

Safety data sheet

Page: 1/17

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 20.12.2018

Version: 5.0

Product: **Amasil® NA**

(ID no. 30286605/SDS_GEN_GB/EN)

Date of print 21.12.2018

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

1.1. Product identifier

Amasil® NA

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

Relevant identified uses: feed additive(s)

1.3. Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY

Contact address:
BASF plc
PO Box 4, Earl Road, Cheadle Hulme,
Cheadle, Cheshire
SK8 6QG, UNITED KINGDOM

Telephone: +44 161 485-6222
E-mail address: product-safety-north@basf.com

1.4. Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Acute Tox. 4 (Inhalation - vapour)
Acute Tox. 4 (oral)

Skin Corr./Irrit. 2

Eye Dam./Irrit. 1

H318, H315, H332, H302

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elementsAccording to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318	Causes serious eye damage.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H302	Harmful if swallowed.

Precautionary Statements (Prevention):

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye/face protection.
P261	Avoid breathing vapours.
P260	Do not breathe mist or vapour.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P310	Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P330	Rinse mouth.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

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

According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: formic acid...%

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

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. The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

Preparation based on: formic acid...%, Sodium formate

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

formic acid...%

Content (W/W): $\geq 50\%$ - $< 75\%$	Flam. Liq. 3
CAS Number: 64-18-6	Acute Tox. 3 (Inhalation - vapour)
EC-Number: 200-579-1	Acute Tox. 4 (oral)
REACH registration number: 01-2119491174-37	Skin Corr./Irrit. 1A
INDEX-Number: 607-001-00-0	Eye Dam./Irrit. 1
	H226, H331, H302, H314
	EUH071

Specific concentration limit:

Eye Dam./Irrit. 2: 2 - $< 10\%$
Skin Corr./Irrit. 2: 2 - $< 10\%$
Skin Corr./Irrit. 1B: 10 - $< 90\%$
Skin Corr./Irrit. 1A: $\geq 90\%$

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

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:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

5.2. Special hazards arising from the substance or mixture

harmful vapours, carbon oxides

The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Cool endangered containers with water-spray.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Information regarding personal protective measures see, section 8. Avoid dust formation. Ensure adequate ventilation. Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing.

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

For large amounts: Dike spillage. Pump off product.

For residues: Pick up with suitable absorbent material (e.g. acid binder).

Dispose of absorbed material in accordance with regulations. Cleaning operations should be carried out only while wearing breathing apparatus.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Use with local exhaust ventilation. Wear suitable protective clothing and eye/face protection. Avoid contact with the skin, eyes and clothing. This product may cause irritations; wash your hands after every contact. Keep container tightly sealed.

Protection against fire and explosion:

Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

7.2. Conditions for safe storage, including any incompatibilities

Segregate from alkalies and alkalizing substances.

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Keep container tightly closed and in a well-ventilated place. Protect against heat.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

64-18-6: formic acid...%

TWA value 9.6 mg/m³ ; 5 ppm (WEL/EH 40 (UK))

TWA value 9 mg/m³ ; 5 ppm (OEL (EU))

indicative

DNEL

Data refer to the lead substance

Components with DNEL

64-18-6: formic acid...%

worker: Long-term exposure - systemic and local effects, Inhalation: 9.5 mg/m³

consumer: Short-term exposure - systemic and local effects, Inhalation: 9.5 mg/m³

consumer: Long-term exposure - systemic and local effects, Inhalation: 3 mg/m³

worker: Short-term exposure - systemic and local effects, Inhalation: 19 mg/m³

8.2. Exposure controls

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:

Wear chemically resistant gloves in combination with specific activity training

Wear chemical resistant protective gloves.

butyl rubber (butyl) - 0.7 mm coating thickness

chloroprene rubber (Neoprene)

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.

