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Safety data sheet

BASF Safety data sheet
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Product: **Amasil® 85**

(30041102/SDS_GEN_SG/EN)
Date of print: 21.10.2025

1. Substance/preparation and manufacturer/supplier identification

Product name:
Amasil® 85

Use: feed additive(s)

Manufacturer/supplier:
BASF South East Asia Pte Ltd.
128 Beach Road #18-01
Guoco Midtown, 189773, Singapore
Telephone: +65 8322 4420
Telefax number: +65 6 334-0330
E-mail address: benny.zou@basf.com

Emergency information:
Singapore Emergency Toll-Free Number:
Telephone: 1800-723-1361
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:
Flammable liquids: Cat.4
Acute toxicity: Cat.3 (Inhalation - vapour)
Acute toxicity: Cat.4 (oral)
Skin corrosion: Cat.1B
Serious eye damage: Cat.1

Label elements and precautionary statement:

Pictogram:

Signal Word:
Danger

Hazard Statement:

H227	Combustible liquid.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary Statements (Prevention):

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing and eye protection or face protection.
P260	Do not breathe dust/gas/mist/vapours.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

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.
P310	Immediately call a POISON CENTER or physician.
P311	Call a POISON CENTER or physician.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use alcohol-resistant foam, carbon dioxide, dry powder or water spray for extinction.

Precautionary Statements (Storage):

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Other hazards which do not result in classification:
If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Corrosive to the respiratory tract.

3. Composition/information on ingredients

Chemical nature

Substance nature: mixture

carboxylic acid
, formic acid (Content (W/W): > 85 %)

Hazardous ingredients

formic acid

Content (W/W): >= 85 % - <= 86 %	Flam. Liq.: Cat. 3
CAS Number: 64-18-6	Acute Tox.: Cat. 3 (Inhalation - vapour)
	Acute Tox.: Cat. 4 (oral)
	Skin Corr.: Cat. 1A
	Eye Dam.: Cat. 1

4. First-Aid Measures

General advice:
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:
Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

On contact with eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Do not induce vomiting. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, dry powder, alcohol-resistant foam, carbon dioxide

Specific hazards:
carbon monoxide
The substances/groups of substances mentioned can be released if the product is involved in a fire.

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

6. Accidental Release Measures

Personal precautions:
Breathing protection required.Avoid contact with the skin, eyes and clothing.

Environmental precautions:
Do not empty into drains.

Methods for cleaning up or taking up:
For large amounts: Pump off product.
For residues: Pick up with suitable absorbent material (e.g. acid binder). Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Handling

Ensure thorough ventilation of stores and work areas. Sealed containers should be protected against heat as this results in pressure build-up.

Protection against fire and explosion:
Sources of ignition should be kept well clear.

Storage

Segregate from alkalies and alkalizing substances.

Suitable materials for containers: Stainless steel 1.4571, Stainless steel 1.4404, High density polyethylene (HDPE), Low density polyethylene (LDPE), glass
Unsuitable materials for containers: Paper/Fibreboard, Carbon steel (Iron)

Storage stability:
Storage temperature: < 30 °C
Storage duration: <= 36 Months
From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.

8. Exposure controls and personal protection

Components with occupational exposure limits

formic acid, 64-18-6;
TWA value 5 ppm (ACGIHTLV)
TWA value 9.4 mg/m3 ; 5 ppm (OEL (SG))
STEL value 19 mg/m3 ; 10 ppm (OEL (SG))

Personal protective equipment

Respiratory protection:
Suitable respiratory protection for lower concentrations or short-term effect: Gas filter for acid inorganic gases/vapours such as SO2, HCl (e.g. EN 14387 Type E). Gas filter for gases/vapours of inorganic compounds (e.g. EN 14387 Type B) Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK). Suitable respiratory protection for higher concentrations or long-term effect: Self-contained breathing apparatus.

