SAFETY DATA SHEET

FORMIC ACID 78.5 - 85 %

Compilation date: 01/04/2015

Revision No: 1

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

1.1. Product identifier

Product name: FORMIC ACID 78.5 - 85 %

REACH registered name: FORMIC ACID

REACH registered number(s): 01-2119491174-37-XXXX

CAS number: 64-18-6

EINECS number: 200-579-1

Index number: 607-001-00-0

Synonyms: METHANOIC ACID 78.5 - 85 %

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

Use of substance / mixture: Descaling. Preservative. Animal Feed Processing. Chemical manufacturing.

1.3. Details of the supplier of the safety data sheet

Company name: Abbeychem Limited T/A Abbey Chemicals
Victory House
245 Southtown Road
Great Yarmouth
Norfolk
NR31 0JJ

sales@abbeychemicals.co.uk

1.4. Emergency telephone number

Emergency tel: +44 (0) 1270 502891

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: C: R35

Classification under CLP: Acute Tox. 3: H331; Acute Tox. 4: H302; Skin Corr. 1B: H314; Eye Dam. 1: H318; -: EUH071

Most important adverse effects: Causes severe burns.

2.2. Label elements

Label elements under CLP:

Hazard statements: H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H331: Toxic if inhaled.

EUH071: Corrosive to the respiratory tract.

[cont...]

Signal words: Danger

Hazard pictograms: GHS05: Corrosion

GHS06: Skull and crossbones

Precautionary statements: P260: Do not breathe fume/mist/vapours/spray.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P303+361+353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Label elements under CHIP:

Hazard symbols: Corrosive.

Risk phrases: R35: Causes severe burns.

Safety phrases: S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

FORMIC ACID 100 % - REACH registered number(s): 01-2119491174-37-XXXX

EINECS	CAS	CHIP Classification	CLP Classification	Percent
200-579-1	64-18-6	C: R35	Flam. Liq. 3: H226; Acute Tox. 3: H331; Acute Tox. 4: H302; Skin Corr. 1A: H314; Eye Dam. 1: H318	78.4-85%

[cont...]

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Wash out mouth with water. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If conscious, ensure the casualty sits or lies down. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible. Move to fresh air in case of accidental inhalation of vapours.

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

Skin contact: Irritation or pain may occur at the site of contact. There may be redness or whiteness of the skin in the area of exposure. Blistering may occur. Severe burns may occur.

Eye contact: There may be severe pain. The eyes may water profusely. Corneal burns may occur. Risk of serious damage to eyes.

Ingestion: Moderately toxic, although there is very low risk during normal industrial use. Harmful if swallowed. Corrosive burns may appear around the lips. May cause throat burns. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting. Blood may be vomited.

Inhalation: Inhalation may be fatal. There may be irritation of the throat with a feeling of tightness in the chest. There may be coughing and a sore throat. There may be congestion of the lungs causing severe shortness of breath. There may be loss of consciousness. Corrosive to the mucous membrane. Prolonged or repeated exposure may cause ulceration and perforation of the nasal septum.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Show this safety data sheet to the doctor in attendance. In case of pulmonary irritation treat initially with dexamethasone metered-dose aerosol. A decontamination shower should be available on the premises. Eye bathing equipment should be available on the premises.

[cont...]

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Toxic. Corrosive. In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Wear suitable protective clothing. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Remove all incompatible materials as outlined in section 10 of SDS.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Wash the spillage site with large amounts of water.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Wear suitable protective clothing. Ensure there is sufficient ventilation of the area. Avoid the formation or spread of mists in the air. Avoid contact with the material and breathing its vapours.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. Avoid incompatible materials and conditions - see section 10 of SDS. Do not store near foodstuffs.

Suitable packaging: Plastic. Plastic-lined.

7.3. Specific end use(s)

Specific end use(s): No special requirement.

[cont...]

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: **Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	9.6 mg/m3	-	-	-

DNEL/PNEC Values

FORMIC ACID 78.5 - 85 %

Type	Exposure	Value	Population	Effect
DNEL	Inhalation (repeated dose)	9.5 mg/m3	Workers	Local
DNEL	Inhalation	19 mg/m3	Workers	Systemic
DNEL	Inhalation (repeated dose)	3 mg/m3	Consumers	Local
DNEL	Inhalation	9.5 mg/m3	Consumers	Systemic
PNEC	Fresh Water	2 mg/l	-	-
PNEC	Marine Water	0.2 mg/l	-	-
PNEC	Aqua Intermittent	1 mg/l	-	-
PNEC	Fresh Water Sediment	13.4 mg/kg dry weigh	-	-
PNEC	Marine Water Sediment	1.34 mg/kg dry weigh	-	-
PNEC	Soil	1.5 mg/kg dry weight	-	-
PNEC	Sewage Treatment Plant	7.2 mg/l	-	-

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure all engineering measures mentioned in section 7 of SDS are in place.

