

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

#### 1.1. Product identifier

Product name : Bioact™ EC-7R  
Product code : EC7R  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Function or use category : Cleaning/washing agents and additives

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier

Vantage Specialties, Inc.  
3938 Porett Drive  
60031 Gurnee – IL  
USA  
T +1 847-244-3410  
[msds.pm.us@vantagegrp.com](mailto:msds.pm.us@vantagegrp.com)

##### Only Representative

Vantage Specialties Chemicals S.A.S.  
3 rue Jules Guesde  
91130 Ris Orangis  
France  
[+33 \(0\) 1 69 86 1330](tel:+332169861330)

#### 1.4. Emergency telephone number

Emergency number : For Chemical Emergency Call CHEMTREC 24hr/day 7days/week  
Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: 1-703-527-3887  
(collect calls accepted)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3	H226
Skin corrosion/irritation, Category 2	H315
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411
Full text of H- and EUH-statements: see section 16	

##### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Warning

Contains

: D-Limonene

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Hazard statements (CLP)	: H226 - Flammable liquid and vapour. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting equipment. P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash hands, forearms and face thoroughly after handling.

### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
D-Limonene	CAS-No.: 5989-27-5 EC-No.: 227-813-5 EC Index-No.: 601-029-00-7 REACH-no: 01-2119529223-47	90 – 100	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Dodecanoic acid, methyl ester	CAS-No.: 111-82-0 EC-No.: 203-911-3	< 10	Aquatic Acute 1, H400 Aquatic Chronic 2, H411

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

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.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

No additional information available

### 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	: Use extinguishing agent suitable for surrounding fire.
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### 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.

#### 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

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. Wear personal protective equipment.  
Hygiene measures : 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 in a well-ventilated place. Keep cool.  
Incompatible products : Strong acids.  
Incompatible materials : Strong oxidizing agents.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

D-Limonene (5989-27-5)	
Finland - Occupational Exposure Limits	
Local name	D-Limoneeni
HTP (OEL TWA) [1]	140 mg/m <sup>3</sup>
HTP (OEL TWA) [2]	25 ppm

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D-Limonene (5989-27-5)	
HTP (OEL STEL)	280 mg/m <sup>3</sup>
HTP (OEL STEL) [ppm]	50 ppm
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	(R)-p-Mentha-1,8-dien (D-Limonen)
AGW (OEL TWA) [1]	28 mg/m <sup>3</sup> (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	5 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Peak exposure limitation factor	4(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); H - hautresorptiv; Sh - Hautsensibilisierender Stoff; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Chemical category	Skin notation, Skin sensitization
Regulatory reference	TRGS900
Slovenia - Occupational Exposure Limits	
Local name	(R)-p-menta-1,8-dien (D-limonen)
OEL TWA	28 mg/m <sup>3</sup>
OEL TWA [ppm]	5 ppm
OEL STEL	112 mg/m <sup>3</sup>
OEL STEL [ppm]	20 ppm
Remark	K (Lastnost lažjega prehajanja snovi v organizem skozi kožo), Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti)
OEL chemical category	Potential for cutaneous absorption
Regulatory reference	Uradni list RS, št. 72/2021 z dne 11.5.2021
Spain - Occupational Exposure Limits	
Local name	d-Limoneno
VLA-ED (OEL TWA) [1]	168 mg/m <sup>3</sup>
VLA-ED (OEL TWA) [2]	30 ppm
Remark	Sen (Sensibilizante), vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante).
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2021. INSHT
Norway - Occupational Exposure Limits	
Local name	d-limonen (Limonen)
Grenseverdi (OEL TWA) [1]	140 mg/m <sup>3</sup>
Grenseverdi (OEL TWA) [2]	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m <sup>3</sup> (value calculated)
Korttidsverdi (OEL STEL) [ppm]	37.5 ppm (value calculated)

