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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Commercial name : SPICY AMBER

UFI : KX20-50C7-H002-5G53

European product categorisation system (EupCS): PC-AIR-4 - Air care products for vehicles

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

Uses	CONSUMER	PROFESSIONAL	INDUSTRIAL
	EVA air freshener for small rooms		

Uses advises against : All those not expressly identified on the label

Life cycle stages : C-Consumer use

**1.3 Details of the supplier of the safety data sheet**

Joy Fragrances s.r.l. - Via Gavina, 14 - 21052 BUSTO ARSIZIO (VA) – Italy

tel. +39 0331 536942 - [www.mrandmrsfragrance.com](http://www.mrandmrsfragrance.com)email competent person [info@joyfragrances.it](mailto:info@joyfragrances.it)**1.4 Emergency telephone number**

Joy Fragrances s.r.l. - Tel +39 +39 0331 536942 – from 09,30 to 12,30 – from 15,30 to 19,30

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****2.1.1 Classification in accordance with Regulation (EC) No 1272/2008:**

The product is classified as dangerous pursuant to the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adjustments), the product therefore requires a safety data sheet compliant with the provisions of Regulation (EU) 2020/878.

Hazard pictogram(s) : None

Hazard Class and Notes Category Code(s) : Aquatic Chronic 3

Hazard statement Code(s) : H412 - Harmful to aquatic life with long lasting effects

**2.1.2 Adverse Effects**

The product is dangerous for the environment as it is harmful to aquatic organisms with long lasting effects

**2.2 Label elements****2.2.1 Label in accordance with Regulation (EC) No 1272/2008**

Hazard pictogram(s) : None



Signal Word Code(s) :

No signal word is used

Hazard statement Code(s) :

H412 - Harmful to aquatic life with long lasting effects

Suppl. Hazard statement Code(s) :

EUH208 - Contains (Dihydro pentamethylindanone, Helional, Tetramethyl acetylloctahydronaphthalenes, Acetyl

Diisoamylene, 4-tert-butylcyclohexyl acetate, Isoeugenol). May produce an allergic reaction

Precautionary statements :

**General**

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

**Prevention**

P273 - Avoid release to the environment.

**Disposal**

P501 - Dispose of contents/container in accordance with local/ national regulation.

**2.2.2 Additional regulations to be implemented on the label**

Regulation (EC) 648/2004 : Not applicable

Regulation (EU) 528/2012 : Not applicable

**Additional information:** Not a toy. Do not swallow. Do not leave the product exposed in environments with temperatures above 70°C. Do not use the product for purposes other than those intended. Only insert into the air vents. Avoid contact with shiny or metallic surfaces.

**2.3 Other hazards**

The mixture does NOT contain PBT / vPvB substances according to Regulation (EC) 1907/2006, annex XIII in concentrations equal to or greater than 0.1% by weight. The mixture does NOT contain substances that have been included in the list established in accordance with Article 59, paragraph 1 due to properties of interference with the endocrine system in concentrations equal to or greater than 0.1% by weight.

The mixture does NOT contain a substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 in concentrations equal to or greater than 0.1% by weight.

ISO 8317 \_ Child-resistant packaging - Requirements and testing procedures for reclosable packages

EN 862 \_ Child-resistant packaging - Requirements and testing procedures for non-reclosable packages for non-pharmaceutical products

Not applicable

Tactile warnings of danger (ISO 11683 \_ Packaging - Tactile warnings of danger - Requirements)

Not applicable

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not relevant

**3.2 Mixtures**

Refer to section 16 for the full text of the hazard statements.

Index number	EC/List n°.	CAS	REACH	International Chemical Identification		X= Conc. % 1.5 < x < 2.0	Notes
				Classification	Vanillin		
	---	204-465-2	121-33-5	01-2119516040-60			
				Classification		Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)	
				Hazard Class and Category Code(s), Hazard Statement Code(s)	Supplementary Hazard Statement Code(s)	Pictograms, Signal Word Code(s)	Notes
					--	GHS07 - WARNING	--
							--

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<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
---	251-649-3	33704-61-9	01-2119977131-40
<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>International Chemical Identification</b>
Skin Irrit. 2 H315, Skin Sens. 1B H317, Eye Irrit. 2 H319, Aquatic Chronic 2 H411		Supplementary Hazard Statement Code(s)	Dihydro pentamethylindanone
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
---	701-122-3	106185-75-5	01-2119529224-45
<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>International Chemical Identification</b>
Eye Irrit. 2 H319, Aquatic Chronic 2 H411		Supplementary Hazard Statement Code(s)	Ethyl trimethylcyclopentene butenol
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
---	214-881-6	1205-17-0	01-2120740119-58
<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>International Chemical Identification</b>
Skin Sens. 1B H317, Aquatic Chronic 2 H411		Supplementary Hazard Statement Code(s)	Methylenedioxyphenyl methylpropanal (Helional)
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
---	915-730-3	54464-57-2	01-2119489989-04
<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>International Chemical Identification</b>
Skin Irrit. 2 H315, Skin Sens. 1H317, Aquatic Chronic 2 H411		Supplementary Hazard Statement Code(s)	Tetramethyl acetoxytetrahydronaphthalenes
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
---	939-627-8	--	01-2119980043-42
<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>International Chemical Identification</b>
Skin Sens. 1B H317, Aquatic Chronic 2 H411		Supplementary Hazard Statement Code(s)	Acetyl Diisoamylene
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
---	250-954-9	32210-23-4	01-2119976286-24
<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>International Chemical Identification</b>
Skin Sens. 1B H317		Supplementary Hazard Statement Code(s)	4-tert-butylcyclohexyl acetate
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
---	268-979-9	68155-67-9	--
<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>International Chemical Identification</b>
Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 1 H410		Supplementary Hazard Statement Code(s)	1-(1,2,3,4,6,7,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxytetrahydronaphthalenes)
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
---	268-978-3	68155-66-8	--
<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>International Chemical Identification</b>
Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 1 H410		Supplementary Hazard Statement Code(s)	1-(1,2,3,5,6,7,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxytetrahydronaphthalenes)
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
604-094-00-X	202-590-7	97-54-1	--
<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>International Chemical Identification</b>
Skin Sens. 1A H317		Supplementary Hazard Statement Code(s)	Isoeugenol
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
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<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)</b>
Skin Sens. 1A H317		Supplementary Hazard Statement Code(s)	GHS07 - WARNING
<b>Index number</b>	<b>EC/List n°.</b>	<b>CAS</b>	<b>REACH</b>
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<b>Hazard Class and Category Code(s), Hazard Statement Code(s)</b>		<b>Classification</b>	<b>Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)</b>
Skin Sens. 1A H317		Supplementary Hazard Statement Code(s)	M=1

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

First aid instructions categorized according to relevant routes of exposure. It is advisable for those who provide first aid to wear the personal protective equipment deemed suitable for the conditions in which the intervention is to be carried out.

#### Inhalation

Given the specificity of the product and the small quantities of substances released, conditions such as to require first aid measures are not foreseen.

#### Skin

Wash the areas of the body that have come into contact with the product with plenty of soap and water, even if they are only suspected.

#### Eyes

Given the particular structure of the product, accidental contacts are unpredictable and mainly of traumatic and/or voluntary origin. If necessary, apply fresh compresses and, if the painful phenomena continue, contact the medical staff.

#### Ingestion

SEEK MEDICAL ATTENTION IMMEDIATELY.

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

#### Inhalation

They are not known and there are no specific reports on symptoms and effects caused by the product.

#### Skin

They are not known and there are no specific reports on symptoms and effects caused by the product.

#### Eyes

Redness.

#### Ingestion

They are not known and there are no specific reports on symptoms and effects caused by the product.

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

See section 4.1 Description of first aid measures.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media :** Water spray, CO<sub>2</sub>, alcohol resistant foam, chemical powders depending on the materials involved in the fire.**Unsuitable extinguishing media :** None in particular**5.2 Special hazards arising from the substance or mixture**

During combustion, fumes that are potentially harmful to health may develop. If exposed to flame, it catches fire and continues to burn with a dimly lit flame even if removed from the heat source.

**5.3 Advice for firefighters**

Use protective clothing for the respiratory tract, eyes and skin. Water spray can be used to disperse vapors and protect people engaged in firefighting. It is also advisable to use self-contained breathing apparatus, especially if you work in closed and poorly ventilated places. Wear the specific protective equipment of the firefighting team. Given the polymeric characteristic of the material, the possible presence of considerable quantities of product in the environments involved in the fire can be a source of risk in causing the re-ignition of the fire in the presence of oxygen since the internal layers can conserve heat. It is therefore necessary, in the event of a fire in environments where large quantities of product have been involved, to dissipate the heat retained inside.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel :** Move away from the area surrounding the spill or release. Not smoking.**For emergency responders :** General information: No smoking. Use suitable personal protective equipment, see Section 8.**6.2 Environmental precautions**

Contain leaks with inert material. Avoid dispersion and/or washout in sewers and surface waters. Dispose of the residue according to current regulations.

