

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 11-Jul-2017

Print date: 30-Aug-2017

Version: 4

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Powering Business Worldwide

SIHA SulfoLiq A40

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

1.1. Product identifier

Trade name/designation:

SIHA SulfoLiq A40

Article No.:

64103/HW020

REACH No.:

01-2119537321-49

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

Use of the substance/mixture:

Product for Wine treatment

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Eaton Technologies GmbH

Langenlonsheim Branch

An den Nahewiesen 24

55450 Langenlonsheim

Germany

Telephone: +49 6704 204-0 (Diese Nummer ist nur zu Bürozeiten besetzt.)

Telefax: +49 6704 204-121

E-mail: SDB@Eaton.com

Website: www.eaton.com/filtration

1.4. Emergency telephone number

Notfallauskunft bei Vergiftungen: Giftinformationszentrum Mainz (Deutsch und Englisch). Emergency medical information: Poison information center Mainz (German and English)., 24h: +49 6131 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



GHS07

Exclamation mark

Signal word: Warning

hazard statements for health hazards

H319 Causes serious eye irritation.

Supplemental Hazard information (EU)

EUH031 Contact with acids liberates toxic gas.

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Precautionary statements Prevention

P264.1	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements 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.

2.3. Other hazards

No data available

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concentration
CAS No.: 192-30-0 EC No.: 233-469-7 REACH No.: 01-2119537321-49-0000	Ammoniumhydrogensulfid	≥ 60 - < 70 %

SECTION 4: First aid measures

4.1. Description of first aid measures

Following inhalation:

Remove casualty to fresh air and keep warm and at rest. Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.

In case of skin contact:

Take off contaminated clothing.

Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. After contact with skin, wash immediately with plenty of water and soap.

After eye contact:

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

After ingestion:

Induce vomiting when the affected person is not unconscious. IF SWALLOWED: Immediately call a POISON CENTER/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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water, Carbon dioxide (CO₂)

5.2. Special hazards arising from the substance or mixture

In case of fire and/or explosion do not breathe fumes.

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5.3. Advice for firefighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Use personal protection equipment.

Protective equipment:

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Use appropriate respiratory protection.

Provide adequate ventilation.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:

Wash with plenty of water.

6.4. Reference to other sections

No data available

6.5. Additional information

No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Avoid contact with eyes and skin. Do not breathe dust/fume/gas/mist/vapours/spray.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Keep only in original container.

Non-contaminated packages may be recycled.

Contaminated work clothing should not be allowed out of the workplace.

When using do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Ensure adequate ventilation of the storage area.

Keep in a cool, well-ventilated place.

Keep container dry.

Hints on storage assembly:

Do not store together with: Acid, Oxidising agent

Further information on storage conditions:

Keep away from food, drink and animal feedingstuffs.

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7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
TRGS 900 (DE)	sulphur dioxide CAS No.: 7446-09-5	① 1 ppm (2.5 mg/m ³) ② 1 ppm (2.5 mg/m ³)

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
Ammoniumhydrogensulfid CAS No.: 192-30-0	10 mg/m ³	① DNEL worker ② DNEL long-term inhalative (systemic)
Ammoniumhydrogensulfid CAS No.: 192-30-0	0.901 mg/kg	① DNEL Consumer ② DNEL long-term oral (repeated)

Substance name	PNEC Value	① PNEC type
Ammoniumhydrogensulfid CAS No.: 192-30-0	1.04 mg/l	① PNEC aquatic, freshwater
Ammoniumhydrogensulfid CAS No.: 192-30-0	0.1 mg/l	① PNEC aquatic, marine water
Ammoniumhydrogensulfid CAS No.: 192-30-0	78.6 mg/l	① PNEC sewage treatment plant (STP)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

The glove material has to be impermeable and resistant to the product/the substance/the preparation. Due to missing tests no recommendation to the glove material can be given for the product/the preparation/the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Respiratory protection:

Use suitable breathing apparatus. DIN EN 141

8.2.3. Environmental exposure controls

No data available

8.3. Additional information

No data available

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid

Colour: not determined

Odour: Sulphur dioxide (SO₂)

Safety relevant basis data

parameter		at °C	Method	Remark
pH	≈ 5	20 °C		
Melting point	<i>not applicable</i>			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	≈ 105 °C			
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	<i>not determined</i>			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Relative density	1.3 - 1.4 kg/l			
Bulk density	<i>not determined</i>			
Water solubility (g/L)	<i>not determined</i>			
Partition coefficient: n-octanol/water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>			

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Substance is, under normal conditions, chemically stable.

