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

1.1. Product identifier

Product name : MICROCID
Product code: refer to sales department

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

Stabilisers
Sectors of use:
Manufacture of food products[SU4]
Product category:
Additive for enological 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 SpA - Via Vittorio Arici 104 S.Polo - 25134 Brescia (BS) Italy
Tel. +39.030.2307.1 Fax +39.030.2307281
E-mail: info@aeb-group.com - Internet: www.aeb-group.com
E-mail tecnico competente/technical dept.: sds@aeb-group.com

AEB USA
111 N Cluff Avenue
Lodi CA 95240 (USA)
Tel: +1 2096258139 Fax: +1 2092248953
Email: info@aebusa.com - Internet: www.aeb-group.com

AEB AFRICA (PTY) LTD
18 Track Crescent, Cor. Station Road
Montague Gardens 7441
Cape Town (South Africa)
Tel.: +27 215512700 - Fax: +27 (0) 215511919
Email: info@aeb.co.za - Internet: www.aeb-group.com

AEB OCEANIA PTY LTD
178A Wakaden Street
Griffith NSW 2680
T: 1300 704 971
Email: aeboceania@aeb-group.com - Internet: www.aeb-group.com

Produced by
AEB SpA
Via Vittorio Arici 104 S. Polo
25134 Brescia

1.4. Emergency telephone number

AEB SpA
Centralino/Switchboard: +39.030.2307.1 - (h 8.30-12.00 13.30-18.00 GMT +1; Lingua/Language: Italiano, English)

AEB USA

Switchboard: +1 2096258139 (GMT -8; Language: English)

AEB AFRICA (PTY) LTD
Switchboard: +27 215512700 (GMT +1; Language: English, Afrikaans)

AEB OCEANIA PTY LTD
Switchboard: +61 1300 704 971 (GMT +9; Language: English)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008:

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 Regulation (EC) No 1272/2008:

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 (SO2)

Precautionary statements:
Prevention
P261 - Avoid breathing dust.
P280 - Wear eye/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% (50 g/hL bring about 200 mg/L of sorbic acid), anhydrous citric acid 21,6%, potassium metabisulfite(a) 15,7% (50 g/hL will increase the total SO2 by 45,2 mg/L), ascorbic acid 8,7%.

Food use. Also for oenological use. Not intended for the final consumer. In accordance with current regulations on the specific matter. Only for industrial use.

(a)=sulfites
(<Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/litre expressed as SO2>in compliance with Regulation (EU) No 1169/2011 - Annex II and subsequent additions and modifications)

2.3. Other hazards

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

SECTION 3. Composition/information on ingredients

3.1 Substances

Irrilevant

3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
Potassium (E,E)-hexa-2,4-dienoate	>= 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	01-2119457026-42-XXXX
Potassium metabisulfite	>= 10 < 25%	EUH031; Eye Dam. 1, H318		16731-55-8	240-795-3	01-2119537422-45-XXXX

SECTION 4. First aid measures

4.1. Description of first aid measures

Inhalation:
Ventilate the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated room. CALL A PHYSICIAN.
If breathing has stopped, give artificial respiration.

Direct contact with skin (of the pure product).:
Take off immediately contaminated clothing.
Wash immediately with plenty of running water and possibly with soap, the areas of the body that have, or are only suspected to have, come in contact with the product.

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 oculist.

Ingestion:
Not dangerous. In case of malaise consult a doctor.

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.
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, dry chemical, depending on the materials involved in the fire.

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

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus
Safety helmet and full protective clothing.
The water spray can be used to protect the people involved in the extinction.
You may also use self-contained breathing apparatus, especially when working in confined and poorly ventilated areas.
Keep containers cool with water spray

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:
Leave the area surrounding the spill or release. Do not smoke
Wear mask, gloves and protective clothing.

6.1.2 For emergency responders:
Eliminate all unguarded flames and possible sources of ignition. No smoking.
Privide a sufficient ventilation.
Evacuate the danger area and, in case, 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.
At work do not eat or drink.
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)

Sulfur dioxide:
8h * = 1.3mg / m3, 0.5ppm
Short term ** = 2.7mg / m3, 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
PNEC
Sweet water = 0,44 (mg/l)

sediment Sweet water = 34,6 (mg/kg/sediment)
Sea water = 0,044 (mg/l)
sediment Sea water = 3,46 (mg/kg/sediment)
ground = 33,1 (mg/kg ground)

- Substance: Potassium metabisulfite
DNEL
Systemic effects Long term Workers inhalation = 263 (mg/m3)
Local effects Long term Consumers oral = 10 (mg/kg bw/day)
Local effects Long term Consumers inhalation = 78 (mg/m3)
PNEC
Sweet water = 1,17 (mg/l)
Sea water = 0,12 (mg/l)
STP = 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 (E,E)-hexa-2,4-dienoate:
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
Physical state	Dust	
Colour	Beige	
Odour	not determined as considered not relevant for the characterization of the product	
Odour threshold	not determined as considered not relevant for the characterization of the product	
Melting point/freezing point	not determined as considered not relevant for the characterization of the product	
Boiling point or initial boiling point and boiling range	not determined as considered not relevant for the characterization of the product	
Flammability	not determined as considered not relevant for the characterization of the product	
Lower and upper explosion limit	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
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	
pH	5,25 ± 0,5 (20 ° C; sol. 5%)	
Kinematic viscosity	not determined as it is considered not relevant for the characterization of the product	
Solubility	in water	
Water solubility	partially soluble	
Partition coefficient n-octanol/water (log value)	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	
Density and/or relative density	0,45 ± 0,05 (20 °C)	
Relative vapour density	not determined as considered not relevant for the characterization of the product	
Particle characteristics	not determined as considered not relevant for the characterization of the product	

9.2. Other information

9.2.1 Information with regard to physical hazard classes

No data available.

