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SAFETY DATA SHEET

Safety data sheet according to (EF) no. 1907/2006.

POINT 1: Identification of material/compounds and of the company/factory

1.1. Product identifier:

Dancid® Farma
UFI: 8F00-X0Q4-600W-4UV6

1.2. Relevant identifying use of the material or compound and the usage that is contraindicated:

Liquid supplementary feed. Only for commercial use.

1.3. Detailed information about the supplier for the safety data sheet:

Jorenku A/S
Teglvaerksvej 11
4733 Tappernoeje
Denmark
Tel.: +45 56214070

Responsible for safety data sheet (e-mail): jorenku@jorenku.dk

1.4. Emergency phone:

Contact the poison centre in your own country.

POINT 2: Identification of danger

2.1. Classification of the material or compound:

Ætsende, farlig og brandfarlig væske med langtidsvirkninger.
CLP (1272/2008): Flam. Liq. 3;H226 Met. Corr. 1;H290 Skin Corr. 1A;H314 Eye Dam. 1;H318 Acute Tox. 4;H302+H332

2.2. Label elements:

DANGER

Contains:	Formic acid & propionic acid.
H226:	Flammable liquid and vapour.
H290:	May be corrosive to metals.
H302+H332:	Harmful if swallowed or in contact with skin.
H314:	Causes severe skin burns and eye damage.
P261:	Avoid breathing fume.
P210:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233:	Keep container tightly closed.
P280:	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353+P310:	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/ doctor.

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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 CENTER/doctor.
EUH 071: Corrosive to the respiratory tract.

2.3. Other dangers:
PBT/vPvB: The ingredients are not PBT/vPvB according to the criteria in REACH annex XIII.
Endocrine disrupting properties: The ingredients are not considered endocrine disruptors according to the criteria of Regulation 2017/2100 or Regulation 2018/605.

POINT 3: Compensation of/information about contents

3.1. Compensation of/information about contents

3.2. Compounds:

Substance name	CAS	EF-No.	Index-no.	REACH reg.no.	Substance Classification	Note
Formic acid	64-18-6	200-579-1	607-001-0-0	-	Flam. Liq. 3;H226 Met. Corr. 1;H290 Acute Tox 4;H302 Acute Tox 3;H331 Skin Corr. 1A;H314 Eye Dam. 1;H318	1,2,3
Propionic acid	79-09-4	201-176-3	607-089-00-0	01-2119486971-24	Flam. Liq. 3;H226 Skin Corr. 1B;H314 Eye Dam. 1;H318 STOT SE 3;H335	4
Lactic acid	79-33-4	201-196-2	607-743-00-5	-	Skin Corr. 1C;H314 Eye Dam. 1;H318	-

1) The substance is an organic solvent.
2) SCL (Specific Concentration limits) for classification: Eye Irrit. 2;H319: 2 % ≤ C < 10 %; Skin Corr. 1A;H314: C ≥ 90 %; Skin Corr. 1B;H314: 10 % ≤ C < 90 %; Skin Irrit. 2;H315: 2 % ≤ C < 10 % (harmonised classification)
3) ATE (oral) = 730 mg/kg; ATE (inhalation) = 7.85 mg/l/4h
4) SCL (Specific Concentration limits) for classification: Skin Corr. 1B;H314: C ≥ 25 %; Skin Irrit. 2;H315: 10 % ≤ C < 25 %; Eye Irrit. 2;H319: 10 % ≤ C < 25 %; STOT SE 3;H335: C ≥ 10 % (harmonised classification)

The wording of the hazard statements - see paragraph 16.

POINT 4: First aid measures

4.1. Description of first aid measures:

General: First-aiders must protect themselves against the risk of burns. The patient may lie on his back while the first aider continuously pours water into the injured eye (make sure you have plenty of eyewash).
Inhalation: Immediately bring the person to fresh air and evacuate others! **Mild cases:** Keep the person calm under supervision. In case of discomfort: Seek medical attention. **Severe cases:** Unconscious people are placed into the recovery position with their head low and kept warm. If breathing is stopped, artificial respiration is given. Immediately call a doctor or ambulance.

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Skin: Immediately remove contaminated clothing. Rinse skin and wash thoroughly with soap and water. Rinsing is continued until a doctor can undertake the treatment.

Eyes: Rinse immediately with water or physiological saline for at least 30 minutes. If possibly remove contact lenses and open the eye wide. In all cases, seek medical attention. Rinsing is continued during transport to the doctor/hospital.

Ingestion: Immediately rinse mouth thoroughly and drink water in copious amounts. **Do not induce vomiting.** If vomiting occurs, keep the head low to avoid stomach contents in the lungs. Immediately call an ambulance.

Burns: Rinse with water until the pain has stopped. During rinsing, do not remove burnt clothing from the burned area. If medical treatment is needed, continue rinsing until a doctor has undertaken the treatment.

