We create chemistry

Safety data sheet

1. Substance/preparation and manufacturer/supplier identification

Product name:
Luprosil®

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.3
Acute toxicity: Cat.5 (oral)
Acute toxicity: Cat.5 (dermal)
Skin corrosion: Cat.1B
Serious eye damage: Cat.1
Specific target organ toxicity — single exposure: Cat.3 (irritating to respiratory system)

Label elements and precautionary statement:

Pictogram:

Signal Word:
Danger

Hazard Statement:

H226	Flammable liquid and vapour.
H335	May cause respiratory irritation.
H314	Causes severe skin burns and eye damage.
H303 + H313	May be harmful if swallowed or in contact with skin.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P271	Use only outdoors or in a well-ventilated area.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/gas/mist/vapours.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P264	Wash contaminated body parts thoroughly after handling.
P240	Ground and bond container and receiving equipment.
P242	Use non-sparking tools.

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.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction.

Precautionary Statements (Storage):

P233	Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
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.

3. Composition/information on ingredients

Chemical nature

Substance nature: Substance

carboxylic acid

Hazardous ingredients

propionic acid

Content (W/W): >= 99.5 % - <= 100 % CAS Number: 79-09-4	Flam. Liq.: Cat. 3 Acute Tox.: Cat. 5 (oral) Acute Tox.: Cat. 5 (dermal) Skin Corr./Irrit.: Cat. 1B Eye Dam./Irrit.: Cat. 1 STOT SE: Cat. 3 (irr. to respiratory syst.)

acetic acid

Content (W/W): >= 0 % - <= 0.2 % CAS Number: 64-19-7	Flam. Liq.: Cat. 3 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:
Immediately administer a corticosteroid from a controlled/metered dose inhaler. Keep patient calm, remove to fresh air, seek medical attention.

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.

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, foam, carbon dioxide

Specific hazards:
carbon oxides, nitrogen oxides
The substances/groups of substances mentioned can be released in case of 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:
Personal protection: wear a tightly closed chemical protection suit and a self-contained breathing apparatus.Wear acid-resistant boots.

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. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Handling

Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Change clothes immediately after contamination.

Protection against fire and explosion:
Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Storage

Segregate from alkalies and alkalizing substances.
Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

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

acetic acid, 64-19-7;
STEL value 15 ppm (ACGIHTLV)
TWA value 10 ppm (ACGIHTLV)
TWA value 25 mg/m3 ; 10 ppm (OEL (SG))
STEL value 37 mg/m3 ; 15 ppm (OEL (SG))

propionic acid, 79-09-4;
TWA value 10 ppm (ACGIHTLV)
TWA value 30 mg/m3 ; 10 ppm (OEL (SG))

Personal protective equipment

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

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):
butyl rubber (butyl) - 0.7 mm coating thickness
Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN ISO 374-1)
nitrile rubber (NBR) - 0.4 mm coating thickness
chloroprene rubber (CR) - 0.5 mm coating thickness

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

Body protection:
acid-proof chemical protection suit (f.e. according to EN 14605)

General safety and hygiene measures:
Avoid contact with the skin, eyes and clothing. Avoid inhalation of vapour. Avoid contact with skin and eyes. Take off immediately all contaminated clothing.

9. Physical and Chemical Properties

Form:	liquid
Colour:	colourless
Odour:	pungent
Odour threshold:	not determined

pH value:	2.5 (100 g/l, 20 °C) Literature data.	
pKA:	4.87 (20 °C)	
Melting point:	-20 °C	
Boiling point:	140.7 - 141.6 °C	
Flash point:	53 °C	(ISO 13736, closed cup)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability (solid/gas):	Flammable liquid and vapour.	(derived from flash point)
Lower explosion limit:	2.1 %(V) (46.9 °C) The lower explosion point of the substance/mixture has been determined. The explosion point describes the temperature of a flammable liquid at which the concentration of the saturated vapour mixed with air equals the lower explosion limit.	
Upper explosion limit:	12.0 %(V)	
Ignition temperature:	485 °C	(DIN 51794)
Thermal decomposition:	not determined	
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	Test type: Spontaneous self-ignition at room-temperature.
Self heating ability:	not applicable, the product is a liquid	
SADT:	Not a substance/mixture liable to self-decomposition according to GHS.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	
Vapour pressure:	5 mbar (20 °C) approx. 23 hPa (50 °C)	
Density:	0.993 g/cm3 (20 °C) Literature data. 0.957 g/cm3 (55 °C) Literature data.	

