

SAFETY DATA SHEET

## DAV.4073

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Trade name

DAV.4073

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

▼ Relevant identified uses of the substance or mixture

Additive for improving the flow properties and the water resistance

Restricted to professional users.

▼ Uses advised against

None known.

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

Company and address

**Vanora AG**

Neulandstrasse 3

CH-6203 Sempach Station

+41 41 469 92 13

www.vanora.ch

E-mail

info@vanora.ch

Revision

9/22/2023

SDS Version

2.0

Date of previous version

8/18/2022 (1.0)

#### 1.4. ▼ Emergency telephone number

Swiss Toxicological Information Centre (Tox Info Suisse): 145 (24h service)

Calling from abroad: +41 44 251 51 51 (24h service)

See also section 4 "First aid measures".

### SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP).

#### 2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP).

#### 2.2. Label elements

▼ Hazard pictogram(s)

Not applicable.

▼ Signal word

Not applicable.

▼ Hazard statement(s)

Not applicable.

Precautionary statement(s)

General

-

Prevention

-

Response

-

Storage

-

Disposal

-

▼ Hazardous substances

None known.

Additional labelling

EUH208, Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH210, Safety data sheet available on request.

The product contains a biocidal product.

2.3. Other hazards

▼ Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. ▼ Substances

Not applicable. This product is a mixture.

3.2. ▼ Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
1,2-benzisothiazol-3(2H)-one	CAS No.: 2634-33-5 EC No.: 220-120-9 REACH: BPR Index No.: 613-088-00-6	<0.05%	Acute Tox. 4, H302 (ATE: 532.00 mg/kg) Skin Irrit. 2, H315 Skin Sens. 1, H317 (SCL: 0.05 %) Eye Dam. 1, H318 Acute Tox. 2, H330 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411	
Pyridine-2-thiol 1-oxide, sodium salt	CAS No.: 3811-73-2 EC No.: 223-296-5 REACH: BPR Index No.:	<0.01%	EUH070 Acute Tox. 4, H302 Acute Tox. 3, H311 (ATE: 790.00 mg/kg) Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 3, H331 STOT RE 1, H372 (Central nervous system) Aquatic Acute 1, H400 (M=100) Aquatic Chronic 2, H411	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

#### Other information

-

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

##### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

##### Skin contact

IF ON SKIN: Wash with plenty of water and soap.

Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

##### ▼ Eye contact

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

##### ▼ Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

##### ▼ Burns

Not applicable.

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

Sensitisation: This product contains substances, which may produce an allergic reaction through inhalation. The allergic reaction typically takes place within an hour after exposure. The reaction results in an inflammatory reaction to the lungs.

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact.

Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

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

Treat symptomatically.

#### Information to medics

Bring this safety data sheet or the label from this product.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

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

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are

exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

#### 5.3. ▼ Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Swiss Toxicological Information Centre (Tox Info Suisse): 145 (24h service) in order to obtain further advice.

Fire fighters should wear appropriate personal protective equipment.

### SECTION 6: Accidental release measures

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

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

#### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

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

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

#### 6.4. ▼ Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

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

Store in tightly closed containers and store protected from moisture and light. Containers should be dated when opened and tested periodically for the presence of peroxides. Do not exceed storage time limits.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

Always store in containers of the same material as the original container.

Storage temperature

Do not freeze!

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

#### 7.3. ▼ Specific end use(s)

This product should only be used for applications quoted in section 1.2.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

sodium metabisulphite

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 5 einatembarer Staub(Gesamtstaub)

Pyridine-2-thiol 1-oxide, sodium salt

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 0,2 einatembarer Staub(Gesamtstaub)

Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 0,4 einatembarer Staub(Gesamtstaub)

Annotations:

H = Special risk of dermal absorption.

SSC = No risk of damage to the unborn child if the occupational exposure limit (OEL) value is met.

Workplace exposure limits: MAK-/BAT values, physical effects, physical stress. (Publication number 1903.d)

▼ DNEL

sodium metabisulphite

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	66 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	225 mg/m <sup>3</sup>
Long term – Local effects - Workers	Oral	8.6 mg/kg

▼ PNEC

sodium metabisulphite

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		1 mg/L
Marine water		0.1 mg/L
Sewage treatment plant		75.4 mg/L

8.2. ▼ Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

▼ Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

▼ Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment

Generally

Use only CE marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards
No special when used as intended.			

