

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

1.1. Product identifier

Product name : TIMUR PEPPER EO
CAS-No. : 91770-90-0
Alternate CAS No : 102242-62-6
Product group : Blend

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

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Berje
700 Blair Road
07008 Carteret, NJ - USA
T 973-748-8980 - F 973-680-9618
berje@berjeinc.com - www.berjeinc.com

1.4. Emergency telephone number

Emergency number : 1-800-424-9300 24 Hours Emergency Chemtrec. ERR - CCN2624

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Skin sensitisation, Category 1 H317
Aspiration hazard, Category 1 H304
Hazardous to the aquatic environment — Chronic Hazard, Category 2 H411

Full text of H statements : see section 16

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07



GHS08



GHS09

Signal word (CLP) :

Danger

Hazardous ingredients :

+d-Limonene; CARYOPHYLLENE; METHYL CINNAMATE; Myrcene; beta-Phellandrene; Terpinolene; beta-Pinene; alpha-pinene

Hazard statements (CLP) :

H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P280 - Wear protective gloves/protective clothing/eye protection
P301+P310+P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

Child-resistant fastening :

Not applicable

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Tactile warning : Not applicable

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Linalool	(CAS-No.) 78-70-6 (EC-No.) 201-134-4	20 - 50	Not classified	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
+d-Limonene	(CAS-No.) 5989-27-5 (EC-No.) 227-813-5 (EC Index-No.) 601-029-00-7	10 - 20	Not classified	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
METHYL CINNAMATE	(CAS-No.) 103-26-4 (EC-No.) 203-093-8	10 - 20	Not classified	Skin Sens. 1B, H317
beta-Phellandrene	(CAS-No.) 555-10-2 (EC-No.) 209-081-9	10 - 20	Not classified	Flam. Liq. 3, H226 Asp. Tox. 1, H304
Myrcene	(CAS-No.) 123-35-3 (EC-No.) 204-622-5	5 - 10	Not classified	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304
CARYOPHYLLENE	(CAS-No.) 87-44-5 (EC-No.) 201-746-1	1 - 5	Not classified	Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Chronic 4, H413
Terpinolene	(CAS-No.) 586-62-9 (EC-No.) 209-578-0	0.1 - 1	Not classified	Flam. Liq. 3, H226 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
beta-Pinene	(CAS-No.) 127-91-3 (EC-No.) 204-872-5	0.1 - 1	Not classified	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
alpha-pinene	(CAS-No.) 80-56-8 (EC-No.) 201-291-9	0.1 - 1	Not classified	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of R- and H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.
Symptoms/effects after ingestion : Risk of lung oedema.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

+d-Limonene (5989-27-5)		
Belgium	Limit value (ppm)	20 ppm
beta-Pinene (127-91-3)		
Belgium	Limit value (ppm)	20 ppm
USA - ACGIH	ACGIH TWA (ppm)	20 ppm
USA - ACGIH	ACGIH STEL (ppm)	20 ppm
alpha-pinene (80-56-8)		
Belgium	Limit value (ppm)	20 ppm (Essence de térébenthine et monoterpènes sélectionnés; Belgium; Time-weighted average exposure limit 8 h)
USA - ACGIH	ACGIH TWA (ppm)	20 ppm (Turpentine and selected monoterpenes; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)

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8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Hand protection	: Protective gloves
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment
Environmental exposure controls	: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: brown.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 145.4 °F
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0.885
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
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+d-Limonene (5989-27-5)	
LD50 oral rat	4400 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg bodyweight
METHYL CINNAMATE (103-26-4)	
LD50 oral rat	2610 mg/kg (Rat)
LD50 oral	2610 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
Terpinolene (586-62-9)	
LD50 oral rat	4390 mg/kg
LD50 oral	3850 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg
alpha-pinene (80-56-8)	
LD50 oral rat	3700 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.
TIMUR PEPPER EO (91770-90-0)	
Viscosity, kinematic	< 20.5 mm ² /s

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

+d-Limonene (5989-27-5)	
LC50 fish 1	720 µg/l (96 h; Pimephales promelas; Lethal)
LC50 fish 2	702 µg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	0.36 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1	150 mg/l (72 h; Desmodesmus subspicatus; GLP)
Threshold limit algae 2	2.62 mg/l (72 h; Desmodesmus subspicatus)
Terpinolene (586-62-9)	
LC50 fish 1	0.805 mg/l (96 h; Danio rerio; GLP)
EC50 Daphnia 1	0.634 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1	0.692 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)
Threshold limit algae 2	0.302 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)
beta-Pinene (127-91-3)	
LC50 fish 1	1 - 10 mg/l (96 h; Pisces)
LC50 fish 2	2 mg/l (96 h; Pisces)
LC50 other aquatic organisms 1	1 - 10 mg/l (96 h)
EC50 Daphnia 1	1 mg/l (48 h; Daphnia magna; QSAR)
Threshold limit other aquatic organisms 1	1 - 10,96 h
Threshold limit algae 1	0.6 mg/l (72 h; Algae)
alpha-pinene (80-56-8)	
LC50 fish 1	0.28 mg/l (LC50; 96 h)
EC50 Daphnia 1	41 mg/l (LC50; 48 h)

