according to Regulation (EC) No 1907/2006



JUVENEX EC

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

1.1. Product identifier

JUVENEX EC

UFI: 1410-R0R8-300A-E4HT

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

Use of the substance/mixture

Pesticide

1.3. Details of the supplier of the safety data sheet

Company name: FROWEIN GmbH & Co. KG

Street: Am Reislebach 83 Place: D-72461 Albstadt

Telephone: +49 (0) 74 32-956 - 0 Telefax: +49 (0) 74 32-956 - 138

Responsible Department: Responsible for the safety data sheet: sds@gbk-ingelheim.de

1.4. Emergency telephone INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)

number: In England and Wales: NHS 111 In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Flammable liquid: Flam. Liq. 3 Aspiration hazard: Asp. Tox. 1

Serious eye damage/eye irritation: Eye Dam. 1

Hazardous to the aquatic environment: Aquatic Acute 1 Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

Flammable liquid and vapour.

May be fatal if swallowed and enters airways.

Causes serious eye damage. Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Hydrocarbons, C12-C16, isoalkanes, cyclics, < 2% aromatics

Calcium dodecylbenzenesulphonate

Alkanes, C11-C13-iso-2-Methylpropan-1-ol

Signal word: Danger

Pictograms:









Hazard statements

H226 Flammable liquid and vapour.

according to Regulation (EC) No 1907/2006



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JU	JV	4 = 1	$\mathbf{A} = \mathbf{A}$	

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H304 May be fatal if swallowed and enters airways.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.

P101 If medical advice is needed, have product container or label at hand.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P260 Do not breathe vapour/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331 Do NOT induce vomiting.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container to in accordance with local and national regulations.

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:







Hazard statements

H304-H318

Precautionary statements

P102-P101-P280-P301+P310-P331-P305+P351+P338-P501

2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Insecticide emulsion concentrate

according to Regulation (EC) No 1907/2006



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Hazardous components

CAS No	Chemical name			
	EC No	Index No	REACH No	
	GHS Classification	•	·	
51-03-6	Piperonyl butoxide			< 60 %
	200-076-7		01-2119537431-46	
	Aquatic Acute 1, Aquatic Chron	ic 1; H400 H410		
1174522-39-4	Hydrocarbons, C12-C16, isoalk	anes, cyclics, < 2% aro	matics	< 15 %
	927-676-8		01-2119456377-30	
	Asp. Tox. 1; H304 EUH066	-	·	
89997-63-7	Chrysanthemum cinerariaefoliu	m, extract (pyrethrines)		< 10 %
	289-699-3			
	Acute Tox. 4, Acute Tox. 4, Acu H400 H410	te Tox. 4, Aquatic Acute	1, Aquatic Chronic 1; H332 H312 H302	
26264-06-2	-2 Calcium dodecylbenzenesulphonate			< 7 %
	247-557-8		01-2120122335-68	
	Acute Tox. 4, Skin Irrit. 2, Eye [Dam. 1, Aquatic Chronic	4; H302 H315 H318 H413	
90622-58-5	Alkanes, C11-C13-iso-			< 10 %
	920-901-0		01-2119456810-40	
	Asp. Tox. 1; H304 EUH066	-		
78-83-1	2-Methylpropan-1-ol			< 3 %
	201-148-0	603-108-00-1	01-2119484609-23	
	Flam. Liq. 3, Skin Irrit. 2, Eye D	am. 1, STOT SE 3, STO	OT SE 3; H226 H315 H318 H335 H336	
95737-68-1	Pyriproxyfen (ISO)			< 5 %
	429-800-1	613-303-00-3		
	Aquatic Acute 1, Aquatic Chron	ic 1; H400 H410	·	
128-37-0	2,6-bis(1,1-dimethylethyl)-4-methylphenol			< 1 %
	204-881-4		01-2119480433-40	
	Aquatic Chronic 1; H410			

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

according to Regulation (EC) No 1907/2006



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Specific Conc. Limits, M-factors and ATE

operine ee	=	idotoi o dila ATE	
CAS No	EC No	Chemical name	Quantity
	Specific Conc	. Limits, M-factors and ATE	
51-03-6	200-076-7	Piperonyl butoxide	< 60 %
	M akut; H400: M chron.; H41		
89997-63-7	289-699-3	Chrysanthemum cinerariaefolium, extract (pyrethrines)	< 10 %
		E = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: ATE = oral: ATE = 500 mg/kg M akut; H400: M=100 0: M=100	
26264-06-2	247-557-8	Calcium dodecylbenzenesulphonate	< 7 %
	oral: ATE = 50	00 mg/kg	
78-83-1	201-148-0	2-Methylpropan-1-ol	< 3 %
	inhalation: LC mg/kg	250 = > 24 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2830	
128-37-0	204-881-4	2,6-bis(1,1-dimethylethyl)-4-methylphenol	< 1 %
	dermal: LD50	= > 2000 mg/kg; oral: LD50 = > 2000 mg/kg	

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

If you feel unwell, seek medical advice.

