SECTION 1. Identification of the substance/mixture and of the company/enterprise

1.1. Product identifier

Product name : MICROCID SB
Product code: refer to sales department

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

Antimicrobial and antioxidant stabilizer
Sectors of use:
Manufacture of food products[SU4]
Product category:
Additive for brewery use

Not recommended uses
Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

AEB BRITAIN LTD - 5a Connaught Avenue, London, England, SW14 7RH -
Tel: +442081332049
infoecommerce@aeb-group.com - www.aeb-group.com

1.4. Emergency telephone number

Emergency telephone number: 111
AEB BRITAIN LTD
Tel: +442081332049

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification according GB CLP:

Pictograms:
GHS05, GHS07

Hazard Class and Category Code(s):
Eye Dam. 1, STOT SE 3

Hazard statement Code(s):
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.

If inhaled, the product causes irritations to the respiratory tract.

If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

2.2. Label elements

Labelling according to GB CLP:

Pictogram, Signal Word Code(s):
GHS05, GHS07 - Danger

Hazard statement Code(s):
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.

Supplemental Hazard statement Code(s):
EUH031 - Contact with acids liberates toxic gas.

Precautionary statements:
Prevention
P261 - Avoid breathing dust.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Response
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or a doctor if you feel unwell.

Contains:
Potassium metabisulfite, citric acid

Ingredients:
potassium sorbate (54%) anhydrous citric acid (21,6%), potassium metabisulfite (sulphites) (15,7%), ascorbic acid (8,7%). For food, for brewing. Not intended for the final consumer. In accordance with current regulations on the specific matter.

Contains: Sulphites

2.3. Other hazards

The substance / mixture does NOT contain substances PBT/vPvB according to Regulation No. 1907/2006 (Reach) as amended, Annex XIII

SECTION 3. Composition/information on ingredients

3.1 Substances

Not relevant

3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh / UK REACh
Potassium sorbate	≥ 50 < 100%	Eye Irrit. 2, H319	019-003-00-3	24634-61-5	246-376-1	**
Citric acid	≥ 10 < 25%	Eye Irrit. 2, H319; STOT SE 3, H335		77-92-9	201-069-1	**
Potassium metabisulfite	≥ 10 < 25%	EUH031; Eye Dam. 1, H318		16731-55-8	240-795-3	**

*** Not applicable - Regulation No. 1907/2006 (Reach) as amended, Article 2(5).*

SECTION 4. First aid measures

4.1. Description of first aid measures

Inhalation:
Ventilate the contaminated area and immediately remove the patient to a well-ventilated area. Keep the patient rested and seek medical advice if unwell.

Direct contact with skin (of the pure product).:
Wash thoroughly with soap and running water.

Direct contact with eyes (of the pure product).:
Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately
Do not use eye drops or ointments of any kind before the examination or advice from an ophthalmologis.

Ingestion:
Not Hazardous. Seek medical advice if feeling unwell.

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

No data available.

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

Immediately call a POISON CENTER or a doctor if you feel unwell.

SECTION 5. Firefighting measures

5.1. Extinguishing media

Suggested extinguishing media:
Water spray, CO2, foam, chemical powders depending on the materials involved in the fire.

Extinguishing media to avoid:
Water jet. Use jets of water only to cool the surfaces of containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

PPE: Use breathing apparatus (self-contained in confined spaces) appropriate head protection and protective clothing.
Keep product containers cool with water spray.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation.
Evacuate the danger zone and consult an expert.

6.2. Environmental precautions

Contain spills
Inform the competent authorities.
Dispose of the waste material in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 Containment:
Rapidly recover the product, wear a mask and protective clothing (for specifications refer to section 8.2. SDS)
Recover the product for reuse, if possible, or for elimination.

6.3.2 Cleaning up:
After wiping up, wash with water the area and materials involved

6.3.3 Other information:
None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Wear eye/face protection.
Handle the product after consulting all other sections of this safety data sheet.
Do not eat or drink while handling.
See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabelled containers.
Keep containers upright and safe by avoiding the possibility of falls or collisions.
Store in a cool and dry place, away from heat sources and direct exposure to sunlight.

7.3. Specific end use(s)

Manufacture of food products:
Handle with care.
Store in a clean, dry, ventilated area away from heat and direct sunlight.
Keep container tightly closed.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

==========
Related to contained substances:
Potassium metabisulfite:
ACGIH - STEL: 0.25 ppm - Notes: (SO2) UE - TWA: 0.5 ppm - STEL: 1 ppm - Notes: (SO2)

Sulphur dioxide (SO2).
**Derived no-effect level (DNEL)= 2.7 mg/m³
*8-hour time weighted average (TWA) exposure limits ppm/m3= Parts per million per cubic meter
*8 hours= 0.5ppm
Short term exposure level (STEL) reference period 15 mins= 1ppm

* Measured or calculated over a reference period of eight hours, as a weighted average
** Short term exposure level. Limit value above which the exposure should not occur and which refers to a period of 15 minutes, unless otherwise indicated.