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D-Limonene (5989-27-5)	
Remark	A: Kjemikalier som skal betraktes som at de fremkaller allergi eller annen overfølsomhet i øynene eller luftveier, eller som skal betraktes som at de fremkaller allergi ved hudkontakt.
OEL chemical category	Sensitizing substance
Regulatory reference	FOR-2021-06-28-2248
Switzerland - Occupational Exposure Limits	
Local name	D-Limonène / D-Limonen
MAK (OEL TWA) [1]	40 mg/m <sup>3</sup>
MAK (OEL TWA) [2]	7 ppm
KZGW (OEL STEL)	80 mg/m <sup>3</sup>
KZGW (OEL STEL) [ppm]	14 ppm
Critical toxicity	Foie / Leber
Notation	S, SS <sub>C</sub> / S, SS <sub>C</sub>
OEL chemical category	Sensitizer
Regulatory reference	www.suva.ch, 01.01.2021

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

### 8.2.2. Personal protection equipment

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

##### Hand protection:

Protective gloves

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### 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	: light yellow.
Odour	: citrus-like.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (water=1)	: $\leq 1$ (BUAC = 1)
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 171 – 189 °C
Flash point	: 47 °C (closed cup)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: < 2 mm Hg
Relative vapour density at 20 °C	: > 1 (air = 1)
Relative density	: 0.84 @ 25°C
Solubility	: immiscible.
Partition coefficient n-octanol/water (Log Pow)	: 4.4 Published data for d-Limonene
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: None reported.
Oxidising properties	: None reported.
Explosive limits	:
Lower explosive limit (LEL)	: 0.7 vol %
Upper explosive limit (UEL)	: 6.1 vol %

### 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

Protect from sunlight. extreme temperatures.

### 10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

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### 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 (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### D-Limonene (5989-27-5)

LD50 oral rat	4400 mg/kg
LD50 dermal rabbit	> 5 g/kg

#### Dodecanoic acid, methyl ester (111-82-0)

LD50 oral rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 5 mg/l air Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

#### D-Limonene (5989-27-5)

IARC group	3 - Not classifiable
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Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.
Not rapidly degradable	

#### D-Limonene (5989-27-5)

LC50 - Fish [1]	0.619 – 0.796 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	35 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 - Crustacea [1]	0.36 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	0.51 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	≈ 8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	0.214 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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D-Limonene (5989-27-5)	
ErC50 algae	0.32 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
NOEC (chronic)	0.115 mg/l Test organisms (species): other:For freshwater invertebrates, species frequently include Daphnia magna or Daphnia pulex. Duration: '16 d'

Dodecanoic acid, methyl ester (111-82-0)	
LC50 - Fish [1]	> 1000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 - Crustacea [1]	0.255 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.324 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.179 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	1.5 mg/l (Species: Desmodesmus subspicatus)
NOEC (chronic)	0.0814 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

### 12.2. Persistence and degradability

D-Limonene (5989-27-5)	
Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

Bioact™ EC-7R	
Partition coefficient n-octanol/water (Log Pow)	4.4 Published data for d-Limonene
D-Limonene (5989-27-5)	
BCF - Fish [1]	864.8 l/kg (BCFBAF v3.01, Pisces, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.38 (Experimental value, Equivalent or similar to OECD 117, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).
Dodecanoic acid, methyl ester (111-82-0)	
Partition coefficient n-octanol/water (Log Pow)	6.02

### 12.4. Mobility in soil

D-Limonene (5989-27-5)	
Ecology - soil	Low potential for mobility in soil.

### 12.5. Results of PBT and vPvB assessment

Component	
D-Limonene (5989-27-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