Eye protection:

Tightly fitting safety goggles (splash goggles) (e.g. EN 166)

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

Avoid contact with the skin, eyes and clothing. Hands and/or face should be washed before breaks and at the end of the shift.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	liquid	
Colour:	clear	
Odour:	pungent	
Odour threshold:	Not determined since harmful by inhalation.	
pH value:	2.6 - 3.2 (water, 10 %(m))	
Melting point:	-25 °C	
boiling temperature:	117.6 °C (1,013.3 hPa)	(Directive 92/69/EEC, A.2)
Flash point:	> 110 °C	(DIN ISO 2592)
Evaporation rate:	not determined	
Flammability:	hardly combustible	(derived from flash point)
Lower explosion limit:	For liquids not relevant for classification and labelling.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	520 °C	
Vapour pressure:	12.3 hPa (20 °C) dynamic	(measured)
Density:	1.3009 g/cm ³ (20 °C)	(ISO 2811-3)
Relative density:	approx. 1.3 (20 °C)	
Relative vapour density (air):	not determined	
Solubility in water:	soluble	
Partitioning coefficient n-octanol/water (log Kow):	not applicable for mixtures	
Thermal decomposition:	not determined	
Viscosity, dynamic:	9.29 mPa.s (20 °C)	(DIN 51550)
Explosion hazard:	Based on the chemical structure there is no indicating of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	

9.2. Other information

Self heating ability: not applicable, the product is a liquid

Miscibility with water:

miscible in all proportions

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

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

Corrosion to metals: The product is not to be labelled as corrosive for transport purposes.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

Reacts with bases. Risk of exothermic reaction. No hazardous reactions when stored and handled according to instructions.

10.4. Conditions to avoid

See MSDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid:
bases

10.6. Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Of moderate toxicity after single ingestion. Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single skin contact. The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: formic acid...%**Experimental/calculated data:**LD50 rat (oral): 730 mg/kg (OECD Guideline 401)**Information on: Sodium formate**Experimental/calculated data:**LD50 mouse (oral): > 11,200 mg/kg (similar to OECD guideline 401)**An aqueous solution was tested.*
-----*Information on: formic acid...%**Experimental/calculated data:**LC50 rat (by inhalation): 7.85 mg/l 4 h (BASF-Test)**Information on: Sodium formate**Experimental/calculated data:**LC0 rat (by inhalation): > 0.67 mg/l 4 h (similar to OECD guideline 403)**No mortality was observed. Tested as dust aerosol.*
-----Irritation

Assessment of irritating effects:

Skin contact causes irritation. May cause severe damage to the eyes.

Experimental/calculated data:

Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)

Serious eye damage/irritation cattle: irreversible damage (BCOP)

Respiratory/Skin sensitization

Assessment of sensitization:

No sensitizing effect. The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: formic acid...%**Experimental/calculated data:**Buehler test guinea pig: Non-sensitizing. (OECD Guideline 406)**Information on: Sodium formate**Experimental/calculated data:**Guinea pig maximization test guinea pig: Non-sensitizing. (OECD Guideline 406)**The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. An aqueous solution was tested.*
-----Germ cell mutagenicity

Assessment of mutagenicity:

Based on available Data, the classification criteria are not met.

*Information on: formic acid...%**Assessment of mutagenicity:*

No mutagenic effect was found in various tests with bacteria and mammalian cell culture.

*Information on: Sodium formate**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. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Carcinogenicity**Assessment of carcinogenicity:**

Based on available Data, the classification criteria are not met.

*Information on: formic acid...%**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.

*Information on: Sodium formate**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.

Reproductive toxicity**Assessment of reproduction toxicity:**

Based on available Data, the classification criteria are not met.

*Information on: formic acid...%**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.

*Information on: Sodium formate**Assessment of reproduction toxicity:*

The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:

Based on available Data, the classification criteria are not met.

Information on: formic acid...%

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.

Information on: Sodium formate

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Specific target organ toxicity (single exposure)

No data available.

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

Assessment of repeated dose toxicity:

Based on available Data, the classification criteria are not met.

