

Material Safety Data Sheet / MSDS (I907/2006/EC Article 31)

CITRONELLA ORGANIC ESSENTIAL OIL

VERSION 2: 12.9.2025

SECTION 01:

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

1.1 PRODUCT IDENTIFIER

ORIGIN:	Indonesia
PRODUCT'S NAME:	Citronella organic essential oil
INCI NAME:	Cymbopogon winterianus Oil
BOTANICAL NAME:	Cymbopogon winterianus
CAS Number:	8000-29-1
EC Number:	294-954-7
EINECS CAS Number:	91771-61-8

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Application of the substance:

- Flavouring agent
- Cosmetic ingredient
- Aromatherapy use

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

SUPPLIER:	BOHDEI d.o.o.
ADDRESS:	Pavlova vas 66 8255 Piscece Slovenia, EU
E-MAIL:	info@amonanis.si
TELEPHONE:	+386 70 184 666

1.4 EMERGENCY TELEPHONE NUMBER

+386 70 184 666

SECTION 02: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE (Classification according to Regulation (EC) No 1272/2008)

Acute Toxicity, category 4, H302
Aspiration Hazard, category I, H304
Skin sensitization, category I, H317
Eye Damage, category I, H318
Aquatic Chronic hazard, category 2, H411

2.2 LABEL ELEMENTS (Labelling according to Regulation (EC) No 1272/2008)

Pictograms:

GHS05	GHS08	GHS07	GHS09

Signal word: Danger

Hazard statements:

H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.

2.3 OTHER HAZARDS

No data available.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

NCS (natural complex substance): 100% pure and natural essential oil

List of principal components:

Name of component	CAS Number	EC Number	% composition	Classification Regulation (EC) No 1272/2008
CITRONELLAL	106-23-0	203-376-6	20 - 50	Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, Skin Sens. 1B - H317

GERANIOL	106-24-I	203-377-I	20 - 25	Eye Dam. I - H318, Skin Irrit. 2- H315, Skin Sens. I - H317
CITRONELLOL	106-22-9	203-375-0	8 - 13	Skin Irrit. 2 - H315, Eye Irrit. 2 -H319, Skin Sens. IB - H317
GERANYL ACETATE	105-87-3	203-34I-5	I- 5	Skin Irrit. 2 - H315, Skin Sens. IB -H317, Aquatic Chronic 3 - H412
D-LIMONENE	5989-27-5	227-813-5	I- 5	Asp. Tox. I - H304, Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Skin Sens. IB - H317, Aquatic Acute I -H400 (M=I), Aquatic Chronic 3 - H412
CITRONELLYL ACETATE	150-84-5	205-775-0	I - 5	Skin Irrit. 2 - H315, Aquatic Chronic 2 - H411
CITRAL	5392-40-5	226-394-6	0.5 - 3.5	Skin Irrit. 2 - H315, Eye Irrit. 2 -H319, Skin Sens. IB - H317
BETA- CARYOPHYLLENE	87-44-5	201-746-I	0.I - I	Asp. Tox. I - H304, Skin Sens. IB - H317
LINALOOL	78-70-6	201-I34-4	0.I - I	Skin Irrit. 2 - H315, Eye Irrit. 2 -H319, Skin Sens. IB - H317
ALPHA-PINENE	80-56-8	201-29I-9	0.I - I	Asp. Tox. I - H304, Flam. Liq. 3 - H226, Acute Tox. 4 - H302, Skin Irrit. 2 - H315, Skin Sens. IB - H317
ISOEUGENOL	97-54-I	202-590-7	0.0I - 0.I	Acute Tox. 4 - H302, Acute Tox. 4 - H312, Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, Skin Sens. IA - H317, Skin Sens. IA; H317: C >= 0,0I %

SECTION 04:

FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General information:	Symptoms of poisoning may even occur after several hours, therefore medical observation for at least 48 hours after the accident. Seek immediate medical advice. Never give anything by mouth to an unconscious person. It is recommended that those who provide first aid have a personal protective equipment. No action shall be taken involving any personal risk or without suitable training.
After inhalation:	Supply fresh air. Do not administer anything orally. If unconscious, place them in a suitable position. Seek medical assistance.
After skin contact:	Remove contaminated clothing. Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.
After eye contact:	Check for and remove any contact lenses. Rinse opened eyes for at least 10 minutes under running water while pulling eyelids up. Don't let the person to rub the affected eye. If symptoms persist, consult a doctor.