**6.3 Methods and material for containment and cleaning up****6.3.1 Appropriate advice shall be provided on how to contain a spill**

Keep dry.

**6.3.2 Appropriate advice shall be provided on how to clean-up a spill**

After collection, wash the affected area and materials with plenty of water and recover the resulting fluids.

**6.3.3 Any other information shall be provided relating to spills and releases, including advice on inappropriate containment or clean-up techniques**

Hand over waste only to specialized companies

**6.4 Reference to other sections**

Refer to sections 8 and 13 for more information

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Normal precautions for handling sensitizing chemical products, protecting themselves from any accidental contact. Do not smoke, eat or drink while handling.

**7.2 Conditions for safe storage, including any incompatibilities**

How to manage risks associated with:

i)	explosive atmospheres	Nothing to report
ii)	corrosive conditions	Nothing to report
iii)	flammability hazards	Nothing to report
iv)	incompatible substances or mixtures	Avoid contact with solvents which could damage the product.
v)	evaporative conditions	Keep in the original packaging, in well-ventilated areas at room temperature.
vi)	potential ignition sources (including electrical equipment)	Keep away from open flames, sparks and sources of ignition in general. Appropriate maintenance of all the electrical components of machines, systems and electrical installations in general can give a sufficient guarantee of reducing the risk of fire.

How to control the effects of:

i)	weather conditions	Store indoors in dry environments.
ii)	ambient pressure	Nothing to report
iii)	Temperature	Store at room temperature
iv)	sunlight	Do not store in direct sunlight.
v)	humidity	Keep away from humidity.
vi)	Vibration	Nothing to report

How to maintain the integrity of the substance or mixture by the use of:

i)	stabilisers	Nothing to report
ii)	antioxidants	Nothing to report

Other advice including

i)	ventilation requirements	Keep in cool and ventilated places.
ii)	specific designs for storage rooms or vessels (including retention walls and ventilation)	Nothing to report
iii)	quantity limits under storage conditions (if relevant)	Keep in cool and ventilated places.
iv)	packaging compatibilities	Nothing to report
v)	Storage class	Not applicable

**7.3 Specific end use(s)**

Consumer: Follow the instructions given on the label/box/information leaflets.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

Related to the substances contained

Substance:	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
<b>GESTIS International Limit Values</b>				

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## Remarks

<https://echa.europa.eu/it/registration-dossier/-/registered-dossier/2209>

## DNEL (Workers)

## DNEL (Population)

	Systemic		Local			Systemic		Local	
	Long term	Short term	Long term	Short term		Long term	Short term	Long term	Short term
Inhalation	Hazard unknown (no further information necessary)		Low hazard (no threshold derived)		Inhalation	Hazard unknown (no further information necessary)		Low hazard (no threshold derived)	
Dermal	Hazard unknown (no further information necessary)	No hazard identified	No hazard identified		Dermal	Hazard unknown (no further information necessary)	No hazard identified	No hazard identified	
Oral	Not available		Not available		Oral	No hazard identified		Not available	
Eyes	Not available		Low hazard (no threshold derived)		Eyes	Not available		Low hazard (no threshold derived)	

## PNEC

Freshwater	0.118 mg/L	Intermittent	Not available	Marine water	0.012 mg/L
STP	10 mg/L	Sediment (freshwater)	58.22 mg/kg sediment dw	Sediment (marine water)	5.822 mg/kg sediment dw
Air	No hazard identified	Soil	11.54 mg/kg soil dw	Hazard for predators	No potential for bioaccumulation

Substance: Dihydro pentamethylindanone

CAS: 33704-61-9

## GESTIS International Limit Values

## Limit value - Eight hours

ppm

mg/m<sup>3</sup>

## Limit value - Short term

ppm

mg/m<sup>3</sup>

## Remarks

<https://echa.europa.eu/it/registration-dossier/-/registered-dossier/15957>

## DNEL (Workers)

## DNEL (Population)

	Systemic		Local			Systemic		Local	
	Long term	Short term	Long term	Short term		Long term	Short term	Long term	Short term
Inhalation	1.47 mg/m <sup>3</sup>	No hazard identified	No hazard identified		Inhalation	0.44 mg/m <sup>3</sup>	No hazard identified	No hazard identified	
Dermal	0.42 mg/kg bw/day	No hazard identified	5 510 µg/cm <sup>2</sup>	Low hazard (no threshold derived)	Dermal	0.25 mg/kg bw/day	No hazard identified	3 241 µg/cm <sup>2</sup>	Low hazard (no threshold derived)
Oral	Not available		Not available		Oral	0.25 mg/kg bw/day		Not available	
Eyes	Not available		Low hazard (no threshold derived)		Eyes	Not available		Low hazard (no threshold derived)	

## PNEC

Freshwater	0.004 mg/L	Intermittent	Not available	Marine water	0.00 mg/L
STP	10 mg/L	Sediment (freshwater)	99.1 µg/kg sediment dw	Sediment (marine water)	9.91 µg/kg sediment dw
Air	No hazard identified	Soil	17.4 µg/kg soil dw	Hazard for predators	1.11 mg/kg food

Substance: Ethyl trimethylcyclopentene butenol

CAS: 106185-75-5

## GESTIS International Limit Values

## Limit value - Eight hours

ppm

mg/m<sup>3</sup>

## Limit value - Short term

ppm

mg/m<sup>3</sup>

## Remarks

Link DNEL value <https://echa.europa.eu/it/registration-dossier/-/registered-dossier/20325>

## DNEL (Workers)

## DNEL (Population)

	Systemic		Local			Systemic		Local	
	Long term	Short term	Long term	Short term		Long term	Short term	Long term	Short term
Inhalation	21 mg/m <sup>3</sup>	No hazard identified	No hazard identified		Inhalation	5.2 mg/m <sup>3</sup>	No hazard identified	No hazard identified	
Dermal	6 mg/kg bw/day	No hazard identified	No hazard identified		Dermal	3 mg/kg bw/day	No hazard identified	No hazard identified	
Oral	Not available		Not available		Oral	3 mg/kg bw/day		Not available	
Eyes	Not available		Low hazard (no threshold value)		Eyes	Not available		Low hazard (no threshold value)	

## PNEC

Freshwater	8.8 µg/L	Intermittent	Not available	Marine water	0.88 µg/L
STP	1 mg/L	Sediment (freshwater)	1.05 mg/kg sediment dw	Sediment (marine water)	0.105 mg/kg sediment dw
Air	No hazard identified	Soil	0.206 mg/kg soil dw	Hazard for predators	20 mg/kg food

Substance: Methyleneoxyphenyl methylpropanal (Helional)

CAS: 1205-17-0

## GESTIS International Limit Values

## Limit value - Eight hours

ppm

mg/m<sup>3</sup>

## Limit value - Short term

ppm

mg/m<sup>3</sup>

## Remarks

<https://echa.europa.eu/it/registration-dossier/-/registered-dossier/20444>

## DNEL (Workers)

## DNEL (Population)

	Systemic		Local			Systemic		Local	
	Long term	Short term	Long term	Short term		Long term	Short term	Long term	Short term
Inhalation	1.2 mg/L	No hazard identified	Hazard unknown but no further hazard information necessary as no exposure expected	No hazard identified	Inhalation	0.29 mg/L	No hazard identified	0.005 mg/cm <sup>2</sup>	No hazard identified
Dermal	0.17 mg/kg bw/day	No hazard identified	0.01 mg/cm <sup>2</sup>	No hazard identified	Dermal	0.083 mg/kg bw/day	No hazard identified	No hazard identified	
Oral	Not available		Not available		Oral	0.17 mg/kg bw/day		Not available	
Eyes	Not available		No hazard identified		Eyes	Not available		No hazard identified	

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## PNEC

Freshwater	0.005 mg/L	Intermittent	0.053 mg/L	Marine water	0.001 mg/L
STP	10 mg/L	Sediment (freshwater)	0.057 mg/kg/sediment	Sediment (marine water)	0.006 mg/kg/sediment
Air	No hazard identified	Soil	0.008 mg/kg soil	Hazard for predators	No potential for bioaccumulation

