. Details of the supplier of the sa | fety data sheet |
| Company | Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 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

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

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

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Serious Eye Damage/Eye Irritation

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

Warning

Hazard Statements

H319 - Causes serious eye irritation

Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

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 % | CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|---|------------|-------------------|----------|---|
| (-)-Dibenzoyl-L-tartaric acid monohydrate | 62708-56-9 | EEC No. 220-374-0 | 98 | Eye Irrit. 2 (H319) |

REACH registration number

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

-

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated

Category 2 (H319)

| | clothes and shoes. Get medical attention. |
|------------------------------------|--|
| Ingestion | Clean mouth with water. Get medical attention. |
| Inhalation | Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention. |
| Self-Protection of the First Aider | 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 |

No information available.

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

Notes to Physician

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Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Water spray. Carbon dioxide (CO₂). Dry chemical. Chemical foam.

Extinguishing media which must not be used for safety reasons No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂).

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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

6.2. Environmental precautions

See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Avoid dust formation. Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

(-)-Dibenzoyl-L-tartaric acid monohydrate

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Do not breathe dust.

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 in a dry, cool and well-ventilated place. Keep container tightly closed.

Technical Rules for Hazardous Substances (TRGS) 510 Class 11 Storage Class (LGK) (Germany)

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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) No information available

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.

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 |

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Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. 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 | No protective equipment is needed under normal use conditions. |
|----------------------------|---|
| 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 |
| Small scale/Laboratory use | Maintain adequate ventilation |

Environmental exposure controls No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| Physical State | Powder Solid | |
|--|---|-----------------------------------|
| Appearance Odor Odor Threshold Melting Point/Range Softening Point Boiling Point/Range Flammability (liquid) Flammability (solid,gas) Explosion Limits | White Odorless No data available 88 - 90 °C / 190.4 - 194 °F No data available No information available Not applicable No information available No data available | Solid |
| Flash Point Autoignition Temperature Decomposition Temperature | No information available No data available No data available | Method - No information available |
| pH Viscosity Water Solubility Solubility in other solvents | No information available Not applicable Soluble No information available | Solid |
| Partition Coefficient (n-octanol/wat | • | |
| Vapor Pressure Density / Specific Gravity Bulk Density Vapor Density | No data available No data available No data available Not applicable | Solid |
| Particle characteristics | No data available | |
| 9.2. Other information | | |
| Molecular Formula | C18 H14 O8 . H2 O | |

376.33

Not applicable - Solid

Molecular Weight

Evaporation Rate

SECTION 10: STABILITY AND REACTIVITY

| 10.1. Reactivity | None known, based on information available |
|---|---|
| 10.2. Chemical stability | Stable under normal conditions. |
| 10.3. Possibility of hazardous react | ions |
| Hazardous Polymerization Hazardous Reactions | Hazardous polymerization does not occur. No information available. |
| 10.4. Conditions to avoid | Avoid dust formation. Incompatible products. Exposure to moisture. |
| 10.5. Incompatible materials | Strong oxidizing agents. |

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

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

| Product Information | No acute toxicity information is available for this product |
|---|---|
| (a) acute toxicity; Oral Dermal Inhalation | No data available No data available No data available |
| (b) skin corrosion/irritation; | No data available |
| (c) serious eye damage/irritation; | Category 2 |
| (d) respiratory or skin sensitization; Respiratory Skin | No data available 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 |
| (h) STOT-single exposure; | No data available |
| (i) STOT-repeated exposure; | No data available |

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| Target Organs | No information available. |
|---|--|
| (j) aspiration hazard; | Not applicable Solid |
| Other Adverse Effects | The toxicological properties have not been fully investigated. |
| Symptoms / effects,both acute and delayed | No information available. |
| 11.2. Information on other hazards | |
| Endocrine Disrupting Properties | Assess endocrine disrupting properties for human health. This product does not contain ar known or suspected endocrine disruptors. |
| SE | CTION 12: ECOLOGICAL INFORMATION |
| 12.1. Toxicity_ Ecotoxicity effects | Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants. |
| | |