- Substance: Citric acid
Predicted no-effect concentration (PNEC)
Fresh water = 0.44 (mg/L)
sediment fresh water = 34.6 (mg/kg/sediment)
Marine water = 0.044 (mg/L)
sediment marine water = 3,46 (mg/kg/sediment)
ground = 33.1 (mg/kg ground)

- Substance: Potassium metabisulfite CAS:16731-55-8
Derived no-effect level (DNEL)
Systemic effects Long term occupational inhalation = 263 (mg/m3)
Local effects: Long term exposure oral = 10mg per kg body weight per day ADI.
Local effects: Long term exposure inhalation = 78 (mg/m3)
Predicted no-effect concentration (PNEC)
Fresh water = 1.17 (mg/L)
Marine water = 0.12 (mg/L)
Microorganisms in sewage treatment = 88.1 (mg/L)

8.2. Exposure controls


Appropriate engineering controls:
Manufacture of food products:
No specific monitoring foreseen (act according to good practice and specific rules for the type of risk associated)

8.2.2 Individual protection measures:

(a) Eye / face protection
When handling the pure product use safety glasses (EN 166).

(b) Skin protection

(i) Hand protection
Not needed for normal use, unless otherwise provided by the employer and / or by assessments of environmental hygiene investigations.

(ii) Other

Wear normal work clothing.

(c) Respiratory protection
Use adequate protective respiratory equipment (EN 14387:2008)

(d) Thermal hazards
No hazard to report

Environmental exposure controls:
==========
Related to contained substances:
Potassium sorbate:
Technical protective measures
Ventilate working environments.Dust collection system.Avoid the accumulation of electrostatic charges.

Exposure limit values: not applicable

Individual protections
Goggles:
PVC/rubber gloves:-request the manufacturer break time and permeation (EN 374 part III)
Dust mask:
Rebreather:
Eye rinse bottle with pure water.

General protective regulations and labour hygiene
Do not eat, drink or smoke when handling.
Wash hands thoroughly after work and change clothes.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Appearance	Beige powder	
Odour	not determined	
Odour threshold	not determined as considered not relevant for the characterization of the product	
pH	5,25 ± 0,5 (20°C; sol. 5%)	
Melting point/freezing point	not determined as considered not relevant for the characterization of the product	
Initial boiling point and boiling range	not determined as considered not relevant for the characterization of the product	
Flash point	not determined as considered not relevant for the characterization of the product	ASTM D92
Evaporation rate	not determined as considered not relevant for the characterization of the product	
Flammability (solid, gas)	not determined as considered not relevant for the characterization of the product	
Upper/lower flammability or explosive limits	not determined as considered not relevant for the characterization of the product	
Vapour pressure	not determined as considered not relevant for the characterization of the product	
Vapour density	not determined as considered not relevant for the characterization of the product	
Relative density	0.45 ± 0.05 (20 ° C)	
Solubility	in water	

Physical and chemical properties	Value	Determination method
Water solubility	partially soluble	
Partition coefficient: n-octanol/water	not determined as considered not relevant for the characterization of the product	
Auto-ignition temperature	not determined as considered not relevant for the characterization of the product	
Decomposition temperature	not determined as considered not relevant for the characterization of the product	
Viscosity	not determined as considered not relevant for the characterization of the product	
Explosive properties	not determined as considered not relevant for the characterization of the product	
Oxidising properties	not determined as considered not relevant for the characterization of the product	

9.2. Other information

No data available.

SECTION 10. Stability and reactivity

10.1. Reactivity

==========
Related to contained substances:
Potassium sorbate:
Stable under normal conditions
The presence of impurities can cause degradation in the presence of light or air

Citric acid:
No specific test data related to reactivity available for this product or its ingredients

10.2. Chemical stability

No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions

There are no hazardous reactions

10.4. Conditions to avoid

==========
Related to contained substances:
Potassium sorbate:
Direct light.High temperatures

Citric acid:
Avoid the production of dust when handling the product and avoid any possible ignition source (spark or flame). Avoid the accumulation of electrostatic charges. To avoid fires and explosions, dissipate static electricity during the transfer by placing the containers and equipment on the ground and ground before transferring the material. Avoid accumulation of dust. Keep away from heat.

10.5. Incompatible materials

Acids, oxidants, NaNO2, NaNO3.

