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PRODUCT : ORG Comfrey (1:10) TM

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SECTION 03: Composition/information on ingredients

- 3.2 Mixtures
- Description:
Mixture

- Dangerous components:

CAS Number	%
Alcohol	20,001-50,00
EC number: 200-578-6	
☠ Flam. Liq. 2 - H225; ☠ Eye Irrit.	
2 - H319	

- Additional information:
For the wording of the listed risk phrases refer to section 16.

*

SECTION 04: First aid measures

4.1 Description of first aid measures

- General information:
Seek immediate medical advice.
- After inhalation:
Supply fresh air and to be sure call for a doctor.
- After skin contact:
If skin irritation continues, consult a doctor.
- After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
Seek immediate medical advice.
- Information for doctor:

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 05: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing agents:
CO₂, sand, extinguishing powder. Do not use water.
Use fire extinguishing methods suitable to surrounding conditions.
- For safety reasons unsuitable extinguishing agents:
Water with full jet

- * 5.2 Special hazards arising from the substance or mixture
- * Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

- Protective equipment:
Do not inhale explosion gases or combustion gases.
- Additional information
Cool endangered receptacles with water spray.

SECTION 06: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- * Wear protective equipment. Keep unprotected persons away.
- * Ensure adequate ventilation
- Keep away from ignition sources.

6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

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- * 6.3 Methods and material for containment and cleaning up:
- * Dispose contaminated material as waste according to item 13.
- * Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 07: Handling and storage

- * 7.1 Precautions for safe handling
- * Keep receptacles tightly sealed.
- * Keep away from heat and direct sunlight.
- * Ensure good ventilation/exhaustion at the workplace.
- * Handle with care. Avoid jolting, friction and impact.
 - Information about fire - and explosion protection:
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

- * • Requirements to be met by storerooms and receptacles:
 - * Store only in the original receptacle.
 - * Use only receptacles specifically permitted for this substance/ product.
- * • Information about storage in one common storage facility:
 - * Not required.
- * • Further information about storage conditions:
 - * Keep container tightly sealed.
 - * Protect from heat and direct sunlight.
 - * Store receptacle in a well ventilated area.

7.3 Specific end use(s)

No further relevant information available.

SECTION 08: Exposure controls/personal protection

- * 8.1 Control parameters
 - Ingredients with limit values that require monitoring at the workplace:
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - DNELs

Alcohol

- * Inhalative, DNEL(ShortTerm): 1900 mg/m3 (human being)
- * Dermal, DNEL(long term): 343 mg/kg (human being)
- * Inhalative, DNEL short term: 1000 ppm (human being)
- * Inhalative, DNEL long term: 500 ppm (human being)
- * Inhalative, DNEL long term: 950 mg/m3 (human being)

- PNECs

Alcohol

- * Oral: 0,72 mg/kg
- * Soil: 0,63 mg/kg
- * STP: 580 mg/l
- * Water Inter Rel: 2,75 mg/l
- * Marine water: 0,79 mg/l
- * Fresh water: 0,96 mg/l
- * Sediment freshW: 3,6 mg/kg
- * Sediment Marine: 2,9 mg/kg

- Additional information:

The lists valid during the making were used as basis.

8.2 Exposure controls

- * • Individual protection measures, such as personal protective equipment
- * • General protective and hygienic measures:
 - * The usual precautionary measures are to be adhered to when handling chemicals.
 - * Keep away from foodstuffs, beverages and feed.