4.2. Most important symptoms and effects, both acute and delayed:
Painful burns with redness and blisters. Tissue damage. Risk of burns. Painful eye burns that may cause permanent eye damage and blindness. Epiphora, reflective blinking and cramping of the eyelids. Formic acid vapors cause burning in the nose, mouth, and throat as well as coughing, sneezing and shortness of breath and pain in the airways. Bloody sputum. Inhalation of high concentrations may result in life-threatening fluid leakage and lung damage. Ingestion causes corrosion of the gastrointestinal tract with severe pain and risk of permanent damage. Inhalation of high concentrations or frequent inhalation of even small amounts of organic solvent can cause damage to e.g. liver, kidneys, and the central nervous system (including brain damage).

4.3. Indication of whether emergency medical attention and special treatment are needed:
Show this safety data sheet to doctors or casualty ward.

POINT 5: Fire suppression

5.1. Suppression methods:
Water fogging (never water jet - spreads the fire), foam, powder or carbon dioxide.

5.2. Special dangers in connection with the material or compound:
Avoid inhalation of flue gases. In case of fire, very toxic gases are formed: Primarily carbon oxides.

5.3. Indication for a fire department:
If possible, remove containers. Use compressed air mask for heavy smoke.

POINT 6: Accidental release measures

6.1. Personal precautions, personal protective equipment, and emergency procedures:
Use personal protective equipment - see point 8. Limit spread. Ensure good ventilation. Keep unauthorized persons at a distance.

6.2. Environmental protection indications:
Avoid discharge to drains - see point 12. Inform local environmental authorities in case of spillage to the environment.

6.3. Methods and equipment for containment and cleaning:
Smaller amounts are soaked up with a cloth and larger amounts with granulate or similar. Collect in suitable containers. Rinse thoroughly with water. Further waste handling - see point 13.

6.4. References to other points:
See above.

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POINT 7: Handling and storage

7.1. Measures for safe handling:

AVOID ALL CONTACT! Provide effective ventilation. Immediately change contaminated clothing. If skin becomes contaminated, wash immediately. There must be access to emergency shower, plenty of water and eyewash bottles. When diluted with water, the acid is poured into the water - never the other way around. Never use near fire, sparks, or hot surfaces. No smoking. After use, wash with plenty of soap and water.

7.2. Conditions for safe storage, including any incompatibility:

In a closed container in a cool and well-ventilated place. Separated from incomparable materials - see point 10.
Safe, inaccessible to unauthorized persons, separated from food, medicines and the like.
Fireproof. The emergency management agency's technical regulations for flammable liquids must be followed carefully, including the rules for flammable storage. Fire-danger class: II-2 (23°C < flash point < 60°C mixable with water). 1 storage unit = 5 litre.

7.3. Special usage:

See use - point 1.

PUNKT 8: Exposure control/personal protective equipment

8.1. Control parameter:

AT-limit value (reg. 1054 of 28.06.2022):

	8-hours limit value	Short-term limit value	Anm.
Formic acid	5 ppm = 9 mg/m^3	10 ppm = 18 mg/m^3	E
Propionic acid	10 ppm = 31 mg/m^3	20 ppm = 62 mg/m^3	E

E = The substance has an EF-limit value

DNEL:	Exposure	Value	Population	Effects
Propionic acid	Long-term, skin	0.26 mg/kg	Workers	Local
	Long-term, skin	20.9 mg/kg	Workers	Systemic
	Acute, inhalation	62 mg/m^3	Workers	Local
	Acute, inhalation	62 mg/m^3	Workers	Systemic
	Long-term, inhalation	31 mg/m^3	Workers	Local
	Long-term, inhalation	73 mg/m^3	Workers	Systemic

PNEC:	Medium	Value
Propionic acid	Fresh water	0.5 mg/l
	Sea water	0.05 mg/l
	Fresh water sediment	1.86 mg/kg
	Sea water sediment	0.186 mg/kg
	Sewage works (STP)	5 mg/l
	Soil	0.126 mg/kg

8.2. Exposure control:

Appropriate measures for exposure control: Provide effective ventilation during handling.
Personal protective equipment:

Inhalation: In case of insufficient ventilation: use approved mask with gas filter type E (yellow - against acid gases). The filters have a limited service life (must be replaced). Read the manufacturer's instructions.

Skin: Wear anti-corrosion clothing and footwear as well as protective gloves made of

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neoprene or butyl rubber (material thickness: 0.65 mm).
Breakthrough time approx. 8 hours.
Eyes: Tightly fitted safety goggles (EN 166) in case of risk of eye contact.
Environmental exposure controls: None.