Substance: Tetramethyl acetoxyoctahydronaphthalenes

CAS: 54464-57-2

## GESTIS International Limit Values

		Limit value - Eight hours		Limit value - Short term		
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
Remarks						
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<https://echa.europa.eu/it/registration-dossier/-/registered-dossier/15069>

DNEL (Workers)				DNEL (Population)			
Systemic		Local		Systemic		Local	
	Long term	Short term	Long term	Short term	Inhalation	Long term	Short term
Inhalation	30 mg/m <sup>3</sup>	no hazard identified	no hazard identified	no hazard identified	Inhalation	9 mg/m <sup>3</sup>	no hazard identified
Dermal	28.7 mg/kg bw/day	no hazard identified	648 µg/cm <sup>2</sup>	low hazard (no threshold derived)	Dermal	17.2 mg/kg bw/day	no hazard identified
Oral	Not available		Not available		Oral	3 mg/kg bw/day	no hazard identified
Eyes	Not available		no hazard identified		Eyes	Not available	

## PNEC

Freshwater	4.4 µg/L	Intermittent	Not available	Marine water	0.48 µg/L
STP	10 mg/L	Sediment (freshwater)	3.73 mg/kg sediment dw	Sediment (marine water)	0.75 mg/kg sediment dw
Air	No hazard identified	Soil	2.7 mg/kg soil dw	Hazard for predators	26.7 mg/kg food

Substance: Acetyl Diisoamylene

CAS: -- EC: 939-627-8

## GESTIS International Limit Values

		Limit value - Eight hours		Limit value - Short term		
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
Remarks						
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Link DNEL value <https://echa.europa.eu/it/registration-dossier/-/registered-dossier/13879>

DNEL (Workers)				DNEL (Population)			
Systemic		Local		Systemic		Local	
	Long term	Short term	Long term	Short term	Inhalation	Long term	Short term
Inhalation	6 mg/m <sup>3</sup>	No hazard identified	No hazard identified	No hazard identified	Inhalation	1.8 mg/m <sup>3</sup>	No hazard identified
Dermal	1.7 mg/kg bw/day	No hazard identified	3 600 µg/cm <sup>2</sup>	No hazard identified	Dermal	1 mg/kg bw/day	No hazard identified
Oral	Not available		Not available		Oral	1 mg/kg bw/day	No hazard identified
Eyes	Not available		No hazard identified		Eyes	Not available	

## PNEC

Freshwater	4.8 µg/L	Intermittent	Not available	Marine water	0.48 µg/L	
STP	22 mg/L	Sediment (freshwater)	0.621 mg/kg sediment dw	Sediment (marine water)	0.062 mg/kg sediment dw	
Air	No hazard identified	Soil	0.121 mg/kg soil dw	Hazard for predators	No potential to cause toxic effects if accumulated (in higher organisms) via the food chain	

Substance: 4-tert-butylcyclohexyl acetate

CAS: 32210-23-4

## GESTIS International Limit Values

		Limit value - Eight hours		Limit value - Short term		
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
Remarks						
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Link DNEL value <https://echa.europa.eu/it/registration-dossier/-/registered-dossier/15158>

DNEL (Workers)				DNEL (Population)			
Systemic		Local		Systemic		Local	
	Long term	Short term	Long term	Short term	Inhalation	Long term	Short term
Inhalation	No hazard identified	No hazard identified	No hazard identified	No hazard identified	Inhalation	No hazard identified	No hazard identified
Dermal	No hazard identified	Medium hazard (no threshold derived)	Medium hazard (no threshold derived)	No hazard identified	Dermal	No hazard identified	Medium hazard (no threshold derived)
Oral	Not available		Not available		Oral	No hazard identified	Not available
Eyes	Not available		No hazard identified		Eyes	Not available	

## PNEC

Freshwater	5.3 µg/L	Intermittent	53 µg/L	Marine water	12.2 mg/L
STP	12.2 mg/L	Sediment (freshwater)	2.01 mg/kg sediment dw	Sediment (marine water)	0.21 mg/kg sediment dw
Air	No hazard identified	Soil	0.42 mg/kg soil dw	Hazard for predators	66.67 mg/kg food

Substance: 1-(1,2,3,4,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyoctahydronaphthalenes)

CAS: 68155-67-9

## GESTIS International Limit Values

		Limit value - Eight hours		Limit value - Short term		
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
Remarks						
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[https: --](https://)

DNEL (Workers)		DNEL (Population)	
Systemic	Local	Systemic	Local
Systemic			

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Inhalation	Long term 30 mg/m <sup>3</sup>	Short term No hazard identified	Long term No hazard identified	Short term No hazard identified	Inhalation	Long term 9 mg/m <sup>3</sup>	Short term No hazard identified	Long term No hazard identified	Short term No hazard identified
Dermal	28.7 mg/kg bw/day	No hazard identified	648 µg/cm <sup>2</sup>	Low hazard (no threshold derived)	Dermal	17.2 mg/kg bw/day	No hazard identified	380 µg/cm <sup>2</sup>	Low hazard (no threshold derived)
Oral	Not available		Not available		Oral	3 mg/kg bw/day	No hazard identified		Not available
Eyes	Not available		No hazard identified		Eyes	Not available			No hazard identified

## PNEC

Freshwater	4.4 µg/L	Intermittent	Not available	Marine water	0.44 µg/L
STP	10 mg/L	Sediment (freshwater)	3.73 mg/kg sediment dw	Sediment (marine water)	0.75 mg/kg sediment dw
Air	No hazard identified	Soil	2.7 mg/kg soil dw	Hazard for predators	26.7 mg/kg food

Substance: 1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetyl Octahydronaphthalenes)

CAS: 68155-66-8

## GESTIS International Limit Values

	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
	--	--	--	--
Remarks				
--				

https:--

DNEL (Workers)				DNEL (Population)			
Systemic		Local		Systemic		Local	
Long term	Short term	Long term	Short term	Long term	Short term	Long term	Short term
Inhalation	30 mg/m <sup>3</sup>	No hazard identified	No hazard identified	Inhalation	9 mg/m <sup>3</sup>	No hazard identified	No hazard identified
Dermal	28.7 mg/kg bw/day	No hazard identified	648 µg/cm <sup>2</sup>	Dermal	17.2 mg/kg bw/day	No hazard identified	380 µg/cm <sup>2</sup>
Oral	Not available		Not available	Oral	3 mg/kg bw/day	No hazard identified	
Eyes	Not available		No hazard identified	Eyes	Not available		No hazard identified

## PNEC

Freshwater	4.4 µg/L	Intermittent	Not available	Marine water	0.44 µg/L
STP	10 mg/L	Sediment (freshwater)	3.73 mg/kg sediment dw	Sediment (marine water)	0.75 mg/kg sediment dw
Air	No hazard identified	Soil	2.7 mg/kg soil dw	Hazard for predators	26.7 mg/kg food

## 8.2 Exposure controls

## 8.2.1 Appropriate engineering controls

If, following the risk assessment and the adoption of preventive technical and/or organizational collective protection measures, it appears that there is still a residual risk for the worker, it is necessary to equip the worker with Personal Protective Equipment. In any company, however, the instructions given by the Head of the Prevention and Protection Service must be complied with, who will have assessed the risk deriving from all the products used in each working phase. Before choosing the PPE to wear, it is essential to know the risks associated with the work environment, the environmental conditions, the job of the wearer and after having consulted the instructions provided by the manufacturer. All PPE belonging to the third category must be delivered to operators only after adequate training.

The use of this mixture does not imply the application of Directive 2004/37 / EC on the protection of workers against the risks deriving from exposure to carcinogens or mutagens at work.

**Descriptor for Process categories:** PROC19 - Manual activities involving hand contact

## 8.2.2 Individual protection measures, such as personal protective equipment

The information below must be considered only as an aid to the Head of the Prevention and Protection Service as in addition to this mixture he will have to implement the choices on PPE also in consideration of the other chemical products present in the company used in each specific working phase.

## a) EYE/FACE PROTECTION

PITTOGRAM	PPE	METHOD OF CHOOSING THE PPE			
		RISK CHARACTERISTICS	PROTECTION		
Eye and face protection devices	PPE for the eyes are second category and must be provided with indelible CE marking and the number of the Notified Body that issued the certification. Their use is foreseen in all places where there is a risk of projections of solid bodies, liquids or optical radiation. For eyeglass wearers, it is possible to use over glasses if the duration of use is limited or to mount graduated lenses on safety frames. Operators wearing contact lenses must make their condition known in order to make it easier, if necessary, to remove them by first aid workers in case of need in an emergency. Standard EN166 Personal eye protection - Specifications		Eyeglasses	Glasses with side shields	Mask glasses
	Frontal sketches	Good	Good	Excellent	
	Side sketches	Scarso	Good	Excellent	
	Frontal splinters	Excellent	Good	Excellent if of adequate thickness	
	Side impacts	Scant	Fairly good	Excellent	
	Neck and face protection	Scant	Scant	Fairly good	
	Wearability	Good / Very good	Good	Fairly good	
	Continuous use	Very good	Very good	Fairly good	
	Acceptability for use	Very good	Good	Scant	
				Fairly good	

The Head of the Prevention and Protection Service will assess the need to provide eyewash devices near the areas where the mixture is used.

