



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Klini

Version 18 (Georgia)

Issuing date: 2013/02/11

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name : **Klini**

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

Use : Plant protection agent

1.3. Details of the supplier of the safety data sheet

Nufarm GmbH & Co KG
St.-Peter-Str. 25
A-4021 Linz
Austria
Telephone: +43/732/6918-4010
Telefax: +43/732/6918-64010
E-mail address: Johann.Mayr@at.nufarm.com

1.4. Emergency telephone number

+43/732/6914-2466 (Linz/Austria production site)

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

EEC/99/45 : N R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

according directive 1999/45/EG

Pictogram:





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- R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S 2 - Keep out of the reach of children.
- S13 - Keep away from food, drink and animal feedingstuffs.
- S20/21 - When using do not eat, drink or smoke.
- S61 - Avoid release to the environment. Refer to special instructions/ Safety data sheets.
- S60 - This material and its container must be disposed of as hazardous waste.

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Aqueous solution of the isopropylammonium salt
Glyphosate 360g/L, surfactant 135g/L

3.2. Mixtures

Components:

Glyphosate IPA salt

CAS-No.: 38641-94-0
EINECS-No. / ELINCS No.: 254-056-8
REACH No.:
Concentration: 41,5 % (w/w)

Classification:

EG_1272/08 : AquaticChronic2 H411 - Toxic to aquatic life with long lasting effects.
EEC/67/548 : N R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Tallowalkylamineethoxylate

CAS-No.: 61791-26-2
EINECS-No. / ELINCS No.: 500-153-8
REACH No.:
Concentration: 8,1 % (w/w)

Classification:

EG_1272/08 : AcuteTox.4 H302 - Harmful if swallowed.
EyeDam.1 H318 - Causes serious eye damage.
AquaticChronic2 H411 - Toxic to aquatic life with long lasting effects.
EEC/67/548 : Xn R22 - Harmful if swallowed.
Xi R41 - Risk of serious damage to eyes.
N R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



4. FIRST AID MEASURES

4.1. Description of first aid measures

- Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
- Skin contact : Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
- Inhalation : Move to fresh air. If symptoms persist, call a physician.
- Ingestion : Rinse mouth. If ingested, irrigate the stomach. Ingest activated charcoal. If swallowed, seek medical advice immediately and show this container or label.

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

- Symptoms : Vomiting, Diarrhoea, stomach pains, Irregular cardiac activity

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

- Treatment : No specific antidote, symptomatic treatment.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

- Suitable extinguishing media : Water spray, Dry powder, Sand, Foam, Carbon dioxide (CO₂)
- Extinguishing media which shall not be used for safety reasons : High volume water jet

5.2. Special hazards arising from the substance or mixture

- Specific hazards during firefighting : In the event of fire (NO_x,CO_x,P₂O₅) may be formed.

5.3. Advice for firefighters

- Special protective equipment for firefighters : Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
- Further Information : Standard procedure for chemical fires. Collect contaminated



fire extinguishing water separately. This must not be discharged into drains.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. (see Chapter 8)

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Use mechanical handling equipment.

Additional advice : Never return spills in original containers for re-use.

6.4. Reference to other sections

see Chapter 13

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice : Wear personal protective equipment. Keep out of the reach of children.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container.

Advice on common storage : Keep away from food, drink and animal feeding stuffs.

Storage stability

Storage temperature : > 0 °C

7.3. Specific end use(s)

none



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace control parameters
no data available

8.2. Exposure controls

Personal protective equipment

- Respiratory protection : No special protective equipment required.
- Hand protection : Protective gloves
- Eye protection : Tightly fitting safety goggles
- Skin and body protection : Long sleeved clothing
- Hygiene measures : Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Remove and wash contaminated clothing and gloves, including the inside, before re-use.
- Protective measures : Avoid contact with skin, eyes and clothing. Keep working clothes separately.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance

- Physical state : liquid
- Form : aqueous solution
- Colour : light brown
- Odour : amine-like