After swallowing:	Rinse mouth thoroughly with water. Do not induce vomiting. If vomiting occurs, keep head down to prevent the passage of vomit into the lungs. Move exposed person to fresh air. If unconscious, place them in a suitable position. Seek medical assistance.
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4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No data available.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Get medical attention if any discomfort is felt, and bring these instructions.

SECTION 05: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable extinguishing agents:

CO₂, sand, foam, extinguishing powder.

Unsuitable extinguishing agents:

Water with full jet or fog (spray).

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

Standard procedure for chemical fires.

Spray extinguishing media to base of flames.

Fire precautions:

Evacuate the area.

Container may explode in the heat of a fire.

Cool endangered receptacles with water spray. Take wind direction into account.

Move undamaged containers from immediate hazard area if it can be done safely.

Protective equipment:

Do not intervene without suitable protective equipment.

Use full face, self-contained breathing apparatus.

Full body protection.

SECTION 06: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

For first aiders:

Wear protective equipment.

Ensure adequate ventilation.

Plug the leak if it is safe to do so.

Keep away from ignition sources.

Keep unprotected persons away.

For non-rescuers:

Ventilate the spill area.
Avoid contact with skin and eyes.
Avoid inhalation of gases, vapours or smoke.
Do not smoke.

6.2 ENVIRONMENTAL PRECAUTIONS

Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Dispose contaminated material as waste according to item I3.
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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 I3 for disposal information.

SECTION 07: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Individual precautions

Apply good manufacturing practice and industrial hygiene practices.
Do not eat, drink or smoke while handling.
Avoid contact with skin and eyes.
Do not inhale the vapors, do not swallow.
Prevent access to persons not required.
Wear personal protective equipment.
Wash your hands after any manipulation.
Contaminated work clothes should not leave the workplace.

Packaging precautions

Store in original container or other container approved alternative made from a compatible material.
Keep receptacles tightly sealed when not in use.
Avoid spills.
Empty containers retain residue product.
Keep away from heat, sparks, open flame and direct sunlight.
Do not use tools that can cause sparks.
Avoid exposing to high temperatures during processing.
Handle with care. Avoid jolting, friction and impact.

Working area protection

Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Protect against electrostatic charges.
Electrical equipment has to be protected according to applicable standards.
Avoid release to the environment.
Use appropriate container to avoid environmental contamination.

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. Avoid PVC.

Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

Keep container tightly sealed.

Store the containers between 5 and 25° C in a dry and dark place.

Protect from heat and direct sunlight.

Do not smoke near the product.

Store receptacle in a well ventilated area.

Keep away from oxidising agents and from highly acidic or alkaline materials.

Information about storage in one common storage facility:

Not required.

7.3 SPECIFIC END USE(S)

No data available.

SECTION 08:

EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Ingredients with limit values that require monitoring at the workplace:

Not required.

8.2 EXPOSURE CONTROLS



General protective and hygienic measures:	The usual precautionary measures are to be adhered to when handling chemicals. Ensure good ventilation of the working area. Provide eyewash station. Avoid static discharges in working area. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Do not inhale gases / fumes / aerosols. Do not inhale dust / smoke / mist. Avoid contact with the skin. Avoid contact with the eyes.
Respiratory protection:	Avoid breathing vapors. Use suitable respiratory protective device in case of insufficient ventilation. Wear full face mask supplied with gas cartridge suitable for organic substances (Filter A2 type).
Protection of hands:	Avoid skin contact. Wear suitable protective gloves resistant to chemical agents in accordance with standard EN374. The glove material has to be impermeable and resistant to the product / the substance / the preparation. Type of gloves recommended Nitrile rubber or PVA (Polyvinyl alcohol).
Skin protection:	Wear apron or protective clothing in case of splashes.
Eye/face protection:	Avoid contact with eyes. Wear approved safety goggles with built in frame tested to EN166.

Body protection:	Impervious protective clothing. Boots.
Environmental exposure control:	Avoid release into the environment.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION	
PHYSICAL STATE:	Liquid
COLOUR:	Light yellow
ODOUR:	Herbal
ODOUR THRESHOLD:	Not determined
BOILING POINT OR INITIAL BOILING POINT AND BOILING RANGE:	215.00°C
FLAMMABILITY:	Not determined
LOWER AND UPPER EXPLOSION LIMIT:	Not determined
FLASH POINT:	81.00°C NFT 60-103 CC
DECOMPOSITION TEMPERATURE:	Not determined
PH:	Not determined
VISCOSITY:	Not determined
DYNAMIC:	Not determined
SOLUBILITY WATER:	Not determined
PARTITION COEFFICIENT N-OCTANOL/WATER (LOG VALUE)	Not determined
VAPOUR PRESSURE:	At 25°C 10,0000 mbar
DENSITY AND/OR RELATIVE DENSITY:	Density: Not determined Relative density: 0,8800 0,897 (D20/20)
SOLIDS CONTENT:	0,00 %
EVAPORATION RATE:	<=1,0 butyl acetate = 1

9.2 OTHER INFORMATION

No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

No data available.

