

Safety data sheet

Page: 1/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN)

Date of print 17.09.2015

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

1.1. Product identifier

Linalyl Acetate

Chemical name: Linalyl acetate CAS Number: 115-95-7

REACH registration number: 01-2119454789-19-0000

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

Relevant identified uses: Chemical, Chemical for detergents, Cosmetic and oral care chemical, flavoring substance Recommended use: Chemical, flavoring substance, Chemical for detergents, Cosmetic and oral care chemical

For the detailed identified uses of the product see appendix of the safety data sheet.

1.3. Details of the supplier of the safety data sheet

<u>Company:</u> BASF SE 67056 Ludwigshafen GERMANY Operating Division Nutrition and Health

Telephone: +49 621 60-48434 E-mail address: EN-global-safety-data@basf.com

1.4. Emergency telephone number

International emergency number: Telephone: +49 180 2273-112

Page: 2/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN) Date of print 17.09.2015

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Skin Corr./Irrit. 2 Eye Dam./Irrit. 2

According to Directive 67/548/EEC or 1999/45/EC

Possible Hazards: Irritating to skin.

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:

Signal Word: Warning

Hazard Statement:	
H319	Causes serious eye irritation.
H315	Causes skin irritation.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye/face protection.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):P305 + P351 + P338IF IN EYES: Rinse cautiously with water for several minutes. Remove
contact lenses, if present and easy to do. Continue rinsing.P303 + P352IF ON SKIN (on hair): Wash with plenty of soap and water.P332 + P313If skin irritation occurs: Get medical advice/attention.P337 + P311If eye irritation persists: Call a POISON CENTER or doctor/physician.

P362 + P364Take off contaminated clothing and wash before reuse.

According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: LINALYLACETATE

Page: 3/15

Version: 4.0

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

(ID no. 30034993/SDS_GEN_EU/EN)

Date of print 17.09.2015

According to Directive 67/548/EEC or 1999/45/EC

as in Annex VI of Directive 67/548/EEC

Hazard symbol(s) Xi Irritant.

R-phrase(s) R38

Irritating to skin.

S-phrase(s) S37 Wear suitable gloves.

Hazard determining component(s) for labelling: LINALYLACETATE

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

Linalyl acetate

CAS Number: 115-95-7 EC-Number: 204-116-4

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, the full text is listed in section 16.

3.2. Mixtures

Not applicable

SECTION 4: First-Aid Measures

4.1. Description of first aid measures Remove contaminated clothing.

Page: 4/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN) Date of print 17.09.2015

If inhaled: Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water. If irritation develops, seek medical attention.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion: Rinse mouth and then drink 200-300 ml of water.

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

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media Suitable extinguishing media: dry powder, foam

Unsuitable extinguishing media for safety reasons: water

5.2. Special hazards arising from the substance or mixture

Burning produces harmful and toxic fumes.

5.3. Advice for fire-fighters

Special protective equipment: Wear a self-contained breathing apparatus.

Further information: Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Fire debris must be disposed of in accordance with offical regulations.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Page: 5/15

Version: 4.0

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

(ID no. 30034993/SDS_GEN_EU/EN)

Date of print 17.09.2015

Ensure adequate ventilation. Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Information regarding personal protective measures see, section 8.

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:

Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Protect against heat. Protect contents from the effects of light.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

none

PNEC freshwater: 0.011 mg/l

marine water: 0.0011 mg/l

intermittent release: 0.11 mg/l

sediment (freshwater): 0.609 mg/kg

Page: 6/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: **Linalyl Acetate**

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN) Date of print 17.09.2015

sediment (marine water): 0.0609 mg/kg

soil: 0.115 mg/kg

STP: 10 mg/l

<u>DNEL</u>

worker: Long-term exposure- systemic effects, Inhalation: 2.75 mg/m3

worker: Long-term exposure- systemic effects, dermal: 2.5 mg/kg bw/day

worker: Short-term exposure - local effects, dermal: 8000 µg/cm³

consumer: Long-term exposure- systemic effects, Inhalation: 0.68 mg/m3

consumer: Long-term exposure- systemic effects, oral: 0.2 mg/kg bw/day

consumer: Long-term exposure- systemic effects, dermal: 1.25 mg/kg bw/day

consumer: Short-term exposure - local effects, dermal: 8000 µg/cm³

8.2. Exposure controls

Personal protective equipment

Respiratory protection: Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:

Chemical resistant protective gloves (EN 374) Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): butyl rubber (butyl) - 0.7 mm coating thickness nitrile rubber (NBR) - 0.4 mm coating thickness fluoroelastomer (FKM) - 0.7 mm coating thickness Suitable materials short-term contact and/or splashes (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN 374) polyvinylchloride (PVC) - 0.7 mm coating thickness chloroprene rubber (CR) - 0.5 mm coating thickness Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g.

Page: 7/15

Version: 4.0

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

(ID no. 30034993/SDS_GEN_EU/EN)

Date of print 17.09.2015

temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended. Keep away from food, drink and animal feeding stuffs. When using, do not eat, drink or smoke. Store work clothing separately.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

(OECD Guideline 102)
(OECD Guideline 102)
(closed cup)
(other)
nt for
elling., The
may be 5 - 15
vint.
nt for
elling.
(Directive 84/449/EEC, A.15)

Page: 8/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN)

Date of print 17.09.2015

Density:	0.9018 g/cm3	
	Literature data.	
Relative density:	0.9018	
	(20 °C)	
Polativo vanour density	Literature data.	
	not determined	
Solubility in water:	slow decomposition	
	40 g/l	
Solubility (qualitativa) aa	(20 °C)	
	soluble	
Partitioning coefficient n	-octanol/water (log Kow): 3.9	(OECD Guideline 107)
	(25 °C)	
Self ignition:	Based on its structural properties the	Test type: Spontaneous self-
	igniting.	ignition at room-temperature.
	.g	
Thermal decomposition:	> 100 °C	
Viscosity, dynamic:	2.50 mPa.s	(OECD 114)
	The value was determined by	
	calculation from the detected	
	kinematic viscosity.	
	1.6 mPa.s	(OECD 114)
	The value was determined by	
	calculation from the detected	
	kinematic viscosity.	
VISCOSITY, KINEMATIC:	2.77 mm2/s (20 °C)	(OECD 114)
Explosion hazard:	Based on the chemical structure	(other)
	there is no indicating of explosive	
Fire promoting propertie	properties.	(ath ar)
File promoting propertie	the product is not classified as	(other)
	oxidizing.	
	-	
9.2. Other information		
Self heating ability:	It is not a substance canable of	
con ricating ability.	spontaneous heating.	
	Not tested on account of the low	
	melting-point.	
ρκΑ.	The substance does not dissociate	
Surface tension:		
	Based on chemical structure, surface	
Grain size distribution:	activity is not to be expected.	or used in a non-solid or
	granular form.	
	5	

Page: 9/15

Version: 4.0

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

(ID no. 30034993/SDS_GEN_EU/EN)

Date of print 17.09.2015

Molar mass:

196.29 g/mol

SECTION 10: Stability and Reactivity

10.1. Reactivity

Corrosion to metals: No corrosive effect on metal. Formation of Remarks: flammable gases:

Forms no flammable gases in the presence of water.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

No hazardous reactions when stored and handled according to instructions.

10.4. Conditions to avoid

See MSDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid: acids

10.6. Hazardous decomposition products

Hazardous decomposition products: No hazardous decomposition products known.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Inhalation-risk test (IRT): No mortality within 8 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard. Virtually nontoxic after a single skin contact.

Experimental/calculated data: LD50 rat (oral): > 9,000 mg/kg (BASF-Test) No mortality was observed.

rat (by inhalation): 8 h (IRT) Inhalation-risk test (IRT): No mortality within 8 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard. The vapour was tested.

Page: 10/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN)

Date of print 17.09.2015

LD50 rabbit (dermal): > 5,000 mg/kg

Irritation

Assessment of irritating effects: May cause slight irritation to the eyes. Irritating to skin.

Experimental/calculated data: Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)

Serious eye damage/irritation rabbit: non-irritant (BASF-Test)

Serious eye damage/irritation rabbit: Irritant. (OECD Guideline 405) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Respiratory/Skin sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies. Autoxidation products of the substance may be sensitizing.