Respiratory protection: Gas/vapour filter, type A: organic vapours (EN141). Gas/vapour filter, type E: sulphur dioxide and other acid gases (EN141).

Hand protection: Gloves (acid resistant). Butyl gloves. Viton gloves.

Eye protection: Safety goggles. Face-shield. Ensure eye bath is to hand.

Skin protection: Wear full chemical suit. Wear wellingtons. Ensure safety shower is to hand.

Environmental: Ensure all engineering measures mentioned in section 7 of SDS are in place.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Pungent

[cont...]

Evaporation rate: Slow

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Miscible in all proportions

Also soluble in: Most organic solvents.

Viscosity: Non-viscous

Boiling point/range°C: ~ 100

Melting point/range°C: ~ -9

Flammability limits %: lower: 14

upper: 33

Flash point°C: ~ 65

Part.coeff. n-octanol/water: -2.1

Autoflammability°C: ~ 520

Vapour pressure: 43 mbar @ 20oC

Relative density: ~ 1.2 g/ml @ 20 oC

pH: <2

9.2. Other information

Other information: Product is not flammable. No further information available at this time.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong bases. Strong oxidising agents. Amines. Finely powdered metals. Acetic Anhydride Mineral Acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units

VAPOURS	RAT	4H LC50	7.4 (As Formic Acid)	mg/l
ORAL	RAT	LD50	730 (As Formic Acid)	mg/kg

Relevant effects for mixture:

Effect	Route	Basis
Corrosivity	OPT INH DRM	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: Irritation or pain may occur at the site of contact. There may be redness or whiteness of the skin in the area of exposure. Blistering may occur. Severe burns may occur.

Eye contact: There may be severe pain. The eyes may water profusely. Corneal burns may occur. Risk of serious damage to eyes.

Ingestion: Moderately toxic, although there is very low risk during normal industrial use. Harmful if swallowed. Corrosive burns may appear around the lips. May cause throat burns. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting. Blood may be vomited.

Inhalation: Inhalation may be fatal. There may be irritation of the throat with a feeling of tightness in the chest. There may be coughing and a sore throat. There may be congestion of the lungs causing severe shortness of breath. There may be loss of consciousness. Corrosive to the mucous membrane. Prolonged or repeated exposure may cause ulceration and perforation of the nasal septum.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Other information: There is no further information at this time.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
ALGAE	72H IC50	26.9	mg/l
FISH	96H LC50	46 - 100	mg/l
DAPHNIA	48H EC50	32.19	mg/l

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: Low potential to bioaccumulate.

12.4. Mobility in soil

Mobility: Readily absorbed into soil. Soluble in water. Non-volatile.

12.5. Results of PBT and vPvB assessment

Persistence (P-):

Persistence result: not P-

Bioaccumulation (B-):

Bioaccumulation result: not B-

Toxicity (T-):

mg/l

NOEC for marine or freshwater organisms: >0.1

Toxicity result: not T-

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Harmful to aquatic organisms. Harmful to fauna. Do not allow to enter watercourses or soils. Do not allow to enter watercourses or soils. Large doses causes high/low pH which may affect effluent and sewage treatment processes. Discharge of large quantities may kill fish and other aquatic life due to increase/decrease in pH.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Recovery operations: No information available at this time.

Disposal of packaging: Contaminated containers must not be treated as household waste. Where practical, containers and packaging should be recycled by a licenced contactor.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN3412

14.2. UN proper shipping name

Shipping name: FORMIC ACID

14.3. Transport hazard class(es)

Transport class: 8

14.4. Packing group

Packing group: II

14.5. Environmental hazards

Environmentally hazardous: No **Marine pollutant:** No

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 2

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk: Pollution Category: Y Ship Type: 3

Section 15: Regulatory information

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

Specific regulations: This product is a Seveso category/named substance in Annex I of Council Directive 96/82/EC. Commission Regulation No. 10/2011 relating to plastic materials and articles intended to come into contact with food. Council Directive 76/768/EEC on the approximation of the laws of the Member States relating to cosmetic products. Regulation (EC) No 1223/2009 of the European Parliment and of the Council on cosmetic products.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

WARNING: For professional use only.

Phrases used in s.2 and s.3: EUH071: Corrosive to the respiratory tract.

H226: Flammable liquid and vapour.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H331: Toxic if inhaled.

R35: Causes severe burns.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive

[cont...]

and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.