Information on: formic acid...%

Assessment of repeated dose toxicity:

After repeated administration the prominent effect is the induction of corrosion.

Information on: Sodium formate

Assessment of repeated dose toxicity:

Causes irritating effects at esophagus and the gastro-intestinal tract. Observed effects were reversible. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aspiration hazard

No data available.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

Chronic toxicity to fish:

Study scientifically not justified.

*Information on: formic acid...%**Toxicity to fish:**LC50 (96 h) 130 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 92/69/EEC, C.1, static)**The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.**Information on: Sodium formate**Toxicity to fish:**LC50 (96 h) > 1,000 mg/l, Oncorhynchus mykiss (Fish test acute, Flow through.)**The details of the toxic effect relate to the nominal concentration. No effects at the highest test concentration.**LC50 (96 h) 1,720 mg/l, Scophthalmus maximus (Fish test acute, semistatic)**The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Nominal concentration.**Information on: formic acid...%**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.**Information on: Sodium formate**Aquatic invertebrates:**EC50 (48 h) > 1,000 mg/l, Daphnia magna (Daphnia test acute, Flow through.)**The details of the toxic effect relate to the nominal concentration.**LC50 (96 h) 1,308 mg/l, Crangon crangon (semistatic)**The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Nominal concentration.**Information on: formic acid...%**Aquatic plants:**EC50 (72 h) 1,240 mg/l (growth rate), Selastrum 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.**Information on: Sodium formate**Aquatic plants:**EC50 (72 h) > 1,000 mg/l (growth rate), Pseudokirchneriella subcapitata (Algal growth inhibition test, static)**Nominal concentration.**Information on: Sodium formate**Microorganisms/Effect on activated sludge:**No observed effect concentration (28 d) 22.13 mg/l, aerobic microorganisms (Oxygen consumption test, aerobic)*

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):
Readily biodegradable (according to OECD criteria). The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: formic acid...%

*Assessment biodegradation and elimination (H₂O):
Readily biodegradable (according to OECD criteria).*

Information on: Sodium formate

*Assessment biodegradation and elimination (H₂O):
Readily biodegradable (according to OECD criteria).*

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
Significant accumulation in organisms is not to be expected.
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: formic acid...%

*Assessment bioaccumulation potential:
Significant accumulation in organisms is not to be expected.*

Information on: Sodium formate

*Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.
Study scientifically not justified.*

12.4. Mobility in soil

Information on: formic acid...%

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

Information on: Sodium formate

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

12.5. Results of PBT and vPvB assessment

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 20.12.2018

Version: 5.0

Product: **Amasil® NA**

(ID no. 30286605/SDS_GEN_GB/EN)

Date of print 21.12.2018

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self classification

12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Observe national and local legal requirements.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

SECTION 14: Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Inland waterway transport

ADN

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

Transport in inland waterway vessel

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable

Sea transport

IMDG

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

14.1. UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

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

Regulation:	IBC
Shipment approved:	1
Pollution name:	Formic acid mixture (containing up to 18% propionic acid and up to 25% sodium formate)
Pollution category:	Z
Ship Type:	3

SECTION 15: Regulatory Information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**Prohibitions, Restrictions and Authorizations

Annex XVII of Regulation (EC) No 1907/2006: Number on List: 3

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

15.2. Chemical Safety Assessment

Assessment of safe use has been performed for the mixture and the result is documented in section 7 and 8 of the SDS

SECTION 16: Other Information

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
Eye Dam./Irrit.	Serious eye damage/eye irritation
Flam. Liq.	Flammable liquids
H318	Causes serious eye damage.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H302	Harmful if swallowed.
H226	Flammable liquid and vapour.
H331	Toxic if inhaled.
H314	Causes severe skin burns and eye damage.
EUH071	Corrosive to the respiratory tract.

If you have any queries relating to this MSDS, its contents or any other product safety related questions, please write to the following e-mail address: product-safety-north@basf.com

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.

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