

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

1.1. Product identifier

Trade name	: Klini Xtreme
Product form	: Mixture
Type (Nufarm)	: Country Specific
Country (Nufarm)	: Georgia
CA Code (Nufarm)	: 2615
Product code	: CA2615
Oracle Recipe Code (Nufarm)	: 600000378
Item codes	: 100009138

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

1.2.1. Relevant identified uses

Main use category	: Professional use
Use of the substance/mixture	: Herbicide

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Distributor

Nufarm GmbH & Co KG
St.-Peter-Str. 25
4021 Linz - Austria
T +43/732/6918-3187 - F +43/732/6918-63187
Katharina.Krueger@nufarm.com

1.4. Emergency telephone number

Emergency number	: +43/732/6914-2466 (Produktionsstandort Linz/Österreich) +43/1/4064343 (VergiftungsInformationsZentrale)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS09

Signal word (CLP)

: -

Hazard statements (CLP)

: H411 - Toxic to aquatic life with long lasting effects.

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Precautionary statements (CLP)	: P391 - Collect spillage. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements	: EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Glyphosate isopropylamine salt	(CAS-No.) 38641-94-0 (EC-No.) 254-056-8	30 – 35	Aquatic Chronic 2, H411
GLYPHOSATE K SALT	(CAS-No.) 39600-42-5	20 – 25	Aquatic Chronic 2, H411
D-Glucopyranose, oligomeric, decyl octyl glycosides	(CAS-No.) 68515-73-1 (EC-No.) 500-220-1 (REACH-no) 01-2119488530-XXXX	1 – 5	Eye Dam. 1, H318
1,2-Propanediol substance with national workplace exposure limit(s) (GB, HR, IE, LT, LV, PL)	(CAS-No.) 57-55-6 (EC-No.) 200-338-0 (REACH-no) 01-2119456809-23	1 – 5	Not classified

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Remove immediately contaminated clothing.
First-aid measures after inhalation	: Allow affected person to breathe fresh air.
First-aid measures after skin contact	: Wash off immediately with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Immediately rinse with water for a prolonged period while holding the eyelids wide open. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

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

No additional information available

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

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Sand. Foam. Carbon dioxide.
Unsuitable extinguishing media : high volume water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Nitrogen oxides. Carbon monoxide. Carbon dioxide. Hydrogen cyanide. Sulphur dioxide. Phosphorous oxide.

5.3. Advice for firefighters

Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing.
Other information : Exercise caution when fighting any chemical fire. Contain the spreading of extinguishing fluids (this product may be hazardous for the environment). Do not discharge into drains or the environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear personal protective equipment. Refer to chapter 8.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Mechanically recover the product.
Other information : Never return spills in original containers for possible later re-use.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wear personal protective equipment. Keep out of the reach of children.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container.
Storage temperature : > -5 °C
Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

None.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

1,2-Propanediol (57-55-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Notes	TWA = 10 mg/m ³ (US WEEL)
Croatia - Occupational Exposure Limits	
Local name	Propane-1,2-diol
GVI (OEL TWA) [1]	474 mg/m ³ (total particles and vapor) 10 mg/m ³ (particles)
GVI (OEL TWA) [2]	150 ppm
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
Ireland - Occupational Exposure Limits	
Local name	Propane-1,2-diol [Propylene glycol]
OEL TWA [1]	470 mg/m ³ (total vapour and particulates) 10 mg/m ³ (particulate)
OEL TWA [2]	150 ppm (total vapour and particulates)
OEL STEL	1410 mg/m ³ (calculated-total vapour and particulates) 30 mg/m ³ (calculated-particulate)
OEL STEL [ppm]	450 ppm (calculated-total vapour and particulates)
Regulatory reference	Chemical Agents Code of Practice 2021
Latvia - Occupational Exposure Limits	
Local name	Propilēnglikols (1,2-propāndiols)
OEL TWA	7 mg/m ³
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325
Lithuania - Occupational Exposure Limits	
Local name	Propilenglikolis
IPRV (OEL TWA)	7 mg/m ³
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Poland - Occupational Exposure Limits	
Local name	Propano-1,2-diol
NDS (OEL TWA)	100 mg/m ³ pary i frakcja wdychalna
Remark (PL)	Frakcja wdychalna – frakcja aerozolu wnijkająca przez nos i usta, która po zdeponowaniu w drogach oddechowych stwarza zagrożenie dla zdrowia.
Regulatory reference	Dz. U. 2018 poz. 1286
United Kingdom - Occupational Exposure Limits	
Local name	Propane-1,2-diol
WEL TWA (OEL TWA) [1]	474 mg/m ³ (total particulates and vapour) 10 mg/m ³ (particulates)
WEL TWA (OEL TWA) [2]	150 ppm (total particulates and vapour)