Melting point/range : -10 °C

Boiling point/boiling range : > 100 °C

Flash point : does not flash

Ignition temperature : no data available



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Explosivity	:	Not explosive
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	Active ingredient as salt in aqueous solution. Vapour pressure is negligibly low.
Density	:	1,17 g/cm ³ at 20 °C
Water solubility	:	completely miscible
pH	:	ca.4,6 at 20,6 g/l (Glyphosate)
Partition coefficient: n-octanol/water	:	log POW = < -3,2 at 20 °C (Glyphosate), (pH 5)
Dissociation constant	:	no data available
Viscosity, dynamic	:	no data available

9.2. Other information

none

10. STABILITY AND REACTIVITY

10.1. Reactivity

no data available

10.2. Chemical stability

No spontaneous or exothermic decomposition up to 100 °C.

10.3. Possibility of hazardous reactions



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No dangerous reaction known under conditions of normal use.
No decomposition if stored and applied as directed.

10.4. Conditions to avoid

no data available

10.5. Incompatible materials to avoid

Strong bases

10.6. Hazardous decomposition products

no data available

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity : LD50 rat
Dose: > 2.000 mg/kg

Acute dermal toxicity : LD50 rat
Dose: > 4.000 mg/kg

Acute inhalation toxicity : LC50 rat
Dose: > 5 mg/l
Test substance: (Glyphosate)

Skin irritation : rabbit
Result: No skin irritation

Eye irritation : rabbit
Result: No eye irritation

Sensitisation : guinea pig
Result: Did not cause sensitization on laboratory animals.

12. ECOLOGICAL INFORMATION



12.1. Toxicity

- Toxicity to bees : Not toxic to bees.
- Toxicity to earthworms : LD50 Eisenia fetida (earthworms)
Dose: > 5.000 mg/kg
Testing period: 14 d
- Toxicity to fish : LC50 Oncorhynchus mykiss (rainbow trout)
Dose: 7,5 mg/l
Testing period: 96 h
- Toxicity to daphnia : EC50 Daphnia
Dose: 8,5 mg/l
Testing period: 48 h
- Toxicity to algae : EC50 Desmodesmus subspicatus (green algae)
Dose: 16 mg/l
Exposure time: 72 h

12.2. Persistence and degradability

- Biodegradability : no data available
- Stability in soil : DT50: ca. 4 d
DT90 : < 20 d
(Glyphosate)

12.3. Potential bioaccumulation

- Bioaccumulation : Does not bioaccumulate.

12.4. Mobility in soil

Koc = 884 - 60'000 (Glyphosate)

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6. Other adverse effects

According to our experience, doesn't cause any disturbance in waste water clarifying plant if used appropriately.



13. DISPOSAL CONSIDERATIONS

According to European Directive 2000/532/EC as amended :

Waste Code : 02 01 08 (agrochemical waste containing dangerous substances)

13.1. Waste treatment methods

Product : In accordance with local and national regulations.

Contaminated packaging : Do not re-use empty containers.

Dispose empty and triple rinsed container within a local disposing system according to EC directive 94/62/EC

14. TRANSPORT INFORMATION

14.1. UN number

UN3082

14.2. Proper shipping name

UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.*(Glyphosate, Tallow alkylamine ethoxylate)

14.3. Transport hazard class(es)

ADR/RID :
Class : 9

IMDG :
Class : 9

IATA-DGR :
Class : 9

14.4. Packaging group

ADR/RID : III



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IMDG : III

IATA-DGR : III

14.5. Environmental hazards

IMDG

Marine Pollutant : MP

14.6. Special precautions for user

none

15. REGULATORY INFORMATION

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

Other regulations : The product is classified and labelled in accordance with EC directives or respective national laws.

15.2. Chemical Safety Assessment

none

16. OTHER INFORMATION

Print Date : 2014/02/13

The date format YYYY/MM/DD is used according to ISO 8601.
(Alterations are indicated in the left hand margin by: ||)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Contact person

Company : Nufarm GmbH & Co KG



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The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.