Experimental/calculated data: Skin painting test guinea pig: Non-sensitizing.

Germ cell mutagenicity

Assessment of mutagenicity:

Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Carcinogenicity

Assessment of carcinogenicity: No reliable data was available concerning carcinogenic activity. Study does not need to be conducted.

Reproductive toxicity

Assessment of reproduction toxicity:

The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Developmental toxicity

Assessment of teratogenicity:

Page: 11/15

Version: 4.0

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

(ID no. 30034993/SDS_GEN_EU/EN)

Date of print 17.09.2015

Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Specific target organ toxicity (single exposure)

Assessment of STOT single: Based on available Data, the classification criteria are not met.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

Effects on the kidney of male rats were detected after repeated exposure. These effects are specific for the male rat and are known to be of no relevance to humans. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aspiration hazard

No data available.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 (96 h) 11 mg/l, Cyprinus carpio (OECD Guideline 203, Flow through.) The statement of the toxic effect relates to the analytically determined concentration. The product may hydrolyse. The test result maybe partially due to degradation products.

Aquatic invertebrates:

EC50 (48 h) 15 mg/l, Daphnia magna (OECD Guideline 202, part 1, static) The details of the toxic effect relate to the nominal concentration. The product may hydrolyse. The test result maybe partially due to degradation products.

Aquatic plants:

EC50 (72 h) 62 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201, static) The details of the toxic effect relate to the nominal concentration. The product may hydrolyse. The test result maybe partially due to degradation products.

Microorganisms/Effect on activated sludge: EC20 (30 min) > 1,000 mg/l, (DIN EN ISO 8192, aerobic)

Chronic toxicity to fish: Study scientifically not justified.

Page: 12/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: **Linalyl Acetate**

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN) Date of print 17.09.2015

Chronic toxicity to aquatic invertebrates: Study scientifically not justified.

Assessment of terrestrial toxicity: Study scientifically not justified.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O): Readily biodegradable (according to OECD criteria).

Elimination information: 70 - 80 % BOD of the ThOD (28 d) (OECD 301C; ISO 9408; 92/69/EEC, C.4-F) (aerobic, activated sludge, domestic)

Assessment of stability in water: In contact with water the substance will hydrolyse rapidly. Information on Stability in Water (Hydrolysis): $t_{1/2} < 1 \text{ d}$, (Directive 92/69/EEC, C.7, pH7)

12.3. Bioaccumulative potential

Bioaccumulation potential: Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.

12.4. Mobility in soil

Assessment transport between environmental compartments: The substance will rapidly evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

12.6. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Observe national and local legal requirements.

Page: 13/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN) Date of print 17.09.2015

SECTION 14: Transport Information

Land transport

ADR

UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Special precautions for user	Not classified as a dangerous good under transport regulations Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable None known
RID	
UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Special precautions for user	Not classified as a dangerous good under transport regulations Not applicable Not applicable Not applicable Not applicable Not applicable None known
Inland waterway transport ADN	
UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Special precautions for user Transport in inland waterway vessel:	No dangerous good for ADN except for bulk transport in inland waterway vessel. Not applicable Not applicable Not applicable Not applicable None known Not evaluated

Sea transport

IMDG

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable

Page: 14/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN) Date of print 17.09.2015

Transport hazard class(es):Not applicablePacking group:Not applicableEnvironmental hazards:Not applicableSpecial precautions for
userNone known

Air transport

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for	None known
user	

14.1. UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

Page: 15/15

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 Date / Revised: 12.06.2014 Product: Linalyl Acetate

Version: 4.0

(ID no. 30034993/SDS_GEN_EU/EN) Date of print 17.09.2015

SECTION 15: Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

SECTION 16: Other Information

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Skin Corr./Irrit. 2 Eye Dam./Irrit. 2B Flam. Liq. 4 Aquatic Acute 3

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases,
and the hazard statements, if mentioned in section 2 or 3:
Skin Corr./Irrit.Skin corrosion/irritationEye Dam./Irrit.Serious eye damage/eye irritation

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.