## IN NORMAL USE THERE ARE NO PERSONAL PROTECTIVE EQUIPMENT PROVIDED

## b) SKIN PROTECTION

## i) Hand protection

PITTOGRAM	PPE	METHOD OF CHOOSING THE PPE			
		CHEMICAL PROTECTION			
Protective gloves	The choice of gloves depends on the worker's job, the characteristics of the glove and its biocompatibility. The "grip" must always be guaranteed. The general requirements for choosing the most suitable PPE are: harmlessness, ergonomics / comfort, dexterity, transmission and absorption of water vapor and cleaning. Regarding these requirements, the reference technical standard is UNI EN 420 - Protective gloves. General requirements and test methods. Gloves	Type	Level	Time	Substances
		A	2	30 minutes	minimum 6
		B	2	30 minutes	minimum 3
		C	1	10 minutes	minimum 1
MATERIALS FOR PROTECTION FROM CHEMICAL AGENTS					
	LATEX	NEOPRENE	NITRILE	PVC	

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Gloves	<p>that protect against chemicals are regulated by EN374 - Protective gloves against chemicals and microorganisms. The basic requirements for this type of gloves are: penetration and permeation. Chemical protective gloves are divided into three categories: Type A, B and C; the belonging to which depends on the number of chemicals tested, from a list of 18 substances that have reached a defined permeation time. Gloves must be checked before use. The choice of gloves based on resistance must be made following the UNI EN 16523 standard - Determination of the resistance of materials to the permeation of chemical products. Use proper technique to remove gloves avoiding skin contact with the contaminated outer surface of the glove.</p> <p>After use, wash and dry your hands.</p>	Highlights	Excellent flexibility and tear resistance	Polyvalent chemical resistance: acids, aliphatic solvents. Good resistance to sunlight and ozone.	Excellent resistance to abrasion and perforation. Excellent resistance to hydrocarbon derivatives	Good resistance to acids and bases
		Precautions	<p>It can cause allergic reactions.</p> <p>Avoid contact with fatty oils and hydrocarbon derivatives.</p>	<p>Avoid contact with fatty oils and hydrocarbon derivatives</p>	<p>Avoid contact with solvents containing ketones and oxidizing acids, organic nitrogen products.</p>	<p>Weak mechanical resistance. Avoid contact with solvents containing ketones and aromatic solvents</p>

The Head of the Prevention and Protection Service will evaluate the choice of PPE to be used based on the duties.

**USE WATERPROOF GLOVES**

ii) other

PITTOGRAM	PPE	METHOD OF CHOOSING THE PPE							
		DANGER	Full coverage garment		Partial coverage garment				
Work clothing	<p>PPE for the body can be of different categories depending on their specific use. Under normal working conditions, normal work clothing offers characteristics that provide sufficient protection for workers. In activities presenting particular risks, specific "protective clothing" should be used which covers or replaces personal clothing and which is designed with specific protective characteristics. The basic requirements relating to the ergonomics and health of PPE for the body are: harmlessness of the materials, comfort and effectiveness factors, design, thermal resistance of the clothing and the characteristics of the operators. Please note that to ensure adequacy and mobility with full-coverage protective clothing, it is recommended that all operators carry out the "seven movements" test. Standard EN 13688 Protective clothing - General requirements</p>		Waterproof	Permeable to air	Waterproof	Permeable to air			
			Gas and fumes	A	NO	NO			
			Jets of liquids	A	NO	P			
			Splashes and splashes	A	P	P			
			Dust	A	A	P			
			Dirt	A	A	A			
NO: Indicates that the possibility is not compatible - A: suitable combination - P: combination that depends on external conditions									
The protective clothing against chemicals, depending on the barrier performance of the raw material used and the packaging of the garment, have different types of protection: Type 1 (gas-tight), Type 2 (non-watertight gas), Type 3 (liquid tight), Type 4 (splash tight), Type 5 (dust tight), Type 6 (limited liquid splash tight). The chemical risks are many and it is therefore necessary to choose the most appropriate garment, also considering that the materials can be both waterproof and permeable, evaluating the combination between the type of protection offered by the construction techniques and the design adopted for the realization of the garment. itself and the performance class from the raw material.									

If the Head of the Prevention and Protection Service deems it necessary, protective clothing can be worn in combination with an appropriate respiratory protection device and with boots, gloves or other means of protection.

**NO PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED IN NORMAL USE**

c) RESPIRATORY PROTECTION

PITTOGRAM	PPE	METHOD OF CHOOSING THE PPE				
		DUST FILTERS				
RPD (Respiratory protective devices)	<p>PPE for respiratory protection are of the third category and must be provided with CE marking, the number of the Notified Body that issued the certification and must be provided only after information, training and specific training on their use. To define the type of RPD to use, pay attention to the oxygen rate present in the workplace, using the O<sub>2</sub> concentration of 17% as a limit. Carefully define the type of contaminant (Gas, steam / Dust, particles, viruses), its detection threshold and its use or not in a confined space.</p> <p>The UNI EN 529 standard (Respiratory protection devices - Recommendations for selection, use, care and maintenance - Guidance document) establishing the appropriate FPO value "operational protection factor" (eg use of face masks as per standard UNI EN149 - Respiratory protective devices - Filtering half mask against particles) can be a valid aid in determining the most correct PPE.</p>	Efficiency	Dust class	RPD class and marking	Minimum total filtering efficiency	Protection
		LOW	Filters P1	Respirators FFP1	78%	Powders/Harmful aerosol
		AVERAGE	Filters P2	Respirators FFP2	92%	Powders/fumes/ low toxicity aerosol
		HIGH	Filters P3	Respirators FFP3	98%	Powders/fumes/ Harmful aerosol
		GAS FILTERS				
		Capacity	Class	Maximum concentration		
		Low	1	Gas / vapor concentrations up to 1000 ppm		
		Average	2	Gas / vapor concentrations up to 5000 ppm		
		High	3	Gas / vapor concentrations up to 10000 ppm		
		TYPE OF FILTERS				
		Type	Protection			Filter color
		A	Organic gases and vapors with a boiling point > 65 °C			BROWN
		B	Inorganic gases and vapors			GREY
		E	Acid gases			YELLOW
		K	Ammonia and derivatives			GREEN
		P	Toxic dusts, fumes, mists			WHITE
		AX (EN371)	Low boiling point organic gases and vapors <65 °C			BROWN
FACTORS TO CONSIDER		DUST FILTER RESPIRATORS				
Type of substance	Correct choice of filter type	Filter respirator	Nominal Protection Factor	Operational Protection Factor		
Concentrations	Need / opportunity to protect other parts of the face (eyes - face) Filter capacity in relation to exposure time	Facial Filter FFP1 Half mask + P1	4	4		
		Facial Filter FFP2 Half mask + P2	12	10		
		Facial Filter FFP3 Half mask + P3	50	30		
Visibility	Reduction of protection	Full face + P1	5	4		
Freedom of movement	Reduction of weight and discomfort	Full face + P2	20	15		
Facial anatomy	Mask adequacy	Full face + P3	1000	400		
Environmental conditions						

The Head of the Prevention and Protection Service, as well as correctly defining the specific PPE for the activities, must pay attention to follow the instructions provided by the manufacturers of the various PPE.

**NO PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED IN NORMAL USE**

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## d) THERMAL HAZARDS

PITTOGRAM	PPE	OBSERVATIONS
 Hot/Cold	The indications provided in this section define the PPE intended to protect against possible temperature variations that the mixture causes or that the mixture itself may undergo during normal working activities. PPE must protect against excesses in external temperature by maintaining body temperature, thermally insulate while maintaining permeability to water and air to ensure sweating and moisture removal, respectively, so as not to cause heat loss. In order to protect themselves from the cold, PPE must retain a degree of flexibility that allows the operator to perform the necessary actions and to assume certain positions. PPE intended for short-term interventions or likely to receive projections of hot products, must have a calorific capacity sufficient to return most of the stored heat only after the user has removed them.	PPE intended to protect against thermal differences must have an adequate heat flow transmission coefficient to avoid any risk of damage as required by the foreseeable conditions of use. The heat flow transmitted to the operator during the use of PPE must be such that its accumulation does not in any case reach the pain threshold or the one in which any harmful effect on health occurs. PPE must prevent, as far as possible, the penetration of liquids and must not cause injury caused by contact between their protective coating and the operator.