No additional information available



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### 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 / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
UN 2319	UN 2319	UN 2319	UN 2319	UN 2319
<b>14.2. UN proper shipping name</b>				
TERPENE HYDROCARBONS, N.O.S. (D-Limonene)	TERPENE HYDROCARBONS, N.O.S. (D-Limonene)	Terpene hydrocarbons, n.o.s. (D-Limonene)	TERPENE HYDROCARBONS, N.O.S. (D-Limonene)	TERPENE HYDROCARBONS, N.O.S. (D-Limonene)
<b>Transport document description</b>				
UN 2319 TERPENE HYDROCARBONS, N.O.S. (D-Limonene), 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 2319 TERPENE HYDROCARBONS, N.O.S. (D-Limonene), 3, III, MARINE POLLUTANT/ENVIRONME NTALLY HAZARDOUS (32°C c.c.)	UN 2319 Terpene hydrocarbons, n.o.s. (D- Limonene), 3, III, ENVIRONMENTALLY HAZARDOUS	UN 2319 TERPENE HYDROCARBONS, N.O.S. (D-Limonene), 3, III, ENVIRONMENTALLY HAZARDOUS	UN 2319 TERPENE HYDROCARBONS, N.O.S. (D-Limonene), 3, III, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>				
3	3	3	3	3
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

#### 14.6. Special precautions for user

##### Overland transport

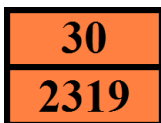
Classification code (ADR)	: F1
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2

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Hazard identification number (Kemler No.) : 30  
Orange plates :



Tunnel restriction code (ADR) : D/E  
EAC code : 3Y

### Transport by sea

Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1, TP29  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : A  
Flash point (IMDG) : 32°C to 49°C c.c.  
Properties and observations (IMDG) : Colourless or yellowish liquids. Flashpoint: 32°C to 49°C c.c. Immiscible with water.

### Air transport

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y344  
PCA limited quantity max net quantity (IATA) : 10L  
PCA packing instructions (IATA) : 355  
PCA max net quantity (IATA) : 60L  
CAO packing instructions (IATA) : 366  
CAO max net quantity (IATA) : 220L  
ERG code (IATA) : 3L

### Inland waterway transport

Classification code (ADN) : F1  
Limited quantities (ADN) : 5 L  
Excepted quantities (ADN) : E1  
Equipment required (ADN) : PP, EX, A  
Ventilation (ADN) : VE01  
Number of blue cones/lights (ADN) : 0

### Rail transport

Classification code (RID) : F1  
Limited quantities (RID) : 5L  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P001, IBC03, LP01, R001  
Mixed packing provisions (RID) : MP19  
Portable tank and bulk container instructions (RID) : T4  
Portable tank and bulk container special provisions (RID) : TP1, TP29  
Tank codes for RID tanks (RID) : LGBF  
Transport category (RID) : 3  
Special provisions for carriage – Packages (RID) : W12  
Colis express (express parcels) (RID) : CE4  
Hazard identification number (RID) : 30

## 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

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### 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

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

##### 15.1.2. National regulations

###### Germany

Employment restrictions

: Observe restrictions according Act on the Protection of Working Mothers (MuSchG)  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Water hazard class (WGK)

: WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV)

: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Storage class (LGK, TRGS 510)

: LGK 3 - Flammable liquids

Joint storage table

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for

: LGK 1, LGK 2A, LGK 4.1A, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1A, LGK 5.1C, LGK 5.2, LGK 6.1B, LGK 6.2, LGK 7

Joint storage with restrictions permitted for

: LGK 5.1B, LGK 6.1D, LGK 11, LGK 10-13

Joint storage permitted for

: LGK 2B, LGK 3, LGK 6.1A, LGK 6.1C, LGK 8A, LGK 8B, LGK 10, LGK 12, LGK 13

###### Netherlands

ABM category

: A(1) - highly toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment

SZW-lijst van kankerverwekkende stoffen

: None of the components are listed

SZW-lijst van mutagene stoffen

: None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding

: None of the components are listed

SZW-lijst van reprotoxische stoffen –

: None of the components are listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling

: None of the components are listed

###### Denmark

Class for fire hazard

: Class II-1

Store unit

: 5 liter

Classification remarks

: R10 <H226;H315;H317;H410>; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations

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

###### Switzerland

Storage class (LK)

: LK 3 - Flammable liquids

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# Bioact™ EC-7R

## Safety Data Sheet

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

### SECTION 16: Other information

#### Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

#### Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
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# Bioact™ EC-7R

## Safety Data Sheet

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

Full text of H- and EUH-statements:	
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Flam. Liq. 3	Flammable liquids, Category 3
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.
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.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

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