After inhalation

Move to fresh air in case of accidental inhalation of vapours.

In the event of symptoms refer for medical treatment.

After contact with skin

Wash off immediately with plenty of water and soap for at least 15 minutes.

Consult a physician.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Consult (eye) doctor immediately.

After inaestion

Do not induce vomiting.

Summon a doctor immediately.

Rinse out mouth and give plenty of water to drink.

Never give anything by mouth to an unconscious person.

Induce vomiting only upon the advice of a physician.

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

Causes serious eye damage.

May be fatal if swallowed and enters airways.

Repeated exposure may cause skin dryness or cracking.

Attention. Beware, danger of aspiration.

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

according to Regulation (EC) No 1907/2006



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Suitable extinguishing media

Foam, carbon dioxide (CO2), dry chemical, water-spray.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Fire may produce:

Carbon monoxide (CO), carbon dioxide (CO2) and sulphur oxides (SOx)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

Cool containers at risk with water spray jet.

The vapour/air mixture is explosive, even in empty, uncleaned receptacles.

Vapours are heavier than air and spread along ground.

Do not release chemically contaminated water into drains, soil or surface waters. Sufficient measures must be taken to retain water used for extinguishing.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Ensure adequate ventilation.

Remove persons to safety.

For non-emergency personnel

Avoid contact with skin, eyes and clothing.

Do not breathe vapours.

For emergency responders

In case of vapour formation use respirator.

Use personal protective clothing.

Use only explosion-proof equipment.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

For containment

Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

Shovel into suitable container for disposal.

Clean contaminated surface thoroughly.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).

Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Keep container tightly closed.

according to Regulation (EC) No 1907/2006



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Vapours are heavier than air and spread along ground.

Avoid contact with the skin and the eyes.

In case of insufficient ventilation, especially in confined areas.

Do not breathe vapours or spray mist.

Advice on protection against fire and explosion

Do not smoke - volatile.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

Keep away from open flames, hot surfaces and sources of ignition.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a dry, cool and well-ventilated place.

Pay attention to anti-explosion rules.

Hints on joint storage

Incompatible with oxidizing agents.

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Pesticide

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
128-37-0	2,6-Di-tert-butyl-p-cresol	-	10		TWA (8 h)	WEL
78-83-1	2-Methylpropan-1-ol	50	154		TWA (8 h)	WEL
		75	231		STEL (15 min)	WEL

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

Wash hands before breaks and immediately after handling the product.

When using do not eat, drink or smoke.

Take off immediately all contaminated clothing.

Avoid contact with skin, eyes and clothing.

Do not breath vapours or spray mist.

Eye/face protection

Tightly fitting goggles (EN 166).

Eye wash bottle with pure water (EN 15154).

Hand protection

Splash protection:

Protective gloves resistant to chemicals made off nitrile, minimum coat thickness 0.4 mm, permeation resistance (wear duration) approx. 240 minutes, i.e. protective glove <Camatril Velours 730> made by www.kcl.de.

according to Regulation (EC) No 1907/2006



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This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Skin protection

Wear standard protective suit (plant protection) when spreading/handling the product (CE 93 0120). Rubber apron (EN 467).

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A) (EN 14387).

SECTION 9: Physical and chemical properties

Physical state: Liquid
Colour: Brownish
Odour: Characteristic

T.	est	me	tŀ	าod

pH-Value: n.d.

Changes in the physical state

Melting point: n.d. Boiling point or initial boiling point and n.d.

boiling range:

Sublimation point: n.a. Softening point: n.d.

Flash point: 43.5 °C DIN 51755

Sustaining combustion: Sustaining combustion

Flammability

Solid/liquid: n.a. Gas: n.a.

Explosive properties

The product is considered non-explosive; nevertheless explosive vapour/air mixture can be generated

Lower explosion limits: 1,1 vol. % *)
Upper explosion limits: 6,5 vol. % *)

Auto-ignition temperature: n.d.

Self-ignition temperature

Solid: n.a. Gas: n.a. Decomposition temperature: n.d.

Oxidizing properties

Not oxidising.

Vapour pressure: n.d.

Density (at 20 °C): 0,98 g/cm³

Bulk density: n.a.

