

SAFETY DATA SHEET

Formic Acid 85%

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Issued: 03/06/2026
Revision No: 3

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product Identifier:

Product Name: Formic Acid 85%
REACH Registration Number: 01-2119491174-37-XXXX

Relevant identified uses of the substance or mixture and uses advised against:

Identified use(s): Pickling acids, adjustment of pH value in textile and leather industry. Manufacture of textiles, leather, pH regulating agents.

Recommended restrictions on use: No information available.

Details of the supplier of the safety data sheet:

Company name: Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567):

Flammable liquids, Category 3 H226: Flammable liquid and vapour
Corrosive to metals, Category 1 H290: May be corrosive to metals
Acute toxicity, Category 4 H302: Harmful if swallowed
Acute toxicity, Category 3 H331: Toxic if inhaled
Skin Corrosion, Sub-category 1B H314: Causes severe skin burns and eye damage
Serious eye damage, Category 1 H318: Causes serious eye damage

Label elements (CLP):

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567):

Contains: Formic Acid



Signal Word: Danger

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Hazard Statements:

H226 – Flammable liquid and vapour
H290 – May be corrosive to metals
H302 - Harmful if swallowed
H331 - Toxic if inhaled
H314 - Causes severe skin burns and eye damage
EUH071 - Corrosive to the respiratory tract

Precautionary Statements:

P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE/doctor.
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Formic Acid

Chemical name CAS number EC number	Classification	Concentration (% w/w)
Formic acid 64-18-6 200-579-1	Flam. Liq. 3; H226 Acute Tox. 4; H302 Acute Tox. 3; H331 Skin Corr. 1A; H314 Eye Dam. 1; H318 Met. Corr. 1; H290 ----- Specific concentration limit Flam. Liq. 3; H226 - > 85 % Skin Corr. 1A; H314 - >= 90 % Skin Corr. 1B; H314 - 10 - < 90 % Skin Irrit. 2; H315 - 2 - < 10 % Eye Dam. 1; H318 - >= 10 % Eye Irrit. 2; H319 - 2 - < 10 %	>= 70 - <90

For explanation of abbreviations see section 16.

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4. FIRST AID MEASURES

Description of first aid measures:

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control centre immediately.
Skin contact:	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before re-use. Call a physician or poison control centre immediately. Thoroughly clean shoes before reuse.
Eye contact:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Call a physician or poison control centre immediately.
Ingestion:	Seek medical advice. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Harmful if swallowed. Causes serious eye damage. Toxic if inhaled. Causes severe burns.

Indication of any immediate medical attention and special treatment needed: Treatment: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Carbon dioxide (CO₂), water spray, dry chemical, alcohol-resistant foam

Unsuitable extinguishing media: Water spray jet.

Special hazards arising from the substance or mixture:

Special hazard during fire-fighting: Water may be ineffective. The product will float on water and can be reignited on surface water.

Hazardous combustion products: No hazardous combustion products are known.

Advice for fire-fighters:

Special protective equipment for fire-fighters: Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire-fighting gear.

Further information: Use water spray to cool unopened containers. Combustible liquid and vapour.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Use personal protective equipment. Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions: Avoid release to the environment.

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Methods and material for containment and cleaning up:

Methods for cleaning up: Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). After cleaning, flush away traces with water. Eliminate all ignition sources if safe to do so.

Reference to other sections: For personal protection see section 8, for disposal considerations see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling:

Advice on safe handling: Do not breathe vapours or spray mist. Do not get on skin or clothing. Do not get in eyes. Do not swallow. Ensure adequate ventilation. Wash thoroughly after handling. Keep away from fire (no smoking). Keep away from fire, sparks and heated surfaces. Do not use sparking tools.

Advice on protection against fire and explosion: None known.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities:

Requirements for storage areas and containers: Keep container closed when not in use.

