

Lembar Data Keselamatan
 menurut Peraturan Menteri Perindustrian RI No. 87/M-IND/
 PER/9/2009

Printing date 24.09.2019

Revision: 24.09.2019

1 Identifikasi Senyawa (Tunggal atau Campuran)

- **Product identifier**
- **Trade name:** (+)-Longifolene
- **Article number:** 155265
- **CAS Number:**
475-20-7
- **EC number:**
207-491-2
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Research use only.
- **Details of the supplier of the safety data sheet**
- **Further information obtainable from:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2 Identifikasi Bahaya

- **Classification of the substance or mixture**



health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements**
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS07



GHS08



GHS09

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
Longifolene

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- **Hazard statements**
 - May cause an allergic skin reaction.
 - May be fatal if swallowed and enters airways.
 - Very toxic to aquatic life with long lasting effects.
- **Precautionary statements**
 - If medical advice is needed, have product container or label at hand.
 - Keep out of reach of children.
 - Read label before use.
 - IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 - Specific treatment (see on this label).
 - Do NOT induce vomiting.
 - Take off contaminated clothing and wash it before reuse.
 - Store locked up.
 - Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Komposisi /Informasi tentang Bahan Penyusun Senyawa Tunggal

- **Chemical characterisation: Substances**
- **CAS No. Description**
475-20-7 Longifolene
- **Identification number(s)**
- **EC number:** 207-491-2

4 Tindakan Pertolongan Pertama pada Kecelakaan

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Tindakan pemadaman kebakaran

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.

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- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Tindakan Penanggulangan jika terjadi Tumpahan dan Kebocoran

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **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.
 - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
- **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.

7 Penanganan dan Penyimpanan

- **Handling:**
- **Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 2-8°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

8 Kontrol Paparan/ Perlindungan Diri

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
- **Respiratory protection:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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· 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.

· 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 protection: Goggles recommended during refilling

9 Sifat fisika dan kimia

· Information on basic physical and chemical properties**· General Information****· Appearance:**

Form:	Liquid
Colour:	Colourless
· Odour:	Indeterminate
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

· Flash point: 101 °C

· Flammability (solid, gas): Not applicable.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Not determined.

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure: Not determined.

· Density: Not determined.

· Relative density Not determined.

· Vapour density Not determined.

· Evaporation rate Not determined.

· Solubility in / Miscibility with -

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· water:	Not determined. Insoluble.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	0.00 %
· Other information	No further relevant information available.

10 Stabilitas dan Reaktifitas

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
No further relevant information available.
No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Informasi Toksikologi

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.

12 Informasi Ekologi

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms

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- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Pembuangan Limbah

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Informasi Transpor/Pengangkutan

· UN-Number · ADR, IMDG, IATA	UN3082
· UN proper shipping name · ADR · IMDG · IATA	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Longifolene) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Longifolene), MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Longifolene)
· Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	9 Miscellaneous dangerous substances and articles. 9
· Packing group · ADR, IMDG, IATA	III
· Environmental hazards: · Marine pollutant: · Special marking (ADR): · Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)
· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F A
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

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· Transport/Additional information:**· ADR**

- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml
- **Transport category** 3
- **Tunnel restriction code** -

· IMDG

- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 3082 ENVIRONMENTALLY HAZARDOUS
 SUBSTANCE, LIQUID, N.O.S. (LONGIFOLENE), 9, III

15 Informasi yang Berkaitan dengan Regulasi

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements**
 The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS07 GHS08 GHS09

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
Longifolene
- **Hazard statements**
May cause an allergic skin reaction.
May be fatal if swallowed and enters airways.
Very toxic to aquatic life with long lasting effects.
- **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
Specific treatment (see on this label).
Do NOT induce vomiting.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** *Substance is not listed.*
- **Seveso category** *E1 Hazardous to the Aquatic Environment*

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- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Informasi Lain

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Quality Control Dept.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Sens. 1: Skin sensitisation – Category 1

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

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