9.2.2 Other safety characteristics

No data available.

SECTION 10. Stability and reactivity

10.1. Reactivity

==========
Related to contained substances:
Potassium (E,E)-hexa-2,4-dienoate:
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 (E,E)-hexa-2,4-dienoate:
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, $NaNO_2$, $NaNO_3$

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 1272/2008

(a) acute toxicity: Potassium (E,E)-hexa-2,4-dienoate: 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): > 2000

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

Inhalation-rat LD50 (mg/l/4h): > 5.5
(b) skincorrosion/irritation: Potassium (E,E)-hexa-2,4-dienoate: Not corrosive
Citric acid: Not corrosive
Potassium metabisulfite: Non-corrosive
Potassium (E,E)-hexa-2,4-dienoate: 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 (E,E)-hexa-2,4-dienoate: Not corrosive
Citric acid: Not corrosive
Potassium metabisulfite: Corrosive
Potassium (E,E)-hexa-2,4-dienoate: Irritating
Citric acid: Strongly irritating
Potassium metabisulfite: Irritating
(d) respiratoryorskinsensitisation: Potassium (E,E)-hexa-2,4-dienoate: Not available
Citric acid: It does not cause sensitization
Potassium metabisulfite: non-sensitizing
(e) germ cell mutagenicity: Potassium (E,E)-hexa-2,4-dienoate: Not available
Citric acid: Not mutagenic
Potassium metabisulfite: non-mutagenic
(f) carcinogenicity: Potassium (E,E)-hexa-2,4-dienoate: Not available
Citric acid: Not carcinogenic
Potassium metabisulfite: non-carcinogenic
(g) eproductivetoxicity: Potassium (E,E)-hexa-2,4-dienoate: 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 (E,E)-hexa-2,4-dienoate: Not available
Citric acid: Unavailable

Potassium metabisulfite: not available
(i) specific target organ toxicity (STOT) repeated exposurePotassium (E,E)-hexa-2,4-dienoate: Not available
Citric acid: Unavailable
Potassium metabisulfite: not available
(j) aspiration hazard: Potassium (E,E)-hexa-2,4-dienoate: Not available
Citric acid: Unavailable
Potassium metabisulfite: not available

==========
Related to contained substances:
Potassium (E,E)-hexa-2,4-dienoate:
LD50 (rat) Oral (mg/kg body weight) = 3800

11.2. Information on other hazards

No data available.

SECTION 12. Ecological information

12.1. Toxicity

==========
Related to contained substances:
Potassium (E,E)-hexa-2,4-dienoate:
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/83d): 464-1000
Acute toxicity-crustacea EC50 (mg/l/48 h): 89
Acute algae toxicity ErC50 (mg/l/72-69): 43.8

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 (E,E)-hexa-2,4-dienoate:
Not available

Citric acid:
Easily biodegradable

Potassium metabisulfite:
not available

12.3. Bioaccumulative potential

==========
Related to contained substances:
Potassium (E,E)-hexa-2,4-dienoate:
Not available

Citric acid:
Not bioaccumulable

Potassium metabisulfite:
not available

12.4. Mobility in soil

==========
Related to contained substances:
Potassium (E,E)-hexa-2,4-dienoate:
Not available

Citric acid:
Not available

Potassium metabisulfite:
not available

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

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.
Recover if possible. Operate according to local or national regulations

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. Maritime transport in bulk according to IMO instruments

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. EC 1907/2006): not applicable
Substances in Candidate List (art. 59 Reg. EC 1907/2006): the product does not contain SVHC in a proportion ≥ 0.1%.
Substances subject to authorisation (Ann. XIV Reg. CEC 1907/2006): the product does not contain SVHC in a proportion ≥ 0.1%.
Reg. (EU) n. 1169/2011: see 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

Points modified compared to previous release: 2.1. Classification of the substance or mixture, 2.2. Label elements

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]:

Classification according to Regulation (EC) Nr. 1272/2008

H318 - Causes serious eye damage. Classification procedure: Calculation method
H335 - May cause respiratory irritation. Classification procedure: Calculation method

Main normative references:
Reg. (CE) n. 1907 del 18/12/06 REACH (Registration, Evaluation and Authorisation of CHemicals) et seq.
Reg. (CE) 1272/2008 CLP (Classification Labelling and Packaging) et seq.
Regulation (UE) n. 1169/2011 (on the provision of food information to consumers)
Directive 2012/18/EU (on the control of major-accident hazards involving dangerous substances) et seq.

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
• SDS supplier
• GESTIS DNEL Database: http://www.dguv.de/ifa/gestis/gestis-dnel-datenbank/index-2.jsp
• GESTIS International Limit Value: http://limitvalue.ifa.dguv.de

This msds was made in good faith by technical Office on the basis of the information available at the date of the last revision. The person in charge must regularly inform the employees about the specific risks they encounter when using this substance/product. The information contained here relate only to the substance/the preparation indicated and may not apply if the product is used improperly or in combination with others. Nothing contained herein shall be construed as a guarantee, either express or implied. It is the responsibility of the user to ensure the opportunities and completeness of the information contained herein for their own particular use.

*** this tab annuls and replaces any previous edition. (IIXX)

Changes to the previous edition: variation on classification.