Specific end use(s): Pickling acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational Exposure Limits:

Substance name	CAS No	Value type (form of exposure)	Control parameters	Basis
Formic acid	64-18-6	TWA	5 ppm 9.6 mg/m ³	GB EH40
		TWA	5 ppm 9 mg/m ³	2006/15/EC

Further information: Indicative

Derived No Effect Level (DNEL):

Substance	End use	Route of exposure	Potential health effects	Value
Formic acid	Workers	Inhalation	Long-term local effects	9.5 mg/m ³
	General population	Inhalation	Long-term local effects	3 mg/m ³

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
Formic Acid	Fresh water	2 mg/l
	Marine water	0.2 mg/l
	Intermittent	1 mg/l
	Fresh water sediment	13.4 mg/kg dry weight (d.w.)
	Marine sediment	1.34 mg/kg dry weight (d.w.)
	Sewage treatment plant	7.2 mg/l
	Soil	1.5 mg/kg dry weight (d.w.)

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Exposure controls:

Appropriate engineering controls: Ensure adequate ventilation.

Personal protective equipment/individual protection measures:

Eye protection: Tightly fitting safety goggles. Face-shield

Hand protection: Wear suitable gloves.

Skin and body protection: Acid-resistant protective clothing. Chemical resistant apron. Footwear protecting against chemicals

Respiratory protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Protective measures: Remove respiratory and skin/eye protection only after vapours have been cleared from the area. Ensure that eye flushing systems and safety showers are located close to the working place. Use personal protective equipment as required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance: Liquid

Colour: Colourless, clear

Odour: Pungent

Odour threshold: Not determined

pH: < 1

Melting point/freezing point: - 13.5°C

Boiling point/boiling range: 107°C

Flash point: 2°C. Method: ISO1523, closed cup

Evaporation rate: No data available

Flammability (solid, gas): Not applicable

Upper explosion limit: Upper flammability limit 51%(V) formic acid

Lower explosion limit: Lower flammability limit 18%(V) formic acid

Vapour pressure: < 4.4 kPa (20°C)

Relative vapour density: No data available

Relative density: 1.2

Density: 1.2 g/cm³ (20°C)

Solubility(ies):

Water solubility: Completely soluble

Partition coefficient: n- octanol/water: See Section 12: Ecological information

Auto-ignition temperature: Approx. 520°C

Decomposition temperature: 350°C formic acid

Viscosity:

Viscosity, dynamic: No data available

Viscosity, kinematic: No data available

Explosive properties: Not explosive

Oxidising properties: Not classified

Other information:

Surface tension: 71.5 mN/m, formic acid

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10. STABILITY AND REACTIVITY

Reactivity: Stable.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Stable.

Hazardous decomposition products formed under fire conditions.

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Oxidising agents.

Hazardous decomposition products: Carbon dioxide (CO₂), carbon monoxide

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity: Harmful if swallowed.

Toxic if inhaled.

Acute oral toxicity:

Remarks: Harmful if swallowed. Causes digestive tract burns.

Acute inhalation toxicity:

Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity:

Remarks: No significant adverse effects were reported.

Components: Formic acid

Acute oral toxicity: LD₅₀ Oral (Rat): 500 mg/kg

Acute inhalation toxicity: LC₅₀ (Rat): 7.4 mg/l, exposure time: 4 h, test atmosphere: vapour

Skin corrosion/irritation: Causes severe burns.

Remarks: Causes severe skin burns.

Components: Formic acid

Assessment: Corrosive

Serious eye damage/eye irritation: Causes serious eye damage.

Remarks: Causes serious eye damage.

Components: Formic acid

Assessment: Corrosive

Respiratory or skin sensitisation:

Skin sensitisation: Not classified due to lack of data.

Respiratory sensitisation: Not classified due to lack of data.

Components: Formic acid

Test Type: Buehler Test

Species: Guinea pig

Assessment: Not classified

Method: OECD Test Guideline 406

Result: Not a skin sensitiser.

