

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

1.1. Product identifier

Product name : DESULFIN

Product code: refer to sales department

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

Specific Treatment

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

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SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

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

Pictograms:
GHS07

Hazard Class and Category Code(s):
Eye Irrit. 2, Aquatic Chronic 3

Hazard statement Code(s):
H319 - Causes serious eye irritation.
H412 - Harmful to aquatic life with long lasting effects.

If brought into contact with eyes, the product causes significant irritations which may last for more than 24 hours.
The product is dangerous to the environment as it is harmful to aquatic life with long lasting effects

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):
GHS07 - Warning

Hazard statement Code(s):
H319 - Causes serious eye irritation.
H412 - Harmful to aquatic life with long lasting effects.

Supplemental Hazard statement Code(s):
not applicable

Precautionary statements:

Prevention

P280 - Wear eye/face protection.

Response

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



P337+P313 - If eye irritation persists: Get medical advice/attention.

Disposal

P501 - Dispose of contents/container to local/regional/national/international regulations

Contains:

Information concerning the components: 1% copper sulphate in aqueous solution, stabilized with citric acid and potassium bisulfite(a).

Only for professional use. Food use, oenological use. In accordance with current regulations on the specific matter.

(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

The substance / mixture does NOT contain substances PBT/vPvB according to Regulation (EC) No 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
Citric acid	>= 1 < 5%	Eye Irrit. 2, H319		5949-29-1	201-069-1	01-2119457 026-42-XXX X
Copper sulfate pentahydrate	>= 0,1 < 1%	Acute Tox. 4, H302; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute toxicity M-factor = 10	029-023-00-4	7758-99-8	231-847-6	01-2119520 566-40-XXX X
Potassium bisulfite substance for which there are Community workplace exposure limits	< 0,1%	EUH031; Eye Irrit. 2, H319		7773-03-7	231-870-1	

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 area. If you feel unwell seek medical advice.

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 hazardous. It's possible to give activated charcoal in water or medicinal mineral vaseline oil.

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

In case of contact with the eye it could cause redness and tearing

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

If eye irritation persists: Get medical advice/attention.

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 and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)

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 gloves and protective clothing

6.1.2 For emergency responders:

Eliminate all unguarded flames and possible sources of ignition. No smoking.

Provide a sufficient ventilation.

Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spills with earth or sand.

If the product has entered a watercourse, sewers or has contaminated soil or vegetation, notify the 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 removal. Possibly absorb it with inert material or suck it.

Prevent it from entering the sewer system.

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

Avoid contact and inhalation of vapors

Wear eye/face protection.

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

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Related to contained substances:

Copper sulfate pentahydrate:

No data available.

Potassium bisulfite:

ACGIH - STEL: 0.25 ppm - Notes: (SO₂) UE - TWA: 0.5 ppm - STEL: 1 ppm - Note (SO₂)

- 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)

STP = 1000 (mg/l)

ground = 33,1 (mg/kg ground)

- Substance: Copper sulfate pentahydrate

DNEL

Systemic effects Short term Workers inhalation = 1 (mg/m³)

Systemic effects Short term Workers dermal = 13,7 (mg/kg bw/day)

Local effects Short term Workers dermal = 1 (mg/kg bw/day)

PNEC

Sweet water = 0,0078 (mg/l)

sediment Sweet water = 87 (mg/kg/sediment)

Sea water = 0,0052 (mg/l)

sediment Sea water = 676 (mg/kg/sediment)

STP = 0,23 (mg/l)

ground = 65 (mg/kg ground)

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

Not needed for normal use, unless otherwise provided by the employer and / or by assessments of environmental hygiene investigations

(d) Thermal hazards

No hazard to report

Environmental exposure controls:

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Related to contained substances:

Copper sulfate pentahydrate:

Appropriate engineering controls:

Industrial uses:

Refer to the scenarios of use

Individual protection measures:

a) Protective eye / face

When handling the undiluted product to use safety glasses (goggles) (EN 166).

b) Skin

i) Protection of hands

When handling the undiluted product using chemical resistant gloves (EN

374-1/EN374-2/EN374-3)

ii) Other

When handling the undiluted product to wear full protective clothing skin.

c) Respiratory protection

Not needed for normal use.

d) Thermal hazards

No hazards to be reported

Environmental exposure controls:

Minimise release to the environment

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Appearance	Clear blue liquid	
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	
pH	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	
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	

Physical and chemical properties	Value	Determination method
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	0,95 - 1,1 (20°C)	
Solubility	in water	
Water solubility	soluble in all solutions	
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

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Related to contained substances:

Citric acid:

Reacts with alkali metals

Copper sulfate pentahydrate:

No risk of reactivity

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

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Related to contained substances:

Citric acid:

Keep away from direct sunlight and heat

Copper sulfate pentahydrate:

Nothing to report

10.5. Incompatible materials

It can generate flammable gases in contact with elementary metals, nitrides, inorganic sulfides, strong reducing agents.
It can generate toxic gases in contact with inorganic sulfides, strong reducing agents.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

ATE(mix) oral = 51.020,4 mg/kg

ATE(mix) dermal = ∞

ATE(mix) inhal = ∞

(a) acute toxicity: Citric acid: Not classified

Potassium bisulfite: Ingestion-rat LD50 (mg/kg/bw 24h): > 2300

Skin contact-LC50 rat/coniglio (mg/kg/bw 24h): n.a.