10.2. Chemical stability

Substance is, under normal conditions, chemically stable.

10.3. Possibility of hazardous reactions

not known.

10.4. Conditions to avoid

Substance is, under normal conditions, chemically stable.

10.5. Incompatible materials

Acid, Oxidising agent

10.6. Hazardous decomposition products

Pyrolysis products, toxic

Gases/vapours, harmful

Gases/vapours, irritant

SECTION 11: Toxicological information

* 11.1. Information on toxicological effects

Acute oral toxicity:

no classification. Based on available data, the classification criteria are not met.

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Acute dermal toxicity:

no classification. Based on available data, the classification criteria are not met.

Acute inhalation toxicity:

no classification. Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

no classification. Based on available data, the classification criteria are not met.

Serious eye damage/irritation:

Causes eye irritation.

Respiratory or skin sensitisation:

no classification. Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

no classification. Based on available data, the classification criteria are not met.

Carcinogenicity:

no classification. Based on available data, the classification criteria are not met.

Reproductive toxicity:

no classification. Based on available data, the classification criteria are not met.

STOT-single exposure:

no classification. Based on available data, the classification criteria are not met.

STOT-repeated exposure:

no classification. Based on available data, the classification criteria are not met.

Aspiration hazard:

no classification. Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity:

Avoid release to the environment.

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

Bioconcentration factor (BCF):

not applicable

12.4. Mobility in soil

not applicable

12.5. Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
192-30-0	Ammoniumhydrogensulfit	—

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The disposal of the product has to be carried out in accordance with the legal requirements. EWC waste codes are strictly industry-oriented, therefore waste classification has to be done by the waste producer.

Waste treatment options

Appropriate disposal / Package:

Contaminated packages must be completely emptied and can be re-used following proper cleaning.

13.2. Additional information

No data available

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SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.

not relevant

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not relevant

SECTION 15: Regulatory information

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

15.1.1. EU legislation

No data available

15.1.2. National regulations

 [DE] National regulations

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

* **15.2. Chemical Safety Assessment**

For this substance a chemical safety assessment has been carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

1.1.	Product identifier
8.1.	Control parameters
11.1.	Information on toxicological effects
15.2.	Chemical Safety Assessment

16.2. Abbreviations and acronyms

No data available

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16.3. Key literature references and sources for data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

No data available

16.6. Training advice

No data available

16.7. Additional information

No data available

* Data changed compared with the previous version

1. Exposure Scenario title:	
Exposure Scenario 3: Professional uses of aqueous solutions of ammonium hydrogensulfite as such or in preparation	
SU22	
PC1, PC2, PC7, PC9a, PC12, PC14, PC15, PC17, PC18, PC20, PC23, PC24, PC25, PC26, PC30, PC31, PC34, PC35, PC37, PC38, PC40	
Professional uses of aqueous solutions of ammonium hydrogensulfite as such or in preparation. Use of NH_4HSO_3 in chemical industry, textile/leather industry, paper, pulp and bleaching industry, food industry, water treatment, mining and metal industry, for distribution/trader and formulator purposes, photographic industry, pharmaceutical industry, cosmetic industry	
Environment	
Manufacture of substances	ERC 1
Formulation of preparations	ERC 2
Industrial use of processing aids in processes and products, not becoming part of articles	ERC 4
Industrial use resulting in manufacture of another substance (use of intermediates)	ERC 6a
Industrial use of reactive processing aids	ERC 6a
Industrial use of monomers for manufacture of thermo-plastics	ERC 6c
Industrial use of process regulators for polymerization processes in production of resins, rubber, polymers	ERC 6d
Industrial use of substances in closed systems	ERC 7
Wide dispersive indoor use of reactive substances in open systems	ERC 8b
Wide dispersive outdoor use of reactive substances in open systems	ERC 8e
Wide dispersive indoor use of substances in closed systems	ERC 9a
Wide dispersive outdoor use of substances in closed systems	ERC 9b
Worker	
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process (synthesis or formulation)	PROC 3
Use in batch and other process (synthesis) where opportunity for exposure arises	PROC 4
Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)	PROC 5
Transfer of substance or preparation (charging/discharging) from/to vessels/large	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	PROC 9