The choice of this type of PPE must be made by guaranteeing thermal insulation power and mechanical and chemical resistance adequate to the foreseeable conditions of use that the Head of the Prevention and Protection Service deems necessary.

**THE MIXTURE IS NOT EXPECTED TO CAUSE OR UNDERTAKE SUGNIFICANT TEMPERATURE CHANGES DURING THE INTENDED USE.**

## 8.2.3 Environmental exposure controls

Prevent uncontrolled release into the environment.

## SECTION 9: Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

The physical and chemical properties listed below are not to be considered technical specifications. The reference specifications are shown in the technical documentation.

Physical and chemical properties	Value	Notes or analytical method
a) Physical state	Solid	As defined in Annex I, section 1.0 of Reg. 1272/2008
b) Colour	Various colours	--
c) Odour	Characteristic of the fragrance	--
d) Melting point/freezing point	Not determined	--
e) Boiling point or initial boiling point and boiling range	Not determined	--
f) Flammability	NO	Applicable to gases, liquids and solids
g) Lower and upper explosion limit	Not applicable	Not applicable to solids
h) Flash point	Not applicable	Does not apply to gases, aerosols and solids
i) Auto-ignition temperature	Not applicable	Only applicable to gases and liquids
j) Decomposition temperature	Not applicable	Only applicable to self-reactive substances and mixtures, organic peroxides and other substances and mixtures which may decompose.
k) pH	Not applicable	The mixture is not soluble in water
l) Kinematic viscosity	Not applicable	Applies to liquids only
m) Solubility	Insoluble in water, partially soluble in alcohol	--
n) Partition coefficient n-octanol/water (log value)	Not applicable	It does not apply to inorganic and ionic liquids and, as a rule, does not apply to mixtures
o) Vapour pressure	Not determined	According to the REACH regulation, the study must not be conducted if the melting point is above 300°C (Annex VII, column 2 adaptation).
p) Density and/or relative density	Not applicable	only applies to liquids and solids.
q) Relative vapour density	Not applicable	only applies to gases and liquids.
r) Particle characteristics	Not relevant. Non-particulate blend	applies only to solids

## 9.2 Other information

- a) Explosives: Not applicable
- b) Flammable gases: Not applicable
- c) Aerosols: Not applicable
- d) Oxidising gases: Not applicable
- e) Gases under pressure: Not applicable
- f) Flammable liquids: Not applicable
- g) Flammable solids: Not applicable
- h) Self-reactive substances and mixtures: Not applicable
- i) Pyrophoric liquids: Not applicable
- j) Pyrophoric solids: Not applicable
- k) Self-heating substances and mixtures: Not applicable
- l) Substances and mixtures, which emit flammable gases in contact with water: Not applicable
- m) Oxidising liquids: Not applicable
- n) Oxidizing solids: Not applicable
- o) Organic peroxides: Not applicable
- p) Corrosive to metals: Not applicable
- q) Desensitised explosives: Not applicable

## 9.2.2 Other safety characteristics

- a) mechanical sensitivity : Not applicable
- b) self-accelerating polymerisation temperature : Not applicable
- c) formation of explosive dust/air mixtures : Not applicable
- d) acid/alkaline reserve : Not applicable
- e) evaporation rate : Not determinated
- f) miscibility : Not miscible with water
- g) conductivity : Not applicable
- h) corrosiveness : Not applicable
- i) gas group : Not applicable
- j) redox potential : Not applicable
- k) radical formation potential : Not applicable
- l) photocatalytic properties : Not applicable

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Other physical and chemical parameters:

COV (Directive 2010/75 / EC)

: 0.044%

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Stable under normal conditions of use and storage.

**10.2 Chemical stability**

Stable under normal conditions of use and storage.

**10.3 Possibility of hazardous reactions**

None known under normal conditions of use.

**10.4 Conditions to avoid**

- a) Temperature : do not subject to direct heating
- b) Pressure : nothing to report
- c) Light : nothing to report
- d) Static discharge : nothing to report
- e) Vibrations : nothing to report
- f) Other physical stresses : no other data available

**10.5 Incompatible materials**

- a) Water : avoid contact
- b) Air : nothing to report
- c) Acids : avoid contact
- d) Bases : avoid contact
- e) Oxidising agents : avoid contact
- f) Reducing agents : avoid contact
- g) Chemicals : avoid contact

**10.6 Hazardous decomposition products**

Under normal conditions the preparation does not decompose. Due to thermal decomposition, fumes harmful to health are released.

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Hazard classes		Information
a)	acute toxicity	: Not classified. based on available data, the classification criteria are not met.
b)	skin corrosion/irritation	: Not classified. based on available data, the classification criteria are not met.
c)	serious eye damage/irritation	: Not classified. based on available data, the classification criteria are not met.
d)	respiratory or skin sensitisation	: The presence of sensitizing substances, even in very low concentrations, can cause an allergic reaction.
e)	germ cell mutagenicity	: Not classified. based on available data, the classification criteria are not met.
f)	carcinogenicity	: Not classified. based on available data, the classification criteria are not met.
g)	reproductive toxicity	: Not classified. based on available data, the classification criteria are not met.
h)	STOT-single exposure	: Not classified. based on available data, the classification criteria are not met.
i)	STOT-repeated exposure	: Not classified. based on available data, the classification criteria are not met.
j)	aspiration hazard	: Not classified. based on available data, the classification criteria are not met.

**Specific toxicological information for the substances contained (if available)**

Substance:	Vanillin		
CAS:	121-33-5		
	ORAL	INHALATION	DERMAL
Rat LD50: ≈ 3978 mg/kg bw	--	--	Rat LD50: >2000 mg/kg bw
The values included in this section are those available, at the time of writing this SDS, in the ECHA dossier in the section Toxicological information or from the supplier's indications.			--
EXPOSURE AND HEALTH EFFECTS			
Routes of exposure	--		
Inhalation risk	A nuisance-causing concentration of airborne particles can be reached quickly when dispersed, especially if powdered		
Effects of short-term exposure	--		
Effects of long-term or repeated exposure	--		
SYMPTOMS BY SPECIFIC ROUTE OF EXPOSURE			
Inhalation	Cough		
Skin	--		
Eyes	Redness.		
Ingestion	--		
Notes	--		

Substance:	Dihydro pentamethylindanone		
CAS:	33704-61-9		
	ORAL	INHALATION	DERMAL
Rat LD50: 2685 mg/kg bw	Rat LC50: 17400 mg/m <sup>3</sup> air	Rat LD50: 2685 mg/kg bw	--
The values included in this section are those available, at the time of writing this SDS, in the ECHA dossier in the section Toxicological information or from the supplier's indications.			

Substance:	Ethyl trimethylcyclopentene butenol		
CAS:	106185-75-5		
	ORAL	INHALATION	DERMAL
Rat LD50: 2000 mg/kg bw	--	--	Rat LD50: 4600 mg/kg bw
The values included in this section are those available, at the time of writing this SDS, in the ECHA dossier in the section Toxicological information or from the supplier's indications.			--
Substance:	Methylenedioxyphenyl methylpropanal (Helional)		
CAS:	1205-17-0		
	ORAL	INHALATION	DERMAL
Rat LD50: 3 362 mg/kg bw	--	--	Rabbit LD50: > 2000 mg/kg bw
The values included in this section are those available, at the time of writing this SDS, in the ECHA dossier in the section Toxicological information or from the supplier's indications.			--