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1,2-Propanediol (57-55-6)	
WEL STEL (OEL STEL)	1422 mg/m ³ (calculated-total particulate and vapour) 30 mg/m ³ (calculated-particulate)
WEL STEL (OEL STEL) [ppm]	450 ppm (calculated-total particulate and vapour)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Norway - Occupational Exposure Limits	
Local name	Propan-1,2-diol
Grønseverdi (OEL TWA) [1]	79 mg/m ³
Grønseverdi (OEL TWA) [2]	25 ppm
Korttidsverdi (OEL STEL)	118.5 mg/m ³ (value calculated)
Korttidsverdi (OEL STEL) [ppm]	37.5 ppm (value calculated)
Regulatory reference	FOR-2021-06-28-2248

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Additional information : Country Specific

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses with side shields. EN 166

8.2.2.2. Skin protection

Skin and body protection:

According to the conditions of use, protective gloves, apron, boots, head and face protection must be worn

Hand protection:

Wear gloves according to EN374 resistant to the solvent(s) in use.

Other skin protection

Materials for protective clothing:

Keep away from food and drink. According to the conditions of use, protective gloves, apron, boots, head and face protection must be worn

8.2.2.3. Respiratory protection

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Respiratory protection:

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:

Wash contaminated clothing before reuse. Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. Keep work clothing separately. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: clear, light yellow.
Odour	: No data available
Odour threshold	: No data available
pH	: ≈ 5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 100 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.3 g/cm ³ @ 20°C
Solubility	: Water: completely miscible
Partition coefficient n-octanol/water (Log Pow)	: -3.2 @25°C (Glyphosate)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive.
Oxidising properties	: Non oxidizing.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Klini Xtreme	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 4000 mg/kg

Glyphosate isopropylamine salt (38641-94-0)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg

1,2-Propanediol (57-55-6)	
LD50 oral rat	20 g/kg
LD50 dermal rabbit	20800 mg/kg
LC50 Inhalation - Rat	317 µL/m ³ rabbit; 2h

Skin corrosion/irritation : Not classified (No skin irritation)
pH: ≈ 5

Additional information : rabbit

Serious eye damage/irritation : Not classified (No eye irritation)
pH: ≈ 5

Additional information : rabbit

Respiratory or skin sensitisation : Not classified (Did not cause sensitisation)

Additional information : mouse

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (The European Chemicals Agency (ECHA) as well as the European Food Safety Agency (EFSA) and other regulatory agencies around the world (EPA, APVMA, JMPR administered jointly by FAO and WHO) classified glyphosate as non-carcinogenic on a risk-based evaluation. The International Agency for Research on Cancer (IARC) classified glyphosate as "probably carcinogenic to humans" (Group 2A) on hazard-based evaluation. Both EFSA and ECHA considered in their respective review the IARC evaluation resulting in non-carcinogenic classification of glyphosate)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

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SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Klini Xtreme	
LC50 96h fish	> 100 mg/l <i>Oncorhynchus mykiss</i> (Rainbow trout)
EC50 - Other aquatic organisms [1]	> 100 mg/l <i>Daphnia magna</i> (Water flea)
ErC50 algae	> 100 mg/l <i>Desmodesmus subspicatus</i> (green algae)
NOEC (chronic)	> 100 mg/l <i>Daphnia magna</i> (Water flea)
NOEC chronic fish	1 mg/l <i>Oncorhynchus mykiss</i> (Rainbow trout)
NOEC chronic algae	> 100 mg/l <i>Desmodesmus subspicatus</i> (green algae)

Additional ecotoxicological information

Toxicity to algae:

EyC50 *Desmodesmus subspicatus*
Dose: > 100 mg/l
Exposure time: 72h

NOEC *Desmodesmus subspicatus*
Dose: 31.3 mg/l

EC50 *Lemna gibba* (Duckweed)
Dose: > 100 mg/l
Exposure time: 7d

EbC50 *Lemna gibba* (Duckweed)
Dose: 31.9 mg/l
Exposure time: 7d

ErC50 *Lemna gibba* (Duckweed)
Dose: 79.5 mg/l
Exposure time: 7d

NOEC *Lemna gibba* (Duckweed)
Dose: 16 mg/l
Exposure time: 7d

Glyphosate isopropylamine salt (38641-94-0)

LC50 96h fish	> 1000 mg/l
EC50 48h crustacea	930 mg/l
EC50 72h algae	72.9 mg/l
LD50, Birds	> 2000 mg/kg (tested substance : glyphosate)
LD50, Dermal, <i>Apis mellifera</i> (bee)	> 100 µg/bee (tested substance : glyphosate)
LD50, oral, <i>Apis mellifera</i> (bee)	> 100 µg/bee (tested substance : glyphosate)

1,2-Propanediol (57-55-6)

LC50 96h fish	40613 mg/l <i>Oncorhynchus mykiss</i> (Rainbow trout)
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EC50 96h algae	19000 mg/l Pseudokirchneriella subcapitata
NOEC (chronic)	13020 mg/l Ceriodaphnia dubia; 7 d
NOEC, Bacille Pseudomonas putida	> 20000 mg/l (18 Hours, Test method: Toxicity to bacteria)

12.2. Persistence and degradability

Klini Xtreme	
Persistence and degradability	Moderately biodegradable.
DT50	< 7 days (glyphosate)
DT50 (Soil)	2 – 174 days DT90: < 20d; (glyphosate)

Glyphosate isopropylamine salt (38641-94-0)

Persistence and degradability	glyphosate (ISO); N-(phosphonomethyl)glycine. Not readily biodegradable.
Biodegradation	DT50 24h (water); 1.041h (soil)

1,2-Propanediol (57-55-6)

Persistence and degradability	Readily biodegradable. Biodegradation can occur under anaerobic conditions (in the absence of oxygen).
Biodegradation	81 % 28 d; OECD 301

12.3. Bioaccumulative potential

Klini Xtreme	
Partition coefficient n-octanol/water (Log Pow)	-3.2 @25°C (Glyphosate)
Bioaccumulative potential	No bioaccumulation.

Glyphosate isopropylamine salt (38641-94-0)

Bioconcentration factor (BCF REACH)	3.16 Estimated
Partition coefficient n-octanol/water (Log Pow)	< -3.2 glyphosate (ISO); N-(phosphonomethyl)glycine

1,2-Propanediol (57-55-6)

BCF - Fish [1]	< 1
Bioconcentration factor (BCF REACH)	0.09
Partition coefficient n-octanol/water (Log Pow)	-1.07
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil

Klini Xtreme	
Koc	884 (≥ 60000) (Glyphosate)

Glyphosate isopropylamine salt (38641-94-0)

Mobility in soil	Constant of Henry's law (H): 1.82E-17 atm * m3 / mole; 25 ° C; Calculated
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1,2-Propanediol (57-55-6)	
Mobility in soil	Given its very low Henry's constant, volatilization from bodies of water or moist soil is not expected to be an important factor in the fate of the product. Very high potential for mobility in the soil (Koc between 0 and 50).
Partition coefficient n-octanol/water (Log Koc)	Koc < 1

12.5. Results of PBT and vPvB assessment

Klini Xtreme

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

Component

Glyphosate isopropylamine salt (38641-94-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
1,2-Propanediol (57-55-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose as hazardous waste. Do not remove as household garbage. Dispose of at authorized waste collection point.
Product/Packaging disposal recommendations	: Do not re-use empty containers. Do not dispose of the packaging without first carrying out the necessary cleaning.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

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Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

15.1.2. National regulations

France

Occupational diseases

Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Other information, restrictions and prohibition regulations : 4511

No ICPE	Installations classées Désignation de la rubrique	Code Régime	Rayon
4511.text	Dangereux pour l'environnement aquatique de catégorie chronique 2.		

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

15.2. Chemical safety assessment

None

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Comments
	Revision date	Modified	
	Supersedes	Modified	

Full text of H- and EUH-statements:

Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

NUFARM SDS TEMPLATE

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.