GLP: Yes

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Germ cell mutagenicity:	Not classified due to lack of data.
Components:	Formic acid
Genotoxicity in vitro:	Result: negative In vitro tests did not show mutagenic effects
Genotoxicity in vivo:	Result: negative, In vivo tests did not show mutagenic effects
Carcinogenicity:	Not classified due to lack of data.
Components:	Formic acid
Result:	Did not show carcinogenic effects in animal experiments.
Test substance:	Read-across (Analogy)
Reproductive toxicity:	Not classified due to lack of data.
Components:	Formic acid
Effects on foetal development:	
Remarks:	Did not show teratogenic effects in animal experiments. Read-across (Analogy).
STOT-single exposure:	Not classified due to lack of data.
Remarks:	No data is available on the product itself.
STOT-repeated exposure:	Not classified due to lack of data.
Remarks:	No data is available on the product itself.
Repeated dose toxicity:	
Components:	Formic acid
Species:	Rat
NOAEL:	142 mg/kg
Application Route:	Oral
Method:	OECD Test No. 453: Combined Chronic Toxicity/Carcinogenicity Studies
Test substance:	Read-across (Analogy)
Remarks:	Calculated
Species:	Rat
NOAEC:	0.122 mg/l
Application Route:	Inhalation
Method:	OECD Test Guideline 413
Remarks:	Local
Species:	Rat
NOAEC:	0.244 mg/l
Application Route:	Inhalation
Method:	OECD Test Guideline 413
Remarks:	Systemic toxicity
Aspiration hazard:	Not classified due to lack of data.
Product:	No aspiration toxicity classification

Endocrine disrupting properties: This substance/mixture does not contain components considered to have endocrine disrupting properties for human health according to UK REACH Article 57(f).

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Experience with human exposure:

Product:

Inhalation - Remarks: Toxic if inhaled.
Skin contact - Remarks: Causes skin burns.
Eye contact - Remarks: Risk of serious damage to eyes.
Ingestion - Remarks: Harmful if swallowed.

Further information:

Product:

Remarks: None known.

12. ECOLOGICAL INFORMATION

Toxicity:

Components: Formic acid

Toxicity to fish: LC50 (Danio rerio (zebra fish)) 130 mg/l. Exposure time: 96 h. Test substance: read-across (analogy), method: OECD Test Guideline 203, remarks: fresh water

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 365 mg/l Exposure time: 48 h. Test substance: read-across (analogy), method: OECD Test Guideline 202, remarks: fresh water

Toxicity to algae/aquatic plants: EC50 (Pseudokirchneriella subcapitata (algae)): 1,240 mg/l. Exposure time: 72 h. Test substance: read-across (analogy), method: OECD Test Guideline 201, remarks: fresh water

Persistence and degradability: Formic acid. Readily biodegradable, according to appropriate OECD test.

Bio accumulative potential: Formic acid does not bioaccumulate.
Bioconcentration factor (BCF) 3.2, Log Pow -2.1 (23°C)

Mobility in soil:

Mobility: Medium: Water.
Remarks: Completely soluble

Results of PBT and vPvB assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects:

Endocrine disrupting properties: This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f).

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13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Product: Dispose of in accordance with local regulations.

Contaminated packaging: In accordance with local and national regulations.
The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

14. TRANSPORT INFORMATION

UN number:

ADN, ADR, IMDG, IATA: 1779

Proper shipping name:

ADN, ADR, IMDG, IATA: FORMIC ACID

Hazard class:

ADN, ADR, IMDG, IATA: 8 (3)

Packing group:

AND:

Packing group: II

Classification Code: CF1

Labels: 8 (3)

ADR:

Packing group: II

Classification Code: CF1

Hazard Identification Number: 83

Labels: 8 (3)

Tunnel restriction code: (D/E)

IMDG:

Packing group: II

Labels: 8 (3)

EmS Code: F-E, S-C

IATA:

Packing instruction (cargo aircraft): 855

Packing instruction (passenger aircraft): 851

Packing instruction (LQ): Y840

Packing group: II

Labels: Corrosive, Flammable liquids

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Environmental hazards:

ADR:

Environmentally hazardous: No

IMDG:

Marine pollutant: No

Special provisions: The transport classification(s) provided herein are for informational purposes only and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable for product as supplied.

15. REGULATORY INFORMATION

Chemical safety assessment: A chemical safety assessment has been carried out.

Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Full text of H-Statements:

- H226: Flammable liquid and vapour.
- H290: May be corrosive to metals.
- H302: Harmful if swallowed.
- H314: Causes severe skin burns and eye damage.
- H318: Causes serious eye damage.
- H331: Toxic if inhaled.

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.