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<b>Substance:</b>	Tetramethyl acetoxyloctahydronaphthalenes		
<b>CAS:</b>	54464-57-2		
<b>ORAL</b>	<b>INHALATION</b>	<b>DERMAL</b>	<b>NOTEs</b>
Rat LD50: 5000 mg/kg bw	--	Rat LD50: 5000 mg/kg bw	--
The values included in this section are those available, at the time of writing this SDS, in the ECHA dossier in the section Toxicological information or from the supplier's indications.			
<b>Substance:</b>	Acetyl Diisoamylene		
<b>CAS:</b>	-- EC: 939-627-8		
<b>ORAL</b>	<b>INHALATION</b>	<b>DERMAL</b>	<b>NOTEs</b>
Rat LD50: 2350 mg/kg bw	--	Rat LD50: 5000 mg/kg bw	--
The values included in this section are those available, at the time of writing this SDS, in the ECHA dossier in the section Toxicological information or from the supplier's indications.			
<b>Substance:</b>	4-tert-butylcyclohexyl acetate		
<b>CAS:</b>	32210-23-4		
<b>ORAL</b>	<b>INHALATION</b>	<b>DERMAL</b>	<b>NOTEs</b>
Rat LD50: 3370 mg/kg bw	--	Rabbit LD50: > 4680 mg/kg bw	--
The values included in this section are those available, at the time of writing this SDS, in the ECHA dossier in the section Toxicological information or from the supplier's indications.			
<b>Substance:</b>	1-(1,2,3,4,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyloctahydronaphthalenes)		
<b>CAS:</b>	68155-67-9		
<b>ORAL</b>	<b>INHALATION</b>	<b>DERMAL</b>	<b>NOTEs</b>
Rat LD50: > 5000 mg/kg bw	--	Rat LD50: > 5000 mg/kg bw	--
The values included in this section are those available, at the time of writing this SDS, in the ECHA dossier in the section Toxicological information or from the supplier's indications.			
<b>Substance:</b>	1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyloctahydronaphthalenes)		
<b>CAS:</b>	68155-66-8		
<b>ORAL</b>	<b>INHALATION</b>	<b>DERMAL</b>	<b>NOTEs</b>
Rat LD50: > 5000 mg/kg bw	--	Rat LD50: > 5000 mg/kg bw	--
The values included in this section are those available, at the time of writing this SDS, in the ECHA dossier in the section Toxicological information or from the supplier's indications.			

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

The mixture does NOT contain substances identified as having endocrine-disrupting properties in accordance with the criteria established in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 in concentrations equal to or greater than 0.1% in weight.

### 11.2.2 Other information

No further data available

## SECTION 12: Ecological information

Environmental Release Categories: ERC11a - Widespread use of articles with low release (indoor)

### 12.1 Toxicity

The product is dangerous for the environment as it is harmful to aquatic life with long lasting effects.

Use according to good working practices, avoiding to disperse the product in the environment.

#### Ecotoxicological information specific to the substances contained

<b>Substance:</b>	Vanillin				
<b>CAS:</b>	121-33-5				
<b>LC50 - fish</b>	96h - 83.7 mg/L	<b>Species :</b>	Pimephales promelas	<b>Guidelines :</b>	OECD203
<b>EC50 - aquatic invertebrates</b>	48h - 36.79 mg/L	<b>Species :</b>	Daphnia Magna	<b>Guidelines :</b>	OECD202
<b>EC50 - aquatic algae and cyanobacteria</b>	72h - 120 mg/L	<b>Species :</b>	Pseudokirchneriella subcapitata	<b>Guidelines :</b>	OECD201
<b>NOEC chronic fish</b>	96h - - - mg/L	<b>Species :</b>	--	<b>Guidelines :</b>	--
<b>NOEC chronic invertebrates</b>	48h - - - mg/L	<b>Species :</b>	--	<b>Guidelines :</b>	--
<b>NOEC chronic algae and cyanobacteria</b>	72h - 47 mg/L	<b>Species :</b>	Pseudokirchneriella subcapitata	<b>Guidelines :</b>	OECD201
<b>Substance:</b>	Dihydro pentamethylindanone				
<b>CAS:</b>	33704-61-9				
<b>LC50 - fish</b>	96h: 1.7 mg/l	<b>Species :</b>	Oryzias latipes	<b>Guidelines :</b>	OECD203
<b>EC50 - aquatic invertebrates</b>	48h: 1.5 mg/l	<b>Species :</b>	Daphnia magna	<b>Guidelines :</b>	OECD202
<b>EC50 - aquatic algae and cyanobacteria</b>	72h: 10 mg/l	<b>Species :</b>	Desmodesmus subspicatus	<b>Guidelines :</b>	OECD201
<b>NOEC chronic fish</b>	--	<b>Species :</b>	--	<b>Guidelines :</b>	--
<b>NOEC chronic invertebrates</b>	--	<b>Species :</b>	--	<b>Guidelines :</b>	--
<b>NOEC chronic algae and cyanobacteria</b>	72h: 6 mg/l	<b>Species :</b>	Desmodesmus subspicatus	<b>Guidelines :</b>	OECD201
<b>Substance:</b>	Ethyl trimethylcyclopentene butenol				
<b>CAS:</b>	106185-75-5				
<b>LC50 - fish</b>	96h - 1.1 mg/L	<b>Species :</b>	Lepomis macrochirus	<b>Guidelines :</b>	EPA OPPTS 850.1075
<b>EC50 - aquatic invertebrates</b>	48h - 1.34 mg/L	<b>Species :</b>	Daphnia magna	<b>Guidelines :</b>	OECD Guideline 202
<b>EC50 - aquatic algae and cyanobacteria</b>	96h - 2.5 mg/L	<b>Species :</b>	Pseudokirchneriella subcapitata	<b>Guidelines :</b>	EPA OPPTS 850.5400
<b>NOEC chronic fish</b>	--	<b>Species :</b>	--	<b>Guidelines :</b>	--
<b>NOEC chronic invertebrates</b>	--	<b>Species :</b>	--	<b>Guidelines :</b>	--
<b>NOEC chronic algae and cyanobacteria</b>	96h - 0.44 mg/L	<b>Species :</b>	Pseudokirchneriella subcapitata	<b>Guidelines :</b>	EPA OPPTS 850.5400
<b>Substance:</b>	Methylenedioxyphephenyl methylpropanal (Helional)				
<b>CAS:</b>	1205-17-0				
<b>LC50 - fish</b>	96h - 5.3 mg/L	<b>Species :</b>	Oncorhynchus mykiss	<b>Guideline :</b>	OECD Guideline 203
<b>EC50 - aquatic invertebrates</b>	48h - 8.3 mg/L	<b>Species :</b>	Daphnia magna	<b>Guideline :</b>	OECD Guideline 202
<b>ERL50 - algae and cyanobacteria</b>	72h - 28 mg/L	<b>Species :</b>	Pseudokirchneriella subcapitata	<b>Guideline :</b>	OECD Guideline 201
<b>NOEC chronic fish</b>	--	<b>Species :</b>	--	<b>Guideline :</b>	--
<b>NOEC chronic invertebrates</b>	--	<b>Species :</b>	--	<b>Guideline :</b>	--
<b>NOEC chronic algae and cyanobacteria</b>	72h - 6.25 mg/L	<b>Species :</b>	Pseudokirchneriella subcapitata	<b>Guideline :</b>	OECD Guideline 201

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Substance:	Tetramethyl acetoxyoctahydronaphthalenes			Guidelines :	OECD 203
CAS:	54464-57-2			Guidelines :	OECD 202
LC50 - fish	96h-1,3 mg/L	Species :	Lepomis macrochirus	Guidelines :	OECD 201
EC50 - aquatic invertebrates	48h-1.38 mg/L	Species :	Daphnia magna	Guidelines :	OECD 210
EC50 - aquatic algae and cyanobacteria	72h->2.6 mg/L	Species :	--	Guidelines :	OECD 211
NOEC chronic fish	30d-0.54 mg/L	Species :	Zebra fish	Guidelines :	OECD 201
NOEC chronic invertebrates	21d-0.044 mg/L	Species :	Daphnia magna	Guidelines :	OECD 203
NOEC chronic algae and cyanobacteria	72h->2.6 mg/L	Species :	Scenedesmus subspicatus	Guidelines :	OECD 202

Substance:	Acetyl Diisoamylene			Guideline :	OECD203
CAS:	-- EC: 939-627-8			Guideline :	OECD202
LC50 - fish	96h - 4.8 mg/L	Species :	Cyprinus carpio	Guideline :	OECD201
EC50 - aquatic invertebrates	48h - 6.1 mg/L	Species :	Daphnia Magna	Guideline :	--
ERL50 - algae and cyanobacteria	72h - 21 mg/L	Species :	Desmodesmus subspicatus	Guideline :	--
NOEC chronic fish	--	Species :	--	Guideline :	--
NOEC Cronica aquatic invertebrates	--	Species :	--	Guideline :	--
NOERl Cronic algae and cyanobacteria	72h - 12 mg/L	Species :	Desmodesmus subspicatus	Guideline :	OECD201