10.2 CHEMICAL STABILITY

No data available.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Not expected under normal temperature conditions and recommended use.

10.4 CONDITIONS TO AVOID

No data available.

10.5 INCOMPATIBLE MATERIALS

No data available.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Not determined.

**SECTION II:
TOXICOLOGICAL INFORMATION****II.1 INFORMATION ON HAZARD CLASSES AS DEFINED IN REGULATION (EC) NO 1272/2008****Acute toxicity:**

Harmful if swallowed.

LD/LC50 values relevant for classification:

CAS	SUBSTANCE	LD/LC50 VALUES
8000-29-1	Cymbopogon winterianus Jowitt	Oral, LD50: >=5000 mg/kg (rat) Dermal, LD50: 4700 mg/kg (Rabbit)
I06-22-9	CITRONELLOL	Oral, LD50: 3450 mg/kg (rat) Dermal, LD50: 2650 mg/kg (Rabbit)
I05-87-3	GERANYL ACETATE	Oral, LD50: >4000 mg/kg (rat) (NTP 1987)
5989-27-5	(R)-p-mentha-1,8-diene	Oral, LD50: 4400 mg/kg (rat)
5392-40-5	CITRAL	Oral, LD50: 4960 mg/kg (rat)
87-44-5	BETA-CARYOPHYLLENE	Oral, LD50: > 5000 mg/kg (rat) (Hart and Wong 1971)
97-53-0	EUGENOL	Oral, LD50: 1930 mg/kg (rat)
78-70-6	LINALOOL	Oral, LD50: 2790 mg/kg (rat) Dermal, LD50: 5610 mg/kg (Rabbit)
97-54-1	ISOEUGENOL	Oral, LD50: 1560 mg/kg (rat)

Primary irritant effect:

Skin corrosion/irritation: No irritant effect.

Serious eye damage/irritation: Strong irritant with the danger of severe eye injury. Causes serious eye damage.

Respiratory or skin sensitisation: Sensitization possible through skin contact.

Germ cell mutagenicity:

CAS	SUBSTANCE	LD/LC50 VALUES
I05-87-3	GERANYL ACETATE	OECD 471 AMES: NEGATIVE (in vitro) (NTP 1987)
87-44-5	BETA-CARYOPHYLLENE	OECD 471 AMES: NEGATIVE (in vitro) (Heck and al., 1989)
78-70-6	LINALOOL	OECD 471 AMES: NEGATIVE (in vitro) (Letizia and al., 2007)

Carcinogenicity:

CAS	SUBSTANCE	LD/LC50 VALUES
I05-87-3	GERANYL ACETATE	Micronoyau: NEGATIVE (mouse) (in vivo, Shelby 1993)
78-70-6	LINALOOL	Micronoyau: NEGATIVE (mouse) (in vivo, Letizia and al., 2007) Micronoyau: NEGATIVE (in vitro) (DiSotto and al., 2011)

Reproductive toxicity:

No data available.

STOT-single exposure:

No data available.

STOT-repeated exposure:

No data available.

Aspiration hazard:

May be fatal if swallowed and enters airways.

Subacute to chronic toxicity:
No data available.

Photo-toxicity:
No data available.

II.2 INFORMATION ON OTHER HAZARDS
No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY

Aquatic toxicity:

CAS	SUBSTANCE	
8000-29-1	Cymbopogon winterianus Jowitt	ErC50(0-72h): 13 mg/l (algae) (OECD 201) ErC50(0-72h): 21,995 mg/l (daphnia) (OECD 202 / EU Method C.2) 96h-LC50: 29,173 mg/l (fish) (OECD 203 / EU Method C.1)
5989-27-5	(R)-P-MENTHA-1,8-DIENE	LD50: 0,71 mg/l (fish) (OECD 203)
78-70-6	LINALOOL	LD50: 27,8 mg/l (fish) ((OECD 203) RIFM 1991) ErC50(0-72h): 156,7 mg/l (algae) ErC50(0-48h): 59 mg/l (daphnia) ((OECD 202)

Do not leave the product, even diluted or in great quantity, penetrate the ground water, water or the drains.