POINT 9: Physical and chemical characteristics

9.1. Information about basic physical and chemical characteristics:

Appearance:	Liquid
Colour:	Uncoloured
Odor:	Strong pungent odor
Melting point/freezing point (°C):	Not decided
Boiling point or bubble-point and boiling point interval (°C):	Not decided
Ignitability (solid, gaseous):	Not decided
Upper/lower explosion limits (vol-%):	Not decided
Flash point (°C):	45-<60
Auto-ignition temperature (°C):	Not decided
Self-accelerating decomposition temperature (°C):	Not relevant
pH:	Approx. 2
Kinematic viscosity (mm^2/s at 40°C):	Not decided
Solubility (mg/l):	Soluble in water
Partition coefficient n-octanol/water Log K_{ow}:	Not relevant – solution (see point 12)
Vapor pressure (hPa, 20°C):	43 (for formic acid); 0.399 (for propionic acid)
Density and/or relative density (g/cm^3):	Not decided
Relative vapor density (air=1):	Not decided
Particulate properties:	Not decided for liquids

9.2. Other information: None known.

POINT 10: Stability and reactivity

10.1. Reactivity:
No available data.

10.2. Chemical stability:
Stable under recommended storage conditions - see point 7. Flammable at temperatures above flash point.
The vapors can be ignited by e.g., a spark, a hot surface, or an ember. The vapors can form explosive mixtures with air.

10.3. Risk of dangerous reactions:
None known.

10.4. Conditions that should be avoided:
Avoid heating and the formation of sparks and embers. Can corrode metals.

10.5. Materials that should be avoided:
Reacts heavily with strong bases, hypochlorite, and oxidants. Formic acid reacts with the most metals under development of hydrogen. Hydrogen can form explosive mixtures with air.

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10.6. Dangerous decomposition products:
In case of fire, very toxic gases are formed: Primarily carbon oxides.

POINT 11: Toxicological information

11.1. Information about hazard classes as defined in Regulation (EC) No 1272/2008:
Acute toxicity: Acute Tox. 4;H302+H332 Harmful if swallowed or in contact with skin.
Skin corrosion/irritation: Skin Corr. 1B; H314 Causes severe skin burns and eye damage.
Serious eye damage/eye irritation: Eye Dam. 1; H318 Causes serious eye damage.
Respiratory or skin sensitization: Based on available data, the classification criteria are not met.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproduction toxicity: Based on available data, the classification criteria are not met.
Single STOT-exposure: Based on available data, the classification criteria are not met.
Repeated STOT-exposures: Based on available data, the classification criteria are not met.
Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

Danger class	Data	Test	Data source
Acute toxicity:			
Inhalation	LC_{50} (rat, vapour) = 7.85 mg/l/4h (Formic acid)	OECD 403	ECHA
	LC_{50} (rat) > 19.7 mg/l/1h (dampe) (Propionic acid)	Not informed	ECHA
	LC_{50} (rat, aerosol) > 7.94 mg/l/4h (Lactic acid)	OECD 403	ECHA
Dermal	LD_{50} (rat) > 2000 mg/kg (Formic acid)	OECD 402	ECHA
	LD_{50} (rabbit) = 3235 mg/kg (Propionic acid)	Not informed	ECHA
	LD_{50} (rabbit) > 2000 mg/kg (Lactic acid)	EPA OPP 81-2	ECHA
Oral	LD_{50} (rat) = 730 mg/kg (Formic acid)	OECD 401	ECHA
	LD_{50} (rat) = 2600 mg/kg (Propionic acid)	Not informed	TOXNET
	LD_{50} (rat) = 3543-4936 mg/kg (Lactic acid)	EPA OPP 81-1	ECHA
Corrosivity/ irritation:	Corrosive to skin, eyes and respiratory tract, human (Formic acid)	Not informed	ECHA
	Corrosive, rabbit (Propionic acid)	OECD 404	ECHA
Sensitisation:	No sensitizing effect, guinea pig (Formic acid)	OECD 406	ECHA
	No skin sensitizing, guinea pig (Propionic acid)	OECD 406	ECHA
CMR:	No CMR-effects (Propionic acid)	Different	ECHA

Usual exposure methods: Lungs, skin, and gastrointestinal tract.

Inhalation: Very irritating to corrosive to the respiratory tract with sore throat, cough and hoarseness. High concentrations may cause shortness of breath and water in the lungs (pulmonary edema). Be aware that the symptoms (breathlessness) may occur several hours after exposure

Skin: Corrosive with redness, pain, burns and wounds. May cause deep tissue damage.

Eyes: Corrosive with redness and pain. Potential permanent damage to the eyesight even with splashes of diluted solutions.

Ingestion: Strong corrosive effect with burning pain in the mouth, throat and stomach, stomach cramps, vomiting (possibly bloody), diarrhoea and low blood pressure. In severe cases shock and death.