10.6. Hazardous decomposition products

In contact with acids it releases SO2-

SECTION 11. Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/200

(a) acute toxicity: Potassium sorbate: LD50 rat (mg / kg / 24h bw): 3800
Skin contact - LC50 rat / rabbit (mg / kg / 24h bw): n.d.
Inhalation - LD50 rat (mg / l / 4h): nd
Citric acid: Ingestion - LD50 rat (mg / kg / 24h bw): 5400
Skin contact - LC50 rat / rabbit (mg / kg / 24h bw): 2000
Inhalation - LD50 rat (mg / l / 4h): na
Potassium metabisulfite: Ingestion-rat LD50 (mg/kg/bw 24h): > 1540

Skin contact-LC50 rat/coniglio (mg/kg/bw 24h): > 2000

Inhalation-rat LD50 (mg/l/4h): > 5.5

(b) skincorrosion/irritation: Potassium sorbate: Not corrosive
Citric acid: Not corrosive
Potassium metabisulfite: Non-corrosive
Potassium sorbate: not classified
Citric acid: Moderately irritating
Potassium metabisulfite: Non-irritating

(c) serious eye damage/irritation: If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.
Potassium sorbate: Not corrosive Citric acid: Not corrosive
Potassium metabisulfite: Corrosive
Potassium sorbate: Irritating Citric acid: Strongly irritating

Potassium metabisulfite: Irritating

(d) respiratoryorskinsensitisation: Potassium sorbate: Not available
Citric acid: It does not cause sensitization
Potassium metabisulfite: non-sensitizing

(e) germ cell mutagenicity: Potassium sorbate: Not available
Citric acid: Not mutagenic
Potassium metabisulfite: non-mutagenic

(f) carcinogenicity: Potassium sorbate: Not available
Citric acid: Not carcinogenic
Potassium metabisulfite: non-carcinogenic

(g) eproductivetoxicity: Potassium sorbate: Not available
Citric acid: Not toxic for reproduction
Potassium metabisulfite: non-toxic for reproduction

(h) specific target organ toxicity (STOT) single exposure: If inhaled, the product causes irritations to the respiratory tract.
Potassium sorbate: Not available
Citric acid: Unavailable
Potassium metabisulfite: not available

(i) specific target organ toxicity (STOT) repeated exposure

(j) Potassium sorbate: Not available

(k) Citric acid: Unavailable
Potassium metabisulfite: not available

(l) aspiration hazard:

Potassium sorbate: Not available
Citric acid: Unavailable
Potassium metabisulfite: not available

11.2. Information on other hazards

No data available.

SECTION 12. Ecological information

12.1. Toxicity

==========
Related to contained substances:
Potassium sorbate:
Acute toxicity - LC50 fish (mg / l / 48h): n.d.
Acute toxicity - EC50 (mg / l / 48h) crustaceans: n.d.
Ergot acute algae ErC50 (mg / l / 72-96h): n.d.

Citric acid:
Acute toxicity - fish LC50 (mg / l / 96h): 440
Acute toxicity - crustaceans EC50 (mg / l / 48h): 120

Acute toxicity algae ErC50 (mg / l / 72-96h): na
Chronic toxicity - fish NOEC (mg / l): nd
Chronic toxicity - NOEC crustaceans (mg / l): nd
Chronic toxicity NOEC algae (mg / l): nd
C(E)L50 (mg/l) = 440

Potassium metabisulfite:
Acute toxicity - fish LC50 (mg/l/96h): 149.5
Acute toxicity - crustaceans EC50 (mg/l/48h): 74.9
Acute toxicity algae ErC50 (mg/l/72-96h): 36.8
Chronic toxicity - fish NOEC (mg /l):50
Chronic toxicity - crustaceans NOEC (mg/l): 8.41
Chronic toxicity - algae NOEC (mg/l): 28

Use according to good working practices and avoid to disperse the product into the environment.

12.2. Persistence and degradability

==========
Related to contained substances: Potassium sorbate:
Not available

Citric acid:
Easily biodegradable

Potassium metabisulfite:
Soluble in water, Persistence is unlikely, based on current data

12.3. Bioaccumulative potential

==========
Related to contained substances: Potassium sorbate:
Not available

Citric acid:
Not bioaccumulable

Potassium metabisulfite:
Bioaccumulation is unlikely.
Octanol/water partition coefficient= -4

12.4. Mobility in soil

==========
Related to contained substances: Potassium sorbate: Not available

Citric acid:
Not available

Potassium metabisulfite:
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.

12.5. Results of PBT and vPvB assessment

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

12.6. Endocrine disrupting properties

No data available.

12.7. Other adverse effects

No adverse effects

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Residual waste
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner and in accordance with local/regional/national/ international regulations. Do not discharge into drains, surface, ground water, soil or subsoil.