Inhalation-rat LD50 (mg/l/4h): n.a.

(b) skin corrosion/irritation: Citric acid: Not corrosive

Potassium bisulfite: Non-corrosive

Citric acid: Irritating

Potassium bisulfite: Non-irritating

(c) serious eye damage/irritation: If brought into contact with eyes, the product causes significant irritations which may last for more than 24 hours.

Citric acid: Not corrosive

Potassium bisulfite: Corrosive

Citric acid: irritating

Potassium bisulfite: Irritating

(d) respiratory or skin sensitization: Citric acid: Unavailable

Potassium bisulfite: Not available

(e) germ cell mutagenicity: Citric acid: Not mutagenic

Potassium bisulfite: Not available

(f) carcinogenicity: Citric acid: Not carcinogenic

Potassium bisulfite: Not available

(g) reproductive toxicity: Citric acid: Non-toxic for reproduction

Potassium bisulfite: Not available
(h) specific target organ toxicity (STOT) single exposure: Citric acid: Unavailable
Potassium bisulfite: Not available
(i) specific target organ toxicity (STOT) repeated exposure: Citric acid: Rat: NOAEL: 4,000 mg / kg
LOAEL: 8,000 mg / kg
Application method: Oral Exposure time: 10 d Doses: 2, 4, 8, 16 g / kg bw / day
Potassium bisulfite: Not available
(j) aspiration hazard: Citric acid: Unavailable
Potassium bisulfite: Not available

Health Hazards:

Eye contact: Accidental contact of product with eyes may cause irritation.
Skin Contact: Product is not an irritant. Prolonged or repeated contact may defeat and irritate the skin and cause dermatitis in some cases.
Ingestion: The ingested product may cause irritation of the mucous membranes of the throat and digestive system leading to digestive symptoms and abnormal bowel disorders.
Inhalation: Prolonged exposure to vapours or mists of product may cause respiratory irritation.

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Related to contained substances:
Citric acid:
LD50 (rat) Oral (mg/kg body weight) = 5400

Copper sulfate pentahydrate:
No Data available

SECTION 12. Ecological information

12.1. Toxicity

=====
Related to contained substances:
Citric acid:
Acute toxicity - fish LC50 (mg / l / 96h): 440
Acute toxicity - crustaceans EC50 (mg / l / 48h): 1535
Acute toxicity algae ErC50 (mg / l / 72-96h): 425
C(E)L50 (mg/l) = 1535

Copper sulfate pentahydrate:
Minimize the release of product into the environment
C(E)L50 (mg/l) = 1,1 Acute toxicity M-factor = 10
NOEC (mg/l) = 0,123

Potassium bisulfite:
Acute toxicity-fish LC50 (mg/l/83d): 460-1000

The product is dangerous for the environment as it is toxic for aquatic organisms following acute exposure.

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

12.2. Persistence and degradability

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Related to contained substances:

Citric acid:
Easily biodegradable

Copper sulfate pentahydrate:
No data available.

Potassium bisulfite:
Not available

12.3. Bioaccumulative potential

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Related to contained substances:
Citric acid:
Not bioaccumulative

Copper sulfate pentahydrate:
No data available.

Potassium bisulfite:
Not available

12.4. Mobility in soil

=====
Related to contained substances:
Citric acid:
Unavailable

Copper sulfate pentahydrate:
No data available.

Potassium bisulfite:
Not available

12.5. Results of PBT and vPvB assessment

No PBT/vPvB ingredient is present

12.6. 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. Send to authorized discharge plants or for incineration under controlled conditions. Operate according to local and National rules in force

SECTION 14. Transport information

14.1. UN 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. EC 1907/2006): not applicable
Substances in Candidate List (art. 59 Reg. EC 1907/2006): the product does not contain SVHC
Substances subject to authorisation (Ann. XIV Reg. CEC 1907/2006): the product does not contain SVHC
Reg. EC 648/04: see 2.2
Reg. (EU) n. 1169/2011: see 2.2

REGULATION (EU) No 1357/2014 - waste:
HP14 - Ecotoxic

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: 1.2. Relevant identified uses of the substance or mixture and uses advised against, 2.2. Label elements, 8.2. Exposure controls

Description of hazard statements set out in paragraph 3

H319 = Causes serious eye irritation.

H302 = Harmful if swallowed.

H318 = Causes serious eye damage.

H400 = Very toxic to aquatic life.

H410 = Very toxic to aquatic life with long lasting effects.

Classification based on data of all mixture components

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 (EC) n. 648 of 31/03/04 (on detergents) 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.

Procedure used to classify under CLP mixture (Reg . EC 1272/2008): calculation 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 européen relative au transport International des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

ATE: Acute Toxicity Estimati

BFC: BioconCentration Factor

BOD: Biochemical Oxygen 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 concernant le transport International ferroviaire des marchandises 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>

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

Changes to the previous edition: label variation.