2. Conditions of use affecting exposure	
2.1 Control of environmental exposure	
Day amount used on site:	40.333 kg/day
Emission days per year:	300
Release fraction to air from process:	Treat air emission to provide a typical removal efficiency of: 99%
Release fraction to waste water:	Required Removal Efficiency (wastewater): 99%
Release fraction to soil:	Release to soil from process: 1%
Environmental factors not influenced by risk management:	Receiving surface water flow is 18000 m ³ /d.
Conditions and measures related to municipal sewage treatment plant:	Removal Efficiency (total): 99%.
Maximum allowable site tonnage (Msafe):	44.814 kg/day
2.2 Control of workers exposure	
Product characteristics:	Aqueous solution.
Duration and frequency of use:	Covers daily exposures up to 8 hours - unless stated differently - (all PROCs)
Concentration of substance in use:	Not relevant.
Temperature:	Not restricted.
Other relevant operational conditions:	The shift breathing volume during all process steps reflected in the PROCs is assumed to be 10 m ³ /shift (8 hours). Under acidic conditions (pH<7), sulfur dioxide can be formed.
Risk Management Measures that, in combination with the operational conditions of use, ensure control of risk	
Technical conditions and measures:	No additional risk management measures required.
Organisational measures to prevent /limit releases, dispersion and exposure (all PROCs):	Avoid inhalation of the product. Regular cleaning of work area. Regular cleaning of equipment.
Conditions and measures related to personal protection, hygiene and health evaluation (all PROCs):	Wear a half mask respirator with type P1 filter (APF=4) (PROC 11) Wear goggles (qualitative risk assessment) Use of gloves and working clothes have been considered additionally.

3. Exposure estimation (PEC) and Risk Characterisation Ratios (RCRs) estimated by applying above Operation Conditions (OCs) and Risk Management Measures (RMMs) are:
Environment – ERC4 (worst case)

Compartment	PEC (mg SO ₃ ²⁻ /L) based on EUSES 2.0	RCR
STP (freshwater)	25,2	0,4
STP (marine)	57,06	0,9
Local freshwater	2,52	0,9
Local marine water	0,57	0,2
Sediment marine water	Not applicable	Not applicable
Local soil	Not applicable	Not applicable
Man via the environment	Not applicable	Not applicable

Due to the physicochemical properties of the substance (adsorption to solid particles not relevant, low stability and rapid oxidation of reduced inorganic sulfur compounds under aerobic conditions) no relevant PNECs can be derived for sediment, terrestrial and air compartment.

Worker

Contributing Scenario	Inhalation Exposure Estimate (RCR) Based on MEASE	Dermal
PROC 2	0,001 mg/m ³ (<0,001)	Due to the negligible dermal absorption of ammonium-hydrogensulfite, the dermal route is not a relevant exposure path for ammonium hydrogensulfite and a dermal DNEL has not been derived. Thus, dermal exposure is not assessed in this exposure scenario.
PROC 3	0,01 mg/m ³ (0,001)	
PROC 4	0,1 mg/m ³ (0,01)	
PROC 5	0,1 mg/m ³ (0,01)	
PROC 8a	0,05 mg/m ³ (0,005)	
PROC 8b	0,05 mg/m ³ (0,005)	
PROC 9	0,05 mg/m ³ (0,005)	
PROC 10	0,05 mg/m ³ (0,005)	
PROC 11	5 mg/m ³ (0,5)	
PROC 12	0,001 mg/m ³ (<0,001)	
PROC 13	0,05 mg/m ³ (0,005)	
PROC 14	0,1 mg/m ³ (0,01)	
PROC 15	0,01 mg/m ³ (0,001)	
PROC 16	0,5 mg/m ³ (0,05)	
PROC 17	1 mg/m ³ (0,1)	
PROC 18	0,5 mg/m ³ (0,05)	
PROC 19	0,05 mg/m ³ (0,005)	
PROC 20	0,001 mg/m ³ (<0,001)	

4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES (in relation to potential for scaling) - adapting parameters of use of substance to individual conditions:

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

The quantitative risk characterization for this worker exposure (long-term systemic effects) and has been calculated by MEASE tool, available at the following link: (www.ebrc.de/mease.html)

The quantitative risk characterization for this environmental exposure (long-term systemic effects) and has been calculated by EUSES tool. The Metal EUSES calculator for DUs can be freely downloaded from <http://www.arche-consulting.be/Metal-CSA-toolbox/du-scaling-tool>. The metal speciation box can be left blank. 0 can be filled in for all partition coefficients and PECs regional. Make sure that the tonnage is the tonnage of SO₃²⁻ after reacting/oxidizing in the process.