Substance:	4-tert-butylcyclohexyl acetate			Guidelines :	OECD203
CAS:	32210-23-4			Guidelines :	OECD202
LC50 - fish	96h - 8.6 mg/L	Species :	Cyprinus carpio	Guidelines :	OECD201
EC50 - aquatic invertebrates	48h - 5.3 mg/L	Species :	Daphnia Magna	Guidelines :	--
EC50 - aquatic algae and cyanobacteria	72h - 22 mg/L	Species :	Desmodesmus subspicatus	Guidelines :	--
NOEC chronic fish	--	Species :	--	Guidelines :	--
NOEC chronic invertebrates	--	Species :	--	Guidelines :	--
NOEC chronic algae and cyanobacteria	72h - 6.8 mg/L	Species :	Desmodesmus subspicatus	Guidelines :	OECD201

Substance:	1-(1,2,3,4,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyoctahydronaphthalenes)			Guidelines :	OECD 203
CAS:	68155-67-9			Guidelines :	OECD guideline 202
LC50 - fish	96h-0.563 mg/l	Species :	Lepomis macrochirus	Guidelines :	OECD guideline 201
EC50 - aquatic invertebrates	48h- 1.38 mg/l	Species :	Daphnia magna	Guidelines :	--
EC50 - aquatic algae and cyanobacteria	72h- > 2.6 mg/l	Species :	Scenedesmus subspicatus	Guidelines :	--
NOEC chronic fish	--	Species :	--	Guidelines :	--
NOEC chronic invertebrates	--	Species :	--	Guidelines :	--
NOEC chronic algae and cyanobacteria	72h- > 2.6 mg/l	Species :	Scenedesmus subspicatus	Guidelines :	OECD guideline 201

Substance:	1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyoctahydronaphthalenes)			Guidelines :	OECD 203
CAS:	68155-66-8			Guidelines :	OECD guideline 202
LC50 - fish	96h-0.563 mg/l	Species :	Lepomis macrochirus	Guidelines :	OECD guideline 201
EC50 - aquatic invertebrates	48h- 1.38 mg/l	Species :	Daphnia magna	Guidelines :	--
EC50 - aquatic algae and cyanobacteria	72h- > 2.6 mg/l	Species :	Scenedesmus subspicatus	Guidelines :	--
NOEC chronic fish	--	Species :	--	Guidelines :	--
NOEC chronic invertebrates	--	Species :	--	Guidelines :	--
NOEC chronic algae and cyanobacteria	72h- > 2.6 mg/l	Species :	Scenedesmus subspicatus	Guidelines :	OECD guideline 201

## 12.2 Persistence and degradability

Data not available for the mixture.

### Specific biodegradation information for the substances contained

Substance:	Vanillin			Guidelines :	OECD 203
CAS:	121-33-5			Guidelines :	OECD guideline 202
Biodegradation in water:	Easily biodegradable			Tempo del test :	14d
Substance:	Dihydro pentamethylindanone			Guidelines :	OECD guideline 201
CAS:	33704-61-9			Guidelines :	--
Biodegradation in water:	Not easily biodegradable			Test time :	28d
Substance:	Ethyl trimethylcyclopentene butenol			Guidelines :	--
CAS:	106185-75-5			Guidelines :	--
Biodegradation in water:	Not easily biodegradable			Test time :	29d → 5%
Substance:	Methylenedioxyphe nyl methylpropanal (Helional)			Guidelines :	--
CAS:	1205-17-0			Guidelines :	--
Biodegradation in water:	Intrinsically biodegradable			Test time :	24 giorni
Substance:	Tetramethyl acetoxyoctahydronaphthalenes			Guidelines :	--
CAS:	54464-57-2			Guidelines :	--
Biodegradation in water:	Not biodegradable			Test time :	42d
Substance:	Acetyl Diisoamylene			Guidelines :	--
CAS:	-- EC: 939-627-8			Guidelines :	--
Biodegradation in water:	Not biodegradable			Test time :	28d
Substance:	4-tert-butylcyclohexyl acetate			Guidelines :	--
CAS:	32210-23-4			Guidelines :	--
Biodegradation in water :	Easily biodegradable			Test time :	28d
Substance:	1-(1,2,3,4,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyoctahydronaphthalenes)			Guidelines :	--
CAS:	68155-67-9			Guidelines :	--
Biodegradation in water:	Not biodegradable			Test time :	42d
Substance:	1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyoctahydronaphthalenes)			Guidelines :	--
CAS:	68155-66-8			Guidelines :	--
Biodegradation in water:	Not biodegradable			Test time :	42d

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**12.3 Bioaccumulative potential**

Data not available for the mixture.

**Bioaccumulation information specific to the substances contained**

Substance:	Vanillin	
CAS:	121-33-5	
Partition coefficient: n-octanol/water	:	Log Kow (Log Pow): 1.17 a 20°C
BCF	:	The study should not be conducted because the substance has a low bioaccumulation potential based on log Kow <= 3
Substance:	Dihydro pentamethylindanone	
CAS:	33704-61-9	
Partition coefficient: n-octanol / water	:	4.2 a 20°C
BCF	:	191 l/kg w/w
Substance:	Ethyl trimethylcyclopentene butenol	
CAS:	106185-75-5	
Partition coefficient: n-octanol / water	:	Log Kow (Log Pow): 4.4
BCF	:	647.7 L/kg ww
Substance:	Methylenedioxyphe nyl methylpropanal (Helional)	
CAS:	1205-17-0	
Partition coefficient: n-octanol / water	:	Log Kow (Log Pow): 2.4 a 25°C
BCF	:	Unavailable
Substance:	Tetramethyl acetoxyoctahydronaphthalenes	
CAS:	54464-57-2	
Partition coefficient: n-octanol / water	:	Log Kow (Log Pow): 5.65 to 30°C
BCF	:	391 L/kg ww
Substance:	Acetyl Diisoamylene	
CAS:	-- EC: 939-627-8	
Partition coefficient: n-octanol/water	:	Log Kow (Log Pow): 4.44 at 25°C
BCF	:	1 910 L/kg ww
Substance:	4-tert-butylcyclohexyl acetate	
CAS:	32210-23-4	
Partition coefficient: n-octanol / water	:	Log Kow (Log Pow): 4.8 a 25°C
BCF	:	334.6 L/kg w/w
Substance:	1-(1,2,3,4,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyoctahydronaphthalenes)	
CAS:	68155-67-9	
Partition coefficient: n-octanol/water	:	Log Kow (Log Pow): 5.65 at 30°C
BCF	:	For aquatic organisms 391. For terrestrial organisms 5361 l/kg ww.
Substance:	1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyoctahydronaphthalenes)	
CAS:	68155-66-8	
Partition coefficient: n-octanol/water	:	Log Kow (Log Pow): 5.65 at 30°C
BCF	:	For aquatic organisms 391. For terrestrial organisms 5361 l/kg ww.

**12.4 Mobility in soil**

Data not available for the mixture.

**Mobility information in soil specific to the substances contained**

Substance:	Vanillin	
CAS:	121-33-5	
Koc a 20 °C: 4 898 (Log Koc: 3.438)		
Substance:	Dihydro pentamethylindanone	
CAS:	33704-61-9	
Koc at 20°C: 200 [= LogKoc: 2.3]		
Substance:	Ethyl trimethylcyclopentene butenol	
CAS:	106185-75-5	
Koc a 20 °C: 1 162.3		
Substance:	Methylenedioxyphe nyl methylpropanal (Helional)	
CAS:	1205-17-0	
Koc at 20 °C: 71.3 [= logKoc : 1.85]		
Substance:	Tetramethyl acetoxyoctahydronaphthalenes	
CAS:	54464-57-2	
Koc at 20°C: 12589 [Log Koc: 4.12]		
Substance:	Acetyl Diisoamylene	
CAS:	-- EC: 939-627-8	
Koc at 20 °C: 1 259 [LogKoc: 3.1]		
Substance:	4-tert-butylcyclohexyl acetate	
CAS:	32210-23-4	
Koc at 20 °C: 3 923		
Substance:	1-(1,2,3,4,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyoctahydronaphthalenes)	
CAS:	68155-67-9	
Koc at 20 °C: 12 589 [LogKoc: 4.12]		
Substance:	1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one (INCI: Tetramethyl Acetoxyoctahydronaphthalenes)	
CAS:	68155-66-8	
Koc at 20 °C: 12 589 [LogKoc: 4.12]		

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### 12.5 Results of PBT and vPvB assessment

The chemical safety report is not required for the mixture. However, based on the available data, the mixture does not contain PBT or vPvB substances in a percentage higher than 0.1 in accordance with Regulation 1907/2006, annex XIII.

### 12.6 Endocrine disrupting properties

The mixture does NOT contain substances identified as having endocrine-disrupting properties in accordance with the criteria established in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 in concentrations equal to or greater than 0.1% in weight.