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
Performance level 6, corresponding to a breakthrough time of >480 min according to EN ISO 374-1
chloroprene rubber (CR) - 0.5 mm coating thickness
butyl rubber (butyl) - 0.7 mm coating thickness
fluoroelastomer (FKM) - 0.7 mm coating thickness
Polyethylene-Laminate (PE laminate) - ca. 0.1 mm coating thickness
Performance level 5, corresponding to a breakthrough time of >240 min according to EN ISO 374-1
polyvinylchloride (PVC) - 0.7 mm coating thickness
Performance level 3, corresponding to a breakthrough time of >60 min according to EN ISO 374-1
natural rubber/natural latex (NR) - 0.5 mm coating thickness
Performance level 1, corresponding to a breakthrough time of >10 min according to EN ISO 374-1
nitrile rubber (NBR) - 0.4 mm coating thickness
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Tightly fitting safety goggles (cage goggles) (e.g. EN 166) and face shield.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:
Contact with eyes and skin must be avoided. Avoid inhalation of vapour. Avoid contact with skin and eyes. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Hands and/or face should be washed before breaks and at the end of the shift. When using, do not eat, drink or smoke.

9. Physical and Chemical Properties

Form:	liquid	
Colour:	colourless to yellow	
Odour:	of formic acid, pungent odour	
Odour threshold:	not determined	
pH value:	2.2 (10 g/l, 20 °C)	
pKA:	3.70 (20 °C)	(OECD Guideline 112)
Melting point:	-13 °C	
Boiling point:	107.3 °C	
Flash point:	65 °C Refers to Formic acid 85%	(DIN 51755)
Information on: formic acid		
Flash point:	49.5 °C	(Directive 92/69/EEC, A.9, closed cup)

Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability (solid/gas):	Combustible liquid.	(derived from flash - and boiling point)
Lower explosion limit:	14.9 %(V)	
Upper explosion limit:	47.6 %(V)	
Ignition temperature:	500 °C	(DIN 51794)
Thermal decomposition:	No data available.	
Self heating ability:	not applicable, the product is a liquid	
SADT:	Substance/mixture liable to self-decomposition according to GHS.	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	
Vapour pressure:	24.2 hPa (20 °C) 112.5 hPa (50 °C)	
Density:	1.195 g/cm3 (20 °C) 1.20 g/cm3 (15 °C)	

1.173 g/cm3
(40 °C)
1.161 g/cm3
(50 °C)
1.15 g/cm3
(55 °C)

Relative density:
No data available.

Relative vapour density (air):
Water content greater than 10%.

Solubility in water: miscible
(20 °C, 1,013.25 hPa)

Miscibility with water:
miscible in all proportions

Solubility (qualitative) solvent(s): organic solvents
miscible

Partitioning coefficient n-octanol/water (log Pow): -1.9
(23 °C; pH value: 5)

Adsorption/water - soil: KOC: < 17.8; log KOC: 1.25 (OECD Guideline 121)

Surface tension: 71.5 mN/m (OECD Guideline 115)
(20 °C; 1 g/l)

Viscosity, dynamic: 1.70 mPa.s
(20 °C)
0.92 mPa.s
(55 °C)

Viscosity, kinematic: 1.42 mm2/s
(20 °C)
0.8 mm2/s
(55 °C)

Molar mass: 46.03 g/mol

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

Specific Surface Area:
No data available.

Particle Shape:
No data available.

Dustiness:
No data available.

10. Stability and Reactivity

Conditions to avoid:
Temperature: > 30 °C

Thermal decomposition: No data available.

Substances to avoid:
bases, non-coated metals, base metals

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:
Reacts with alkalies. Reacts with amines. Exothermic reaction.

Hazardous decomposition products:
carbon monoxide

Chemical stability:
Slow decomposition possible.

Reactivity:
No hazardous reactions if stored and handled as prescribed/indicated.

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:
LD50rat (oral): 730 mg/kg (OECD Guideline 401)

Acute inhalation toxicity

LC50 rat (by inhalation): 7.85 mg/l 4 h (BASF-Test)

Acute dermal toxicity

(dermal):No data available. Study scientifically not justified.

Assessment of acute toxicity

Of moderate toxicity after single ingestion. Of pronounced toxicity after short-term inhalation.

Symptoms

Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Irritation

Assessment of irritating effects:
Highly corrosive! Damages skin and eyes.

Experimental/calculated data:
Skin corrosion/irritation rabbit: Corrosive. (OECD Guideline 404)
Literature data.

Serious eye damage/irritation:Study scientifically not justified. As the product corrodes the skin, it can be expected to have a similar effect on the eyes also.