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- * Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
- Respiratory protection:
Use suitable respiratory protective device in case of insufficient ventilation.
- Protection of hands:
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye/face protection
Safety glasses

* **SECTION 09: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

General Information

*	Physical state	Fluid
	Colour:	brown
	Odour:	weak, characteristic
	Odour threshold:	Not determined.
	Boiling point or initial boiling point and boiling range	Not determined.
	Flammability	Not determined.
	Lower and upper explosion limit	
*	Lower:	Not determined.
*	Upper:	Not determined.
*	Flash point:	24,0 °C NFT 60-103 CC
*	Decomposition temperature:	Not determined.
*	pH	Not determined.
	Viscosity:	
*	Kinematic viscosity	Not determined.
*	Dynamic:	Not determined.
	Solubility	
	water:	Not determined.
	Partition coefficient n-octanol/water (log value)	Not determined.
	Vapour pressure:	Not determined.
	Density and/or relative density	
	Density:	Not determined.
*	Relative density	0,9300 0,970
*	Vapour density	Not determined.
	9.2 Other information	No further relevant information available.
	Appearance:	
	Form:	fluid
	Important information on protection of health and environment, and on safety.	
	Auto-ignition temperature:	Not determined.
	Explosive properties:	Not determined.
	Solvent content:	
*	Solids content:	0,00 %

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*	Change in condition	
*	Evaporation rate	Not determined.
	Information with regard to physical hazard classes	
*	Explosives	not applicable
*	Flammable gases	not applicable
*	Aerosols	not applicable
*	Oxidising gases	not applicable
*	Gases under pressure	not applicable
*	Flammable liquids	Flammable liquid and vapour.
*	Flammable solids	not applicable
*	Self-reactive substances and mixtures	not applicable
*	Pyrophoric liquids	not applicable
*	Pyrophoric solids	not applicable
*	Self-heating substances and mixtures	not applicable
*	Substances and mixtures, which emit flammable gases in contact with water	not applicable
*	Oxidising liquids	not applicable
*	Oxidising solids	not applicable
*	Organic peroxides	not applicable
*	Corrosive to metals	not applicable
*	Desensitised explosives	not applicable

* **SECTION 10: Stability and reactivity**

- 10.1 Reactivity
No further relevant information available.
- 10.2 Chemical stability
- 10.3 Possibility of hazardous reactions
No dangerous reactions known.
- 10.4 Conditions to avoid
No further relevant information available.
- 10.5 Incompatible materials:
No further relevant information available.
- 10.6 Hazardous decomposition products:
Not determined.

* **SECTION 11: Toxicological information**

- 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
 - Acute toxicity
- LD/LC50 values relevant for classification:
- ISO LD/LC**
- Alcohol**
- Oral, LD50: 6200-15000 mg/kg (rat) (OECD 401 equivalent)
- Inhalative, LC50/4h: >50 mg/l (rat) (OECD 403 equivalent)
- Primary irritant effect:
 - Skin corrosion/irritation
- Alcohol**
- Irritation of skin, OECD 404 DRAIZE: NOT IRRITANT (Rabbit) (OECD 404)
- Serious eye damage/irritation
- Alcohol**
- Irritation of eyes, OECD 405 DRAIZE: CAT 2 IRRITANT (Rabbit) (OECD 405)

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- * Irritating effect.
- * Causes serious eye irritation.
- * • Respiratory or skin sensitisation
- * **Alcohol**
- * Dermal, OECD 429 LLNA: NOT SENSITIZER (mouse)
- * Sensitisation, OECD 406: NOT SENSITIZER (guinea Pig)
- * • Germ cell mutagenicity
- * **Alcohol**
- * OECD 471 AMES: NEGATIVE (in vitro) (OECD 471)
- * OECD 476 MLA TK: NOT CLASSIFIED (in vitro)
- * • Carcinogenicity
- * **Alcohol**
- * Micronoyau: NEGATIVE (mouse)
- * OECD 475: NEGATIVE (in vitro)
- * • Reproductive toxicity
- * Not determined.
- * • STOT-single exposure
- * Not determined.
- * • STOT-repeated exposure
- * Not determined.
- * • Aspiration hazard
- * Not determined.
- * • Subacute to chronic toxicity:
- * **Alcohol**
- * Oral, NOAEL: >3000 mg/kg (rat) (carcinogenicity)
- * Oral, NOAEL: >4400 mg/kg (mouse) (Female, >4250 mg/kg Male)
- * • Additional toxicological information:
- * Carcinogenic if inhaled.
- * 11.2 Information on other hazards
- * • Endocrine disrupting properties
- * None of the ingredients is listed.

