

Safety data sheet

according to Regulation (EG) No. 1907/2006 (REACH),
amended by Regulation VO (EU) No. 2020/878

Schliessmann Schwäbisch Hall

Date of issue: 07.05.2024

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Formic acid-based limescale remover
Article: No. 5914
Substance name and synonyms (for substances): -
Product description (for mixture): Aqueous solution of formic acid
REACH-registration number: Substances contained in the mixture see section 3
UFI: MRCH-FORT-M00U-VHT9

1.2 Use

Removal of water and boiler scale

1.3 Details of the supplier of the safety data sheet

Adress Manufacturer / Supplier: C. Schliessmann Kellerei-Chemie GmbH & Co KG
Contact: Auwiesenstr. 5, D-74523 Schwäbisch Hall
Tel. 0049-(0)791 / 97191 -0, Fax -25
E-Mail: service@c-schliessmann.de

1.4 Emergency number

Poison centre Freiburg:
Tel. 0049 – (0)761 / 19240

2. Hazards identification

2.1 Classification of the substance or mixture according to EU-VO No. 1272/2008

Eye Dam. 1 H318 Causes serious eye damage.
Skin Corr. 1 H314 Causes severe skin burns and eye damage.
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H332 Harmful if inhaled.

2.2 Labeling elements according to EU-VO No. 1272/2008

Hazard pictograms:



Signal word: **DANGER**

Hazardous-determining component of labeling: Formic acid

Hazard statements: H332 Harmful if inhaled.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Safety instructions: P101 If medical advice is required, have packaging or labelling ready.
P102 Keep out of the reach of children.
P260 Do not breathe gas / mist / vapour / aerosol.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Induce vomiting.
P303+P361+P353 IF IN CONTACT WITH SKIN (or hair): Remove all contaminated clothing immediately. Wash skin with water or shower.
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 possible. Continue rinsing.
P310 Immediately call a POISON CENTRE/doctor.

2.3 Other hazards EUH071 Corrosive to the respiratory tract.

3. Composition/information on ingredients

3.1 Material	The product is a mixture
3.2 Mixtures	Aqueous solution of formic acid, corrosion inhibitor and cationic surfactants
Hazardous ingredients:	Formic acid
EG-number:	200-579-1
CAS-number:	64-18-6
REACH-registration number:	01-2119491174-37-xxxx
Classification:	Flam. Liq. 3 H226 Flammable liquid and vapour. Met. Corr. 1 H290 May be corrosive to metals. Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 3 H331 Toxic if inhaled. Skin Corr. 1A H314 Causes severe skin burns
Content:	Approx. 75%

4. First aid measures

4.1 Description of first aid measures

After inhalation:	Provide fresh air. Medical treatment necessary.
After skin contact:	Wash off immediately with polyethylene glycol, then with plenty of water. Remove contaminated clothing. Get medical attention.
After eye contact:	Rinse opened eye for several minutes under running water. Then consult an ophthalmologist immediately.
After ingestion:	Rinse out mouth and drink two glasses of water, avoid vomiting, do not attempt to neutralise, seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

After inhalation:	Chemical burns.
After skin contact:	Chemical burns.
After eye contact:	Chemical burns.
After ingestion:	Chemical burns, stomach perforation.

4.3 Indication of any immediate medical attention and special treatment needed

Decontamination. Symptomatic treatment.

5. Firefighting measures

5.0 Flammability	The product itself is flammable.
5.1 Extinguishing agent	Foam, powder, CO ₂ or water spray jet
5.2 Special hazards	Release of hazardous vapours and combustion gases (carbon monoxide) possible due to ambient fire. Risk of explosion on contact with metals due to release of hydrogen.
5.3 Instructions for fire-fighters	Wear self-contained breathing apparatus and chemical protection suit (full protective suit). Avoid penetration of extinguishing water into surface water, groundwater and soil. Avoid skin contact by wearing suitable protective clothing.

6. Accidental release measures

6.1 Personal precautions / protective equipment / behaviour in case of danger	Avoid contact with the substance. Do not inhale vapours/aerosols. Provide fresh air in closed rooms.
6.2 Environmental protection measures	Do not allow to enter drains or waterways.
6.3 Clean/recording procedure	Absorb with liquid-binding material (diatomaceous earth, acid binder), collect in a suitable container and dispose of in accordance with regulations. Rinse off residual residues with plenty of water.
6.4 Reference to other sections	See section 13 for disposal instructions.