Skin protection

Recommended	Type/Category	Standards
No specific requirements	-	-

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Impermeable gloves. The selection of a suitable glove depends not only on the material, but also on other quality features and varies from manufacturer to manufacturer.			

Eye protection

Type	Standards
Wear safety glasses with side shields.	EN166



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

White

Odour / Odour threshold

Characteristic

pH

~7.5

Density (g/cm<sup>3</sup>)

~1.0 (20 °C)

Kinematic viscosity

~500 mm<sup>2</sup>/s (20 °C)

Particle characteristics

Does not apply to liquids.

Phase changes

▼ Melting point/Freezing point (°C)

Testing not relevant or not possible due to the nature of the product.

Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

▼ Boiling point (°C)

Testing not relevant or not possible due to the nature of the product.

▼ Vapour pressure

Testing not relevant or not possible due to the nature of the product.

▼ Relative vapour density  
Testing not relevant or not possible due to the nature of the product.

▼ Decomposition temperature (°C)  
Testing not relevant or not possible due to the nature of the product.

#### Data on fire and explosion hazards

Flash point (°C)  
nicht entflammbar

▼ Flammability (°C)  
Testing not relevant or not possible due to the nature of the product.

▼ Auto-ignition temperature (°C)  
Testing not relevant or not possible due to the nature of the product.

▼ Lower and upper explosion limit (% v/v)  
Testing not relevant or not possible due to the nature of the product.

#### Solubility

Solubility in water  
Nicht anwendbar - dispergierbar

▼ n-octanol/water coefficient  
Testing not relevant or not possible due to the nature of the product.

▼ Solubility in fat (g/L)  
Testing not relevant or not possible due to the nature of the product.

#### 9.2. Other information

Solids content approx. 50% by weight

▼ Other physical and chemical parameters  
No data available.

▼ Oxidizing properties  
Testing not relevant or not possible due to the nature of the product.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Highly reactive and can auto-polymerize as a result of internal peroxide accumulation. The peroxides formed in these reactions are extremely shock- and heat-sensitive.

#### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

#### 10.3. ▼ Possibility of hazardous reactions

None known.

#### 10.4. ▼ Conditions to avoid

None known.

#### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

#### 10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

### SECTION 11: Toxicological information

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

▼ Acute toxicity  
Product/substance            sodium metabisulphite

Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	>1540 mg/kg

Product/substance	1,2-benzisothiazol-3(2H)-one
Test method:	OECD 401
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	532 mg/kg

Product/substance	1,2-benzisothiazol-3(2H)-one
Test method:	OECD 403
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50 (dust)
Result:	0.4 mg/L

Product/substance	Pyridine-2-thiol 1-oxide, sodium salt
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	1208 mg/kg

Product/substance	Pyridine-2-thiol 1-oxide, sodium salt
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	1800 mg/kg

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

#### ▼ Serious eye damage/irritation

Product/substance	sodium metabisulphite
Species:	
Duration:	
Result:	Adverse effect observed (Corrosive)

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

#### ▼ Skin sensitisation

This product contains substances that may trigger an allergic reaction in already sensitized persons.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure



Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

▼ Long term effects

None known.

▼ Endocrine disrupting properties

Not applicable.

▼ Other information

None known.

SECTION 12: Ecological information

12.1. ▼ Toxicity

Product/substance	sodium metabisulphite
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	150-220 mg/L

Product/substance	sodium metabisulphite
Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	89 mg/L

Product/substance	sodium metabisulphite
Species:	Algae
Duration:	72 hours
Test:	EC50
Result:	48 mg/L

Product/substance	sodium metabisulphite
Species:	Bacteria
Duration:	24 hours
Test:	EC50
Result:	56 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	0.74 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one
Species:	Daphnia, Daphnia magna
Duration:	48 hours
Test:	EC50
Result:	1 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one
Test method:	OECD 211