Water solubility: Emulsifiable

(at 20 °C)

according to Regulation (EC) No 1907/2006



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Solubility in other solvents

n d

Partition coefficient n-octanol/water: n.d. Viscosity / dynamic: n.d. Viscosity / kinematic: < 20.5 mm²/s (at 40 °C) Flow time: n.d. Relative vapour density: n.d. Evaporation rate: n.d. Solvent separation test: n.d. Solvent content: < 30 %

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactions with oxidizing agents.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

Vapour/air mixtures are explosive at intensive warming.

Heating can release vapours which can be ignited.

10.5. Incompatible materials

oxidizing agents

10.6. Hazardous decomposition products

No hazardous decomposition products known.

Fire may produce:

Carbon monoxide, carbon dioxide, sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

No toxicological data available.

Irritation and corrosivity

Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

^{*)} Information for solvent

according to Regulation (EC) No 1907/2006



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STOT-single exposure

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

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.

Aspiration hazard

May be fatal if swallowed and enters airways.

Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

High concentration of vapours may cause irritation to eyes and respiratory system and produce narcotic effects.

Prolonged contact may cause skin irritation.

Attention. Beware, danger of aspiration!

Occasionally literature hints report that contact with Pyrethrum compounds may trigger hay fever similar reactions in particularly sensible persons.

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.

Very toxic to aquatic life with long lasting effects.

2-(2-butoxyethoxy)ethyl 6-propylpiperonyl ether

EC50/Daphnia magna/48 h = 0,51 mg/l

LC50/Fish/96 h = 3.94 - 6.12 mg/l

EC50/Algae/72 h = > 9,1 mg/l

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Severe hazard to waters

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

according to Regulation (EC) No 1907/2006



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Disposal recommendations

Where possible recycling is preferred to disposal.

Can be incinerated, when in compliance with local regulations.

List of Wastes Code - residues/unused products

200119 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately

collected fractions (except 15 01); Pesticides; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND

PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by

hazardous substances; hazardous waste

Contaminated packaging

Re-using the polluted packaging materials is not allowed.

Contaminated packagings are to be treated like the product itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1993

14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (2-Methylpropan-1-ol, Distillates

(petroleum))

14.3. Transport hazard class(es): 3
14.4. Packing group: |||||

14.4. Packing group: II Hazard label: 3



Classification code: F1

Limited quantity: 5 L / 30 kg

Excepted quantity: E1
Transport category: 3
Hazard No: 30
Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1993

14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (2-Methylpropan-1-ol, Distillates

(petroleum))

14.3. Transport hazard class(es):314.4. Packing group:IIIHazard label:3



Classification code: F1

Limited quantity: 5 L / 30 kg

Excepted quantity: E1

according to Regulation (EC) No 1907/2006



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Marine transport (IMDG)

14.1. UN number: UN 1993

14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (Isobutanol, Destillates (petroleum),

Pyriproxyfen)

14.3. Transport hazard class(es):314.4. Packing group:IIIHazard label:3



Marine pollutant:

Limited quantity:

Excepted quantity:

EmS:

Yes

5 L / 30 kg

E1

F-E, S-E

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1993

14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (Isobutanol, Destillates (petroleum))

14.3. Transport hazard class(es):314.4. Packing group:IIIHazard label:3



Limited quantity Passenger: 10 L
Passenger LQ: Y344
Excepted quantity: E1

IATA-packing instructions - Passenger: 355
IATA-max. quantity - Passenger: 60 L
IATA-packing instructions - Cargo: 366
IATA-max. quantity - Cargo: 220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

14.7. Maritime transport in bulk according to IMO instruments

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information

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

EU regulatory information

according to Regulation (EC) No 1907/2006



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Restrictions on use (REACH, annex XVII):

Entry 3

2004/42/EC (VOC): < 5 %

Information according to 2012/18/EU P5c FLAMMABLE LIQUIDS

(SEVESO III):

Additional information: E1

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile

work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or

nursing mothers.

Water hazard class (D): 3 - highly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,4,6,7,8,9,10,11,12,14,15.

Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships

IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

REACH = Registration, Evaluation, Authorization and Restriction of Chemicals

CAS = Chemical Abstract Service

EN = European norm

ISO = International Organization for Standardization

DIN = Deutsche Industrie Norm

PBT = Persistent Bioaccumulative and Toxic

vPvB = Very Persistent and very Bio-accumulative

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Asp. Tox. 1; H304	Calculation method
Eye Dam. 1; H318	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 1; H410	Calculation method

according to Regulation (EC) No 1907/2006



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Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

'The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)