7. Handling and storage

7.1 Safe handling

See instructions in sections 2 and 8. In case of open handling of the product, use equipment with local exhaust ventilation; ensure adequate ventilation in closed rooms.

7.2 Safe storage

Store tightly closed in a well-ventilated place, dark, at +15°C to +20°C; not in metal containers; separate from alkalis, oxidising agents and foodstuffs.

7.3 Specific end use

See section 1.2

8. Exposure controls/personal protection

8.1 Parameters to be monitored

Occupational exposure limit according to TRGS 900:
DNEL (derived No Effect Level)

Air limit value formic acid: 9 mg/m³
Long-term (inhalation): 3mg/m³

8.2 Exposure controls and monitoring

Personal protective equipment:
Respiratory protection:

In case of insufficient ventilation and the occurrence of vapours and aerosols, wear respiratory protective equipment. Use tight-fitting safety glasses (basket glasses). Wear chemical protective gloves (e.g. nitrile rubber 0.35 mm penetration time > 8 h).

Eye protection:

Hand protection:

Information on occupational hygiene:

Change contaminated clothing. Preventive skin protection. Wash hands after finishing work.

9. Physical and chemical properties

Physical state:

Liquid

Colour:

Red (coloured)

Odour:

Pungent

pH value:

Approx. 1 (20°C)

Melting temperature:

Not determined

Boiling temperature:

Approx. 105°C

Ignition temperature:

520°C

Flash point:

67°C

Explosion limits:

Lower 14.9 g/m³; upper 47.36 g/m³

Vapour pressure:

Not determined

Density:

1.17 g/m³ (20°C)

Solubility in water:

Unlimited miscibility

10. Stability and reactivity

10.1 Reactivity

See section 7.1 and 10.3

10.2 Chemical stability

The product is stable under normal ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Violent reactions with alkalis, reaction with metals with formation of hydrogen possible, explosion hazard!

10.4 Conditions to avoid

Heating above 50°C.

10.5 Incompatible materials

Metals.

10.6 Hazardous decomposition products

See fire, section 5

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity (**formic acid**):

LD50 (oral, rat):	730 mg/kg
LC50 (inhalation, rat, 4h):	7 mg/L
Subacute to chronic toxicity:	No sensitising effect known.
CMR effects:	The product shows no carcinogenic, mutagenic or fertility-damaging effects.
Mutagenicity / Genotoxicity:	No evidence of harmful effects in humans.
Carcinogenicity:	No evidence of harmful effects in humans.
Reproductive toxicity:	No evidence of harmful effects in humans.

11.2 Endocrine disrupting properties Not applicable.

12. Ecological information

12.1 Aquatic toxicity	Formic acid: LC50 (96h) 50 mg/l (fish)
12.2 Persistence / degradability	Formic acid is biodegradable.
12.3 Bioaccumulative potential	No evidence of bioaccumulation.
12.4 Mobility in soil	The product is soluble in water.
12.5 PBT and vPvB assessment	The substances contained in the mixture do not fulfil the criteria.
12.6 Other adverse effects	Not known.

13. Disposal considerations

Product waste must be disposed of in accordance with the Waste Directive 2008/98/EC and in compliance with national and regional regulations. Small quantities can be channelled after dilution with water and careful neutralisation with diluted acid.

14. Transport information

14.1 UN-number ADR, IMDG, IATA:	UN3412
14.2 UN proper shipping name ADR: IMDG, IATA:	3412 AMEISENSÄUE UN3412, FORMIC ACID, 8, II
14.3 Transport hazard class(es) ADR:	Class 8 / Corrosive substances, hazard label 8 Classification code C3 Transport category 2 / LQ Inner packaging ≤1L Tunnel restriction codeE
IMDG:	Class 8 / Label 8 EmS: F-A, S-B
IATA:	Class 8 / Label 8
14.4 Packing group ADR, IMDG, IATA:	II
14.5 Environmental hazards	Marine pollutant: Nein / No

15. Regulatory information

EU-regulations:

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Industrial Emissions Directive:	VOC-Content: 75%

German regulations:

Water hazard class:

1 (slightly hazardous to water)

Storage class according to TRGS 510:

8A (Flammable corrosive hazardous substances)

Employer's liability insurance association
rules:

DGUV Information 213-070: Acids and alkalis

16. Further information

The information is based on our current knowledge and serves to describe the product with regard to the safety precautions to be taken. It does not constitute a guarantee of the properties of the product described.