SECTION 12: Ecological information

- * 12.1 Toxicity
- * • Aquatic toxicity:
- * **Alcohol**
- * CE50/48h: 12340 mg/l (daphnia)
- * 96h-LC50: 13000 mg/l (fish)
- * 12.2 Persistence and degradability
- * No further relevant information available.
- * • Behaviour in environmental systems:
- * Not determined.
- * 12.3 Bioaccumulative potential
- * No further relevant information available.
- * 12.4 Mobility in soil
- * No further relevant information available.
- * 12.5 Results of PBT and vPvB assessment
- * • PBT:
- * Not applicable.
- * • vPvB:
- * Not applicable.
- * 12.6 Endocrine disrupting properties
- * The product does not contain substances with endocrine disrupting properties.
- * 12.6 Other adverse effects
- * No further relevant information available.
- * • Ecotoxicological effects:
- * Not determined.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Recommendation
Must be specially treated adhering to official regulations.
- Uncleaned packaging:
- Recommendation:
Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN number or ID number

ADR UN1993

IMDG UN1993

IATA UN1993

14.2 UN proper shipping name

ADR 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))

IMDG FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))

IATA FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))

14.3 Transport hazard class(es)

ADR
Class 3 (F1) Flammable liquids.

Label
3


IMDG
Class 3 Flammable liquids.

Label
3


IATA
Class 3 Flammable liquids.

Label
3


14.4 Packing group

ADR III

IMDG III

IATA III

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Warning: Flammable liquids.

Danger code (Kemler): 30

EMS Number: F-E,S-E

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14.7 Maritime transport in bulk according to IMO instruments
Not applicable.

- Transport/Additional information:
Not applicable.

ADR

Excepted quantities (EQ):	E1
Limited quantities (LQ)	5L
Transport category	3
Tunnel restriction code	D/E

IMDG

Limited quantities (LQ)	5L
Excepted quantities (EQ)	E1

- UN "Model Regulation":
UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), 3, III

SECTION 15: Regulatory information

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

- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment - Annex II

None of the ingredients is listed.

- REGULATION (EU) 2019/1148

- Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

- Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

- Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

- National regulations:

- Waterhazard class:
Generally not hazardous for water.

15.2 Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The information in this safety data sheet is based on the state of our knowledge at the date indicated. The information in this sheet must be regarded as a description of the safety requirements for the product, they are not to be considered a warranty or quality specification and have no contractual value on properties and application areas thereof. The information contained in this safety data sheet relate to the specific material designated and may not be valid with respect to the product associated with another product or process, unless it is specified in the text of this document.

The required information complies with EU regulations in force. It does not exempt the user from knowing and applying all the national regulations in force.

- Relevant phrases

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.

- Training hints
Minimum training in occupational risk prevention is recommended for personnel who will handle this product, in the purpose of facilitating the understanding and interpretation of this form of safety data in the same way as the labeling of the product.

- Abbreviations and acronyms:

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CHEMICAL SAFETY DATA SHEET
according to 2020/878/EC (1907/2006/EC Article 31)

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IFRA:International Fragrance Association IOFI:International Organization of the Flavor Industry IFRA:International Fragrance Association IOFI:International Organization of the Flavor Industry
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation DOT: US Department of Transportation
IATA: International Air Transport Association IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation ICAO: International Civil Aviation Organisation
GHS: Globally Harmonised System of Classification and Labelling of Chemicals GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society) CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH) DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH) PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative vPvB: very Persistent and very Bioaccumulative
CE50: effective concentration at 50% ErC50:concentration of test substance which results in a 50 percent reduction in either growth rate (ErC50)relative to the control within 72hrs exposure.

- Sources
IFRA/IOFI Labelling Manual,REACH registration dossier,supplier information
- * Data compared to the previous version altered.