Chronic effects: May cause lung damage by prolonged or repeated inhalation. Formic acid solutions can

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cause eczema with prolonged or repeated skin contact. Effects of low concentrations for a long time can lead to burns on the teeth, inflammation of the nose and throat as well as bronchitis (chronic bronchitis) and suppurative condition of the cornea/conjunctiva (conjunctivitis). Inhalation of high concentrations or frequent inhalation of even small amounts of organic solvent can cause damage to e.g., liver, kidneys and central nervous system (including brain damage).

11.2. Information about other hazards: None known.

POINT 12: Environmental information

12.1. Toxicity:

Aquatic	Data	Test (Media)	Data source
Fish	LC_{50} (Fish, 96h) = 130 mg/l (Formic acid) LC_{50} (Leuciscus idus, 96h) > 10000 mg/l (Propionic acid) NOEC (Leuciscus idus, 96h) > 5000 mg/l (Propionic acid)	Not informed (FW) DIN 38412 (FW) DIN 38412 (FW)	ECHA ECHA Supplier
Crustacean	EC_{50} (Daphnia magna, 48h) = 365 mg/l (Formic acid) EC_{50} (Daphnia magna, 48h) > 500 mg/l (Propionic acid) NOEC (Daphnia magna, 48h) = 250 mg/l (Propionic acid)	Not informed (FW) Not informed (FW) Not informed (FW)	ECHA ECHA Supplier
Alga	EC_{50} (Alga, 72h) = 1000 mg/l (Formic acid) EC_{50} (Scenedesmus subspicatus, 72h) > 500 mg/l (Propionic acid)	Not informed (FW) OECD 201 (FW)	ECHA Supplier

12.2. Persistence and degradability:
Formic acid is rapidly degradable, 98 % in 14 days (OECD 301B).
Propionic acid is rapidly biodegradable, 95 % in 10 days (OECD 302B).

12.3. Bioaccumulative potential:
Formic acid: Log K_{ow}: -2.1 (at pH 7.23) (no significant bioaccumulation).
Propionic acid: Log K_{ow} = 0.3 (OECD 107) (no bioaccumulation).

12.4. Mobility in soil:
Formic acid: K_{OC} = 31 (at 20°C) (OECD 121) (very high mobility in land treatment is expected).

12.5. Results of PBT and vPvB assessment:
The ingredients are not PBT/vPvB according to the criteria in REACH annex XIII.

12.6. Endocrine-disrupting capacities:
None known.

12.7. Other adverse effects:
Emissions of larger amounts can change the pH value in the aquatic environment and shift the balance of the ecosystems.

POINT 13: Removal

13.1. Methods for waste handling:
The chemical must be considered as hazardous waste. Use the local authority's collection scheme.

Chemical waste group:	**EAK-code:**
H	02 01 08 (residue)
H/Z	15 02 02 (absorbents polluted with the product)

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POINT 14: Transport information

14.1. UN-number or ID-number: 3265
14.2. UN-shipment designation (UN proper shipping name): CORROSIVE ACIDIC ORGANIC LIQUID, N.O.S. (formic acid)
14.3. Transport danger class(es): 8
14.4. Packaging group: II
14.5. Environmental dangers: None.
14.6. Special regulations for the user: None.
14.7. Bulk transport by sea according to IMO instruments: Not relevant.

POINT 15: Information about regulations

15.1. Special determinations/special rules for the material or compound with respect to safety, health and environment:
The product must not be used commercially by young people under 18 years of age. However, young people over the age of 15 are exempt from this rule if the product is included as a necessary part of an education.
In a workplace assessment, it must be ensured that employees are not exposed to effects that may involve a risk during pregnancy or breastfeeding (cf. the working environment authority's report on the performance of work).

Feed additives are covered by EU regulation no. 1831/2003 on feed additives.

PR-no.: 4395573

15.2. Chemical safety evaluation:
No CSR.

POINT 16: Other information

Hazard statements given under point 3:
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.
H335: May cause respiratory irritation.

Abbreviations:
AT = Working environment authority
CMR = carcinogenic, mutagenic, or toxic to reproduction
CSR = Chemical Safety Report
EC_{50} = Effect Concentration 50 %
DNEL = Derived No-Effect Level
FW = Fresh Water
LC_{50} = Lethal Concentration 50 %
LD_{50} = Lethal dosage 50 %
PBT = Persistent, Bioaccumulative, Toxic
PNEC = Predicted No-Effect Concentration
vPvB = very Persistent, very Bioaccumulative

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Literature:
ECHA = REACH Registration dossier from ECHA's website
The supplier's safety data sheet
TOXNET = Toxicology Data Network via Toxline database

Advice on training / instruction:
The product may only be used by persons who are carefully instructed in the execution of the work and who have knowledge of the contents of this safety data sheet.

Changes since previous version:
1-16.

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