12.2 PERSISTENCE AND DEGRADABILITY
No data available.

Behaviour in environmental systems:
Not determined.

12.3 BIOACCUMULATIVE POTENTIAL
No data available.

12.4 MOBILITY IN SOIL
No data available.

12.5 RESULTS OF PBT AND VPVB ASSESSMENT
Not determined.

12.6 ENDOCRINE DISRUPTING PROPERTIES
The product does not contain substances with endocrine disrupting properties.

12.7 OTHER ADVERSE EFFECTS
No data available.

Ecotoxic effects:
Not determined.

Remark:
Toxic for fish.

Additional ecological information:

General notes;
Toxic for aquatic organisms.
The material is harmful to the environment.

SECTION I3:**Disposal considerations****I3.1 WASTE TREATMENT METHODS****Recommendation:**

Must be specially treated adhering to official regulations.

Uncleaned packaging:

Disposal must be made according to official regulations.

SECTION I4:**TRANSPORT INFORMATION**

Land: Transport by road: ADR, Transport by rail: RID.

Transport documentation: Consignment note and written instructions.

Sea: Transport by ship: IMDG.

Transport documentation: Bill of lading.

Air: Transport by plane: ICAO/IATA.

Transport document: Airway bill.

I4.1 UN NUMBER OR ID NUMBER

ADR/ADN/RID: UN 3082

IMDG: UN 3082

ICAO/IATA: UN 3082

I4.2 UN PROPER SHIPPING NAME

ADR/ADN/RID: 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(CYMBOPOGON WINTERIANUS JOWITT)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(CYMBOPOGON WINTERIANUS JOWITT)

ICAO/IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(CYMBOPOGON WINTERIANUS JOWITT)

I4.3 TRANSPORT HAZARD CLASS(ES)

TRANSPORT	CLASS	LABEL
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ADDRESS

BOHDEI d.o.o.
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8255 PISECE, SLOVENIA
EUROPE, EU

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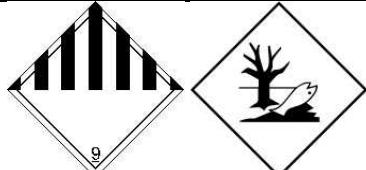
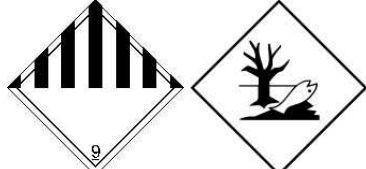
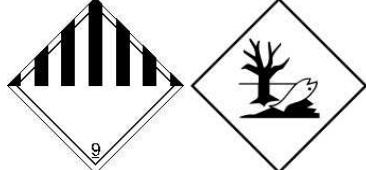
www.amonanis.si

VAT: SI36838217

IBAN: SI56 6100 0002 8475 376

BANK: Delavska hranilnica

SWIFT: HDELSI22

ADR/ADN/RID:	9 (M6) Miscellaneous dangerous substances and articles.	
IMDG	9 Miscellaneous dangerous substances and articles.	
IATA	9 Miscellaneous dangerous substances and articles.	

I4.4 PACKING GROUP

ADR/ADN/RID: III

IMDG: III

ICAO/IATA: III

I4.5 ENVIRONMENTAL HAZARDS

Marine pollutant: Yes

Danger code (Kemler): 90

EMS Number: F-A,S-F



I4.6 SPECIAL PRECAUTIONS FOR USER

Warning: Miscellaneous dangerous substances and articles.

I4.7 MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

Not applicable.

Transport/Additional information:

ADR/ADN/RID:

Excepted quantities (EQ): EI

Limited quantities (LQ): 5L

Transport category: 3

IMDG

Excepted quantities (EQ): EI

Limited quantities (LQ): 5L

UN "Model Regulation":

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(CYMBOPOGON WINTERIANUS JOWITT), 9, III

I4.8 ADDITIONAL INFORMATION

Customs Code : 330I

SECTION I5: REGULATORY INFORMATION

I5.1 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 III/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:

Technical instructions (air): /

Class Share in %: /

Waterhazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

I5.2 CHEMICAL SAFETY ASSESSMENT:

No data available.

SECTION I6: 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:

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IBAN: SI56 6100 0002 8475 376
BANK: Delavska hranilnica
SWIFT: HDELSI22

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H411 Toxic to aquatic life with long lasting effects.

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:

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)

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

DOT: US Department of Transportation

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Sources:

IFRA/IOFI Labelling Manual, REACH registration dossier, supplier information