| 12.2. Persistence and degradability Persistence | Soluble in water, Persistence is unlikely, based on information available. |
|--|--|
| 12.3. Bioaccumulative potential | Bioaccumulation is unlikely |
| <u>12.4. Mobility in soil</u> | The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils |
| <u>12.5. Results of PBT and vPvB</u> assessment | No data available for assessment. |
| <u>12.6. Endocrine disrupting</u> 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 PotentialThis product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

|--|

(-)-Dibenzoyl-L-tartaric acid monohydrate

| Waste from Residues/Unused Products | 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. |
|--|--|
| Contaminated Packaging | Dispose of this container to hazardous or special waste collection point. |
| European Waste Catalogue (EWC) | According to the European Waste Catalog, Waste Codes are not product specific, but application specific. |

Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

| IMDG/IMO | Not regulated |
|---|----------------------------------|
| <u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u> | |
| ADR | Not regulated |
| <u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u> | |
| ΙΑΤΑ | Not regulated |
| <u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u> | |
| 14.5. Environmental hazards | No hazards identified |
| 14.6. Special precautions for user | No special precautions required. |
| 14.7. Maritime transport in bulk according to IMO instruments | Not applicable, packaged goods |

SECTION 15: REGULATORY INFORMATION

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

International Inventories

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

| Component | CAS No | EINECS | ELINCS | NLP | IECSC | TCSI | KECL | ENCS | ISHL |
|--|------------|-----------|--------|-----|-------|------|------|------|------|
| (-)-Dibenzoyl-L-tartaric acid monohydrate | 62708-56-9 | 220-374-0 | - | - | Х | Х | - | - | - |

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|--|------------|------|---|-----|------|------|-------|-------|
| (-)-Dibenzoyl-L-tartaric acid monohydrate | 62708-56-9 | - | - | - | - | - | - | - |

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 REAC | (1907/2006) - REACH (1907/2006) - REACH Regulation (EC |
|-----------------------|--|
|-----------------------|--|

(-)-Dibenzoyl-L-tartaric acid monohydrate

| | | Annex XIV - Substances Subject to Authorization | J | 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--|------------|--|----------|---|
| (-)-Dibenzoyl-L-tartaric acid monohydrate | 62708-56-9 | - | - | - |

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 |
|---|------------|---|--|
| (-)-Dibenzoyl-L-tartaric acid monohydrate | 62708-56-9 | 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)

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

H319 - Causes serious eye irritation

Legend

CAS - Chemical Abstracts ServiceTSCA - United States Toxic Substances Control Act Section 8(b)
InventoryEINECS/ELINCS - European Inventory of Existing Commercial Chemical
Substances/EU List of Notified Chemical SubstancesDSL/NDSL - Canadian Domestic Substances List/Non-Domestic
Substances ListPICCS - Philippines Inventory of Chemicals and Chemical SubstancesENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical SubstancesKECL - Korean Existing and Evaluated Chemical SubstancesNZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit ACGIH - American Conference of Governmental Industrial Hygienists DNEL - Derived No Effect Level TWA - Time Weighted Average IARC - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)

| RPE - Respiratory Protective Equipment | LD50 - Lethal Dose 50% |
|---|---|
| LC50 - Lethal Concentration 50% | EC50 - Effective Concentration 50% |
| NOEC - No Observed Effect Concentration | POW - Partition coefficient Octanol:Water |
| PBT - Persistent, Bioaccumulative, Toxic | vPvB - very Persistent, very Bioaccumulative |
| ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road | ICAO/IATA - International Civil Aviation Organization/International Air Transport Association |
| IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code | MARPOL - International Convention for the Prevention of Pollution from Ships |
| OECD - Organisation for Economic Co-operation and Development | ATE - Acute Toxicity Estimate |
| BCF - Bioconcentration factor | 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 | |
| | fety Data Sheets (SDS), Personal Protective Equipment (PPE) and |
| ,, | action compatibility breaktbrough thresholds care maintenance fit |

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.

(-)-Dibenzoyl-L-tartaric acid monohydrate

| Prepared By | Health, Safety and Environmental Department |
|------------------|--|
| Creation Date | 18-Oct-2010 |
| Revision Date | 22-Jan-2024 |
| Revision Summary | New emergency telephone response service provider. |

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