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:
Buehler test guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:
No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in an insect test.

Carcinogenicity

Assessment of carcinogenicity:
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
No data available.

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
No data available.

Developmental toxicity

Assessment of teratogenicity:
No indications of a developmental toxic / teratogenic effect were seen in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Specific target organ toxicity (single exposure)

Corrosive to the respiratory tract.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
No substance-specific organtoxicity was observed after repeated administration to animals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
No data available.

Aspiration hazard

No aspiration hazard expected.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.
The product gives rise to pH shifts.

Toxicity to fish:
LC50 (96 h) 130 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 92/69/EWG, C.1, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

LC50 (96 h) 68 mg/l, Leuciscus idus (DIN 38412 Part 15, static)
The details of the toxic effect relate to the nominal concentration. After neutralization, it is no longer toxic.

Aquatic invertebrates:
EC50 (48 h) 365 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The statement of the toxic effect relates to the analytically determined concentration.

EC50 (48 h) 32.19 mg/l, Daphnia magna (Directive 79/831/EEC, static)
The details of the toxic effect relate to the nominal concentration. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample.

Aquatic plants:
EC50 (72 h) 1,240 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

EC50 (72 h) 32.64 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9, static)
The details of the toxic effect relate to the nominal concentration. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample.

Microorganisms/Effect on activated sludge:
EC10 (13 d) 72 mg/l, activated sludge, domestic, non-adapted (other, aerobic)

Chronic toxicity to fish:
Study scientifically not justified.

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d), >= 100 mg/l, Daphnia magna (OECD Guideline 211, semistatic)
The statement of the toxic effect relates to the analytically determined concentration. The product will cause changes in the pH value of the test system. The result refers to a neutralized sample. No effects at the highest test concentration.

Assessment of terrestrial toxicity:
Study scientifically not justified.

Other terrestrial non-mammals:
LD50 (18 h) >= 111 mg/kg, Agelaius phoeniceus
Literature data.

Mobility

Assessment transport between environmental compartments:
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Persistence and degradability

Elimination information:
100 % DOC reduction (9 d) (OECD 301E/92/69/EWG, C.4-B) (aerobic, municipal sewage treatment plant effluent)

Assessment of stability in water:
According to structural properties, hydrolysis is not expected/probable.

Information on Stability in Water (Hydrolysis):
$t_{1/2}$ > 5 d (50 °C, pH value 4), (Directive 92/69/EEC, C.7, pH 4)

$t_{1/2}$ > 5 d (50 °C, pH value 7), (Directive 92/69/EEC, C.7, pH 7)

$t_{1/2}$ > 5 d (50 °C, pH value 9), (Directive 92/69/EEC, C.7, pH 9)

Bioaccumulation potential

Assessment bioaccumulation potential:
No data available.

Bioaccumulation potential:
Significant accumulation in organisms is not to be expected.

13. Disposal Considerations

Incinerate in suitable incineration plant, observing local authority regulations.
Do not discharge into waterways or sewer systems without proper authorization.
A waste code in accordance with the European waste catalog (EWC) cannot be specified, due to dependence on the usage.
The waste code in accordance with the European waste catalog (EWC) must be specified in cooperation with disposal agency/manufacturer/authorities.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Domestic transport:

UN number or ID number:	UN 1779
UN proper shipping name:	FORMIC ACID
Transport hazard class(es):	8, 3
Packing group:	II
Environmental hazards:	no
Special precautions for user:	None known

Sea transport
IMDG

UN number or ID number:	UN 1779
UN proper shipping name:	FORMIC ACID
Transport hazard class(es):	8, 3
Packing group:	II
Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	EmS: F-E; S-C

Air transport
IATA/ICAO

UN number or ID number:	UN 1779
UN proper shipping name:	FORMIC ACID
Transport hazard class(es):	8, 3
Packing group:	II
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

Maritime transport in bulk according to IMO instruments

Regulation:	IBC-Code
Product name:	Formic acid (over 85%)
Pollution category:	Y
Ship Type:	3

15. Regulatory Information

Other regulations

16. Other Information

flue gas desulphurizationrubber industrytextile industryleather industryplastics processing industry

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.