Species:	Daphnia, Daphnia magna
Duration:	21 days
Test:	NOEC
Result:	1.2 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one
Test method:	OECD 215
Species:	Fish, Oncorhynchus mykiss
Duration:	28 days
Test:	NOEC
Result:	0.21 mg/L

Product/substance	1,2-benzisothiazol-3(2H)-one
Test method:	OECD 201
Species:	Algae, Selenastrum capricornutum
Duration:	72 hours
Test:	NOEC
Result:	0.04 mg/L

Product/substance	Pyridine-2-thiol 1-oxide, sodium salt
Species:	Fish, Oncorhynchus mykiss
Duration:	96 hours
Test:	LC50
Result:	0.0066 mg/L

Product/substance	Pyridine-2-thiol 1-oxide, sodium salt
Species:	Daphnia, Daphnia magna
Duration:	48 hours
Test:	EC50
Result:	0.022 mg/L

Product/substance	Pyridine-2-thiol 1-oxide, sodium salt
Species:	Algae
Duration:	
Test:	ErC50
Result:	0.46 mg/L

12.2. ▼ Persistence and degradability

No data available.

12.3. ▼ Bioaccumulative potential

No data available.

12.4. ▼ Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. ▼ Endocrine disrupting properties

Not applicable.

12.7. ▼ Other adverse effects

None known.

## SECTION 13: Disposal considerations

### 13.1. ▼ Waste treatment methods

Product is not covered by regulations on dangerous waste.  
Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

#### ▼ EWC code

Not applicable.

#### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

\* Packing group

\*\* Environmental hazards

#### Additional information

Not dangerous goods according to ADR, IATA and IMDG.

### 14.6. ▼ Special precautions for user

Not applicable.

### 14.7. ▼ Maritime transport in bulk according to IMO instruments

No data available.

## SECTION 15: Regulatory information

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

#### Restrictions for application

Restricted to professional users.

#### ▼ Demands for specific education

No specific requirements.

#### ▼ SEVESO - Categories / dangerous substances

Not applicable.

#### Additional information

WGK class: WGK 1

#### ▼ Sources

SR 813.12 Ordinance on the Placing on the Market and Handling of Biocidal Products (Ordinance on Biocidal Products, OBP) of 18 May 2005 (Status as of 1 December 2018)

SR 814.610 Ordinance on the movement of wastes of 22 June 2005 (Status as of 1 January 2020)

SR 814.610.1 DETEC ordinance concerning lists for the movement of wastes of 18 October 2005 (Status as of 1 January 2018)

SR 813.11 Ordinance on Protection against Dangerous Substances and Preparations (Chemicals Ordinance, ChemO) of 5 June 2015 (Status as of 1 April 2020)

### 15.2. Chemical safety assessment

No

## SECTION 16: Other information

## ▼ Full text of H-phrases as mentioned in section 3

EUH070, Toxic by eye contact.  
H302, Harmful if swallowed.  
H311, Toxic in contact with skin.  
H315, Causes skin irritation.  
H317, May cause an allergic skin reaction.  
H318, Causes serious eye damage.  
H319, Causes serious eye irritation.  
H330, Fatal if inhaled.  
H331, Toxic if inhaled.  
H372, Causes damage to organs through prolonged or repeated exposure. (Central nervous system)  
H400, Very toxic to aquatic life.  
H411, Toxic to aquatic life with long lasting effects.

## ▼ Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
CAS = Chemical Abstracts Service  
CE = Conformité Européenne (European conformity)  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
CSA = Chemical Safety Assessment  
CSR = Chemical Safety Report  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EINECS = European Inventory of Existing Commercial chemical Substances  
ES = Exposure Scenario  
EUH statement = CLP-specific Hazard statement  
EuPCS = European Product Categorisation System  
EWC = European Waste Catalogue  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IARC = International Agency for Research on Cancer (IARC)  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
OECD = Organisation for Economic Co-operation and Development  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RRN = REACH Registration Number  
SCL = A specific concentration limit  
SVHC = Substances of Very High Concern  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

▼ Additional information

Not applicable.

▼ The safety data sheet is validated by

cob

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: CH-en