12.2. Persistence and degradability

Linalool (78-70-6)	
Persistence and degradability	Not established.

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+d-Limonene (5989-27-5)	
Persistence and degradability	Readily biodegradable in water. Adsorbs into the soil. May cause long-term adverse effects in the environment.
ThOD	3.29 g O ₂ /g substance
beta-Phellandrene (555-10-2)	
Persistence and degradability	Not established.
METHYL CINNAMATE (103-26-4)	
Persistence and degradability	Biodegradability in water: no data available.
Myrcene (123-35-3)	
Persistence and degradability	No data available. Not established.
CARYOPHYLLENE (87-44-5)	
Persistence and degradability	Not established.
Terpinolene (586-62-9)	
Persistence and degradability	May cause long-term adverse effects in the environment. Readily biodegradable in water. Low mobility (soil).
ThOD	3.2 g O ₂ /g substance
beta-Pinene (127-91-3)	
Persistence and degradability	Not readily biodegradable in water. May cause long-term adverse effects in the environment.
alpha-pinene (80-56-8)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Adsorbs into the soil. Photodegradation in the air.

12.3. Bioaccumulative potential

Linalool (78-70-6)	
Bioaccumulative potential	Not established.
+d-Limonene (5989-27-5)	
BCF fish 1	864.8 - 1022 (Pisces; Fresh weight)
Log Pow	4.38 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 37 °C)
Bioaccumulative potential	Bioaccumulative potential. Not established.
beta-Phellandrene (555-10-2)	
Bioaccumulative potential	Not established.
METHYL CINNAMATE (103-26-4)	
Bioaccumulative potential	No bioaccumulation data available.
Myrcene (123-35-3)	
Bioaccumulative potential	No data available. Not established.
CARYOPHYLLENE (87-44-5)	
Bioaccumulative potential	Not established.
Terpinolene (586-62-9)	
BCF other aquatic organisms 1	818.4
Log Pow	4.29 (QSAR)
Bioaccumulative potential	Bioaccumulative potential. Not established.
beta-Pinene (127-91-3)	
BCF fish 1	718 (Pimephales promelas; QSAR)
Log Pow	4.16 (Experimental value)
Bioaccumulative potential	Bioaccumulative. Not established.
alpha-pinene (80-56-8)	
BCF fish 1	718 (BCF)
Log Pow	4.83 (Experimental value)
Bioaccumulative potential	Bioaccumulative.

12.4. Mobility in soil

alpha-pinene (80-56-8)	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

12.5. Results of PBT and vPvB assessment

No additional information available

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 3082
UN-No. (IMDG) : 3082
UN-No. (IATA) : 3082

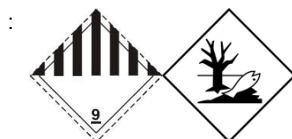
14.2. UN proper shipping name

Proper Shipping Name (ADR) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IATA) : Environmentally hazardous substance, liquid, n.o.s.
Transport document description (ADR) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (limonene), 9, III
Transport document description (IMDG) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (limonene), 9, III, MARINE POLLUTANT

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 9
Danger labels (ADR) : 9



IMDG

Transport hazard class(es) (IMDG) : 9
Danger labels (IMDG) : 9



IATA

Transport hazard class(es) (IATA) : 9
Danger labels (IATA) : 9



14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III

14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes (limonene)

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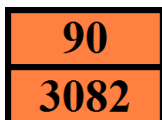
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : M6
Special provisions (ADR) : 274, 335, 375, 601
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates :



EAC code : •3Z

- Transport by sea

Special provisions (IMDG) : 274, 335, 969
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP2, TP29
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-F
Stowage category (IMDG) : A

- Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 964
PCA max net quantity (IATA) : 450L
CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L
Special provisions (IATA) : A97, A158, A197
ERG code (IATA) : 9L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

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Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : METHYL CINNAMATE is listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 4	Hazardous to the aquatic environment — Chronic Hazard, Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

SDS EU (Berje) 5.2

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.