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

EU waste code
The Waste code should be followed by the whole supply chain through to authorised waste disposal.

Disposal methods/information
Workers should wear appropriate personal protective equipment(s) such as respirator.
Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Do not allow this material to drain into sewers/water supplies.

SECTION 14. Transport information

14.1. UN number or ID number

Not included in the field of application of regulations concerning the transport of dangerous goods: by road (ADR); by rail (RID); by air (ICAO / IATA); by sea (IMDG).

14.2. UN proper shipping name

None

14.3. Transport hazard class(es)

None

14.4. Packing group

None

14.5. Environmental hazards

None

14.6. Special precautions for user

No data available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Transport in bulk is not foreseen

SECTION 15. Regulatory information

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

Restrictions relating to the product or contained substances (All. XVII Reg. Reach as amended): not applicable
Substances in Candidate List (art. 59 Reach as amended): the product does not contain SVHC
Substances subject to authorisation (Ann. XIV Reach as amended): the product does not contain SVHC

Regulation (EU) 1169/2011: see point 2.2
Regulation (EC) 1333/2008; see point 2.2

REGULATION (EU) No 1357/2014 - waste:
HP4 - Irritant — skin irritation and eye damage
HP5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

15.2. Chemical safety assessment

No chemical safety assessment was carried out by the supplier

SECTION 16. Other information

16.1. Other information

Description of hazard statements set out in paragraph 3
H319 = Causes serious eye irritation.
H335 = May cause respiratory irritation.
H318 = Causes serious eye damage.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:
H318 - Causes serious eye damage. Classification procedure: Calculation method
H335 - May cause respiratory irritation. Classification procedure: Calculation method

Main normative references:
Regulation (EC) 1272/2008 (CLP Regulation) as amended
Regulation (EC) No. 1907/2006, REACH as amended
Regulation (EU) No 1169/2011 of the European Parliament and of the Council as amended
Regulation (EC) No 1332/2008 of the European Parliament and of the Council
Regulation (EC) No 1333/2008 of the European Parliament and of the Council
Regulation (EC) No 1331/2008 of the European Parliament and of the Council
Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, as amended
Regulation (EC) No. 850/2004 On persistent organic pollutants, as amended.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, as amended
Regulation (EC) No. 166/2006 Pollutant Release and Transfer Registry, as amended
Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended
Commission Regulation(EC) No 1881/2006 on contaminants in food
EC 1935/2004 and EU 10/2011 as amended on Food Contact materials
EU regulations Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Procedure used to classify under CLP mixture (Reg . EC 1272/2008): classification method

Training required: This document must be submitted to the employer to determine the possible need for appropriate training for workers to ensure protection of human health and the environment.

n.a.: not applicable
n.d.: not available
ADR: Accord europèen relative au transport International des merchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE: Acute Toxicity Estimat
BFC: BioconCentration Factor
BOD: Biochemical Oxigen Demand
CAS: Chemical Abstract Service number
CAP: Centre AntiPoison
CE/EC number EINECS (European Inventory of existing Commercial Substances) e ELINCS (European List of notified Chemical Substances)
CL50/LC50: Lethal Concentration 50
DL50/LD50: Lethal Dose 50
COD: Chemical Oxygen Demand
DNEL: Derived No Effect Level
EC50: half maximal Effective Concentration
ERC: Enviroment Release Classes
EU/UE: European Union
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods code
Kow: Octanol water partition coefficient
NOEC: No Observed Effect Concentration
OEL: Occupational Exposure Limit
PBT: Persistent Bioaccumulative and Toxic
PC: Product Categories
PNEC: Predicted No Effect Concentration
PROC: Process Categories
RID: Règlement concernent le transport International ferroviaire des merchandises dangereuses (Regulations concerning International rail transport of dangerous goods)
STOT: Target Organ Systemic Toxicity
STOT (RE): Repeated Exposure
STOT (SE): Single Exposure
STP: Sewage Treatment Plants
SU: Sector of Use
SVCH: Substance of Very High Concern
TLV: Threshold Limit Value
vPvB: Very Persistent Very Bioaccumulative

References and Sources:

• ECHA Registered Substances:
https://echa.europa.eu/web/guest/information-on-chemicals/registered-substances
• GB MCL-GB mandatory clas. and labelling list: https://www.hse.gov.uk/
chemicalclassification/assets/docs/
mcl-list.xlsx
• SDS supplier
• GESTIS International Limit Value: http://limitvalue.ifa.dguv.de
• HSE Great Britain limit values: https://www.hsl.gov.uk/

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*** this tab annuls and replaces any previous edition.

Changes to the previous edition: first emission.