	0.9990 g/cm3 (15 °C) 0.9610 g/cm3 (50 °C)	
Relative density:	No data available.	
Relative vapour density (air):> 1	(20 °C) Heavier than air.	(estimated)
Solubility in water:	miscible (20 °C)	
Partitioning coefficient n-octanol/water (log Pow):	0.25 (25 °C) 0.33	(Calculation Hansch/Leo)
Adsorption/water - soil:	KOC: 1.201; log KOC: 0.08 The data refer to the uncharged form of the substance. Under environmental conditions, the substance will almost completely be in its charged form.	(calculated)
Surface tension:	Based on chemical structure, surface activity is not to be expected.	
Viscosity, dynamic:	1.102 mPa.s (20 °C) Literature data.	
Viscosity, kinematic:	No data available.	
Molar mass:	74.08 g/mol	

Particle characteristics

Specific Surface Area:	No data available.
Particle Shape:	No data available.
Dustiness:	No data available.

10. Stability and Reactivity

Conditions to avoid:
No conditions to avoid anticipated.

Thermal decomposition: not determined

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

Corrosion to metals: Corrosive effects to metal are not anticipated.
In the presence of water or moisture metal corrosion cannot be excluded.

Hazardous reactions:
Reacts with strong alkalies. Exothermic reaction.

No hazardous decomposition products known.

Chemical stability:
The product is chemically stable.

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:
LD50rat (oral): 3,455 mg/kg (similar to OECD guideline 401)

Acute inhalation toxicity

LC50 rat (by inhalation): > 19.7 mg/l 1 h (OECD Guideline 403)
The vapour was tested.

LC0 rat (by inhalation): 24.4 mg/l 8 h (IRT)
Literature data. No mortality within the stated exposition time as shown in animal studies. The vapour was tested.

Acute dermal toxicity

LD50 rat (dermal): 3,235 mg/kg (similar to OECD guideline 402)

Assessment of acute toxicity

Of low toxicity after single ingestion. Virtually nontoxic by inhalation. Of low toxicity after short-term skin contact. Inhalation-risk test (IRT): No mortality within 8 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard.

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:
Corrosive! Damages skin and eyes.

Experimental/calculated data:
Skin corrosion/irritation rabbit: Corrosive. (BASF-Test)

Serious eye damage/irritation rabbit: irreversible damage (Draize test)
Literature data.

Respiratory/Skin sensitization

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:
Guinea pig maximization test guinea pig: Non-sensitizing. (similar to OECD guideline 406)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Germ cell mutagenicity

Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in studies with mammals. 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:
In long-term animal studies in which the substance was given in high concentrations by feed, a carcinogenic effect was not observed.

Experimental/calculated data:
No data available.

Reproductive toxicity

Assessment of reproduction toxicity:
No data available. Study scientifically not justified.

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)

Causes temporary irritation of 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. After repeated administration the prominent effect is the induction of corrosion.

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. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:
LC50 (96 h) > 10,000 mg/l, Leuciscus idus (DIN 38412 Part 15, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates:
EC50 (48 h) > 500 mg/l, Daphnia magna (Directive 84/449/EEC, C.2, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants:
EC50 (72 h) > 500 mg/l (biomass), Scenedesmus subspicatus (OECD Guideline 201, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Microorganisms/Effect on activated sludge:
EC20 (30 min) 500 - 1,040 mg/l, activated sludge, domestic (DIN EN ISO 8192, aquatic)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to fish:
Study scientifically not justified.

Chronic toxicity to aquatic invertebrates:
Study scientifically not justified.

Assessment of terrestrial toxicity:

Soil living organisms:
No data available.

Terrestrial plants:
EC50 (3 d) 125.8 mg/l, Lactuca sativa
Literature data.

Other terrestrial non-mammals:
No data available.

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:
approx. 74 % BOD of the ThOD (30 d) (other) (aerobic, activated sludge, domestic)

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

Information on Stability in Water (Hydrolysis):
The product has not been tested. The statement has been derived from the structure of the product.

Sum parameter

Chemical oxygen demand (COD): 1,520 mg/g

Biochemical oxygen demand (BOD) Incubation period 5 d: 1,300 mg/g

Bioaccumulation potential

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

Bioaccumulation potential:
Accumulation in organisms is not to be expected.

13. Disposal Considerations

Incinerate in suitable incineration plant, observing local authority regulations.

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 3463
UN proper shipping name:	PROPIONIC 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 3463

UN proper shipping name:	PROPIONIC 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 3463
UN proper shipping name:	PROPIONIC 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:	Propionic acid
Pollution category:	Y
Ship Type:	3

15. Regulatory Information

Other regulations

16. Other Information

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.