### 12.7 Other adverse effects

Classification for water pollution in Germany (AwSV, vom 18. April 2017):

WGK 2: Dangerous for the waters.

## SECTION 13: Disposal considerations

The substance/mixture shall not be removed through the sewerage system.

### 13.1 Waste treatment methods

#### Container material and type:

Glass / Plastic / Paper / Metal / Composite (identify the exact material from the symbols on the packaging).

#### Methods for waste treatment of the substance or mixture:

DANGER FEATURES (Directive 2008/98 / EC):

No hazard characteristics identified

RECOVERY OPERATIONS (Directive 2008/98 / EC):

R 13 Storage of waste pending any of the operations numbered R 1 to R 12

DISPOSAL OPERATIONS (Directive 2008/98 / EC):

D13 - Blending or mixing prior to submission to any of the operations numbered D 1 to D 12

EER CODE :

20 01 39 - plastic

#### Methods for handling any contaminated packaging:

DANGER FEATURES (Directive 2008/98 / EC):

No hazard characteristics identified

RECOVERY OPERATIONS (Directive 2008/98 / EC):

R 13 Storage of waste pending any of the operations numbered R 1 to R 12

DISPOSAL OPERATIONS (Directive 2008/98 / EC):

D13 - Blending or mixing prior to submission to any of the operations numbered D 1 to D 12

EER CODE :

15 01 02 plastic packaging

#### Physical / chemical properties that can affect waste treatment:

None

#### Special precautions for recommended waste treatment:

The hazard characteristics, disposal and recovery operations and the suggested EWC codes refer to the product as it is without considering any changes due to use. It is therefore recommended, before disposal, to reclassify the waste, also evaluating its origin. Any mixing of different types of non-hazardous waste and any mixture of different hazardous waste is prohibited (Article 23 of Directive 2008/98 / EC). Disposal must be entrusted to an authorized waste treatment company, in compliance with national and possibly local regulations

## SECTION 14: Transport information

Not included in the scope of the regulations on the transport of dangerous goods: by road (ADR); by rail (RID); by air (ICAO / IATA); by sea (IMDG).

	ADR	IMDG	IATA
14.1 UN number or ID number		Not applicable	
14.2 UN proper shipping name		Not applicable	
14.3 Transport hazard class(es)		Not applicable	
14.4 Packing group		Not applicable	
14.5 Environmental hazards		Not applicable	
14.6 Special precautions for user		Not applicable	
14.7 Maritime transport in bulk according to IMO instruments		Not applicable	

## SECTION 15: Regulatory information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products.

Commission Delegated Regulation (EU) 2017/2100 of 4 September 2017 setting out scientific criteria for the determination of endocrine-disrupting properties pursuant to Regulation (EU) No 528/2012 of the European Parliament and Council.

Commission Regulation (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives

COMMISSION DECISION of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council

REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents

Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)

Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC

DIRECTIVE 2012/18/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC

Product: CESARE VANILLA

Category SEVESO: --

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

The mixture does not contain an explosive precursor.

### 15.2 Chemical safety assessment

Chemical safety assessment for the mixture not foreseen. This safety data sheet contains one or more Exposure Scenarios in an integrated form. The content, where relevant, has been included in sections 1.2, 8, 9, 12, 15 and 16 of the same safety data sheet

## SECTION 16: Other information

### 16.1 Indication of any points of the SDS that have been revised

First issue

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## 16.2 Key abbreviations and acronyms used in this SDS

APVR	Respiratory protective equipment	FPO	Operational protection factor
ATE	Acute Toxicity Estimates	GHS	Globally Harmonized System
BCF	Bioconcentration Factor	HP	Hazardous Properties
CAS	Chemical abstract service	IMO	International Maritime Organization
CE	European Community	ISO	International Standard Organization
CLP	Classification, Labelling and Packaging	LC50	Median lethal concentration
COV	Volatile Organic Compounds	LD50	Median lethal dose
DNEL	Derived No Effect Level	N.A.S.	Not otherwise specified
DPI	Dispositivi di Protezione Individuale	NOEC	No observed effect concentration
EC	European Community	ONU	United Nations Organization
EC50	Half maximal effective concentration	PBT	Persistent, Bioaccumulative and Toxic Substances
ECHA	European Chemicals Agency	vPvB	Very Persistent and very Bioaccumulative substances
EER	European Waste List	ppm	Parts per million
EmS	Emergency Schedules	PROC	Category of processes
EN	European normalization	REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
ERC	Environmental release categories	STOT	Specific target organ toxicity
EUH	Supplemental hazard information	STP	Sewage treatment plant
EuPCS	European Product Categorisation System	UE	European Union
FPN	Protection factor Nominal	UFI	Unique Identifier of Formula
FFP	Filtering Facepiece	UNI	Italian Standard Organization

## 16.3 Full text of the Classification Information set out in Section 3

## Description of the hazard class and category codes set out in section 3

Eye Irrit. 2 - Serious eye damage/eye irritation, Hazard Category 2  
 Skin Irrit. 2 - Skin corrosion/irritation, Hazard Category 2  
 Skin. Sens. 1B - Sensitisation — Skin, hazard category 1B  
 Aquatic Chronic 2 - Hazardous to the aquatic environment — Chronic Hazard, Category 2  
 Skin. Sens. 1 - Sensitisation — Skin, hazard category 1  
 Aquatic Chronic 1 - Hazardous to the aquatic environment — Chronic Hazard, Category 1  
 Skin. Sens. 1A - Sensitisation — Skin, hazard category 1A

## Description of the hazard statements set out in section 3

H319 - Causes serious eye irritation  
 H315 - Causes skin irritation  
 H317 - May cause an allergic skin reaction.  
 H411 - Toxic to aquatic life with long lasting effects.  
 H317 - May cause an allergic skin reaction.  
 H410 - Very toxic to aquatic life with long lasting effects  
 H317 - May cause an allergic skin reaction.

## Indicazioni di pericolo supplementari esposte alla sezione 3

None

M-Factor Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1.

## 16.4 Bibliographical references and main data sources

ECHA	European Chemicals Agency	OSHA	European Agency for Safety and Health at Work
TOXNET	Toxicology Data Network	WHO	World Health Organization
CheLIST	Chemical Lists Information System	ICSCS	International Chemical Safety Cards
IPCS	International Programme on Chemical Safety (Cards)	NIOSH	Registry of toxic effects of chemical substances (1983)

  

IARC	International Agency for Research on Cancer
ACGIH	American Conference of Governmental Industrial Hygienists
ILO	International Labour Organization
IFA	Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung

## 16.5 Normative references and / or documents (from which the data in section 8.1 derive)

Code <sup>(1)</sup>	State	Bibliography / documents --> LINK	
AUS	Australia	<a href="https://www.dguv.de/ifa/...../limit-values-australia/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-australia/index-2.jsp</a>	<a href="https://engage.swa.gov.au/workplace-exposure-standards-review">https://engage.swa.gov.au/workplace-exposure-standards-review</a>
		<a href="https://www.safeworkaustralia.gov.au/exposure-standards#exposure-standards-in-australia">https://www.safeworkaustralia.gov.au/exposure-standards#exposure-standards-in-australia</a>	
AUT	Austria	<a href="https://www.dguv.de/ifa/...../limit-values-austria/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-austria/index-2.jsp</a>	<a href="https://www.iusline.at/gesetz/gkv_2011">https://www.iusline.at/gesetz/gkv_2011</a>
		<a href="https://www.ris.bka.gv.at/GeltendeFassung.wxe?abfrage=Bundesnormen&amp;Gesetzesnummer=20001418">https://www.ris.bka.gv.at/GeltendeFassung.wxe?abfrage=Bundesnormen&amp;Gesetzesnummer=20001418</a>	
BEL	Belgium	<a href="https://www.dguv.de/ifa/...../limit-values-belgium/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-belgium/index-2.jsp</a>	<a href="https://employment.belgium.be/en">https://employment.belgium.be/en</a>
BGR	Bulgaria	<a href="https://pirogov.eu/bg/">https://pirogov.eu/bg/</a>	
CAN	Canada-Ontario	<a href="https://www.dguv.de/ifa/...../limit-values-canada-ontario/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-canada-ontario/index-2.jsp</a>	<a href="https://www.labour.gov.on.ca/english/hs/pubs/oel_table.php">https://www.labour.gov.on.ca/english/hs/pubs/oel_table.php</a>
CAN	Canada-Québec	<a href="https://www.dguv.de/ifa/...../limit-values-canada-qu%C3%A9bec/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-canada-qu%C3%A9bec/index-2.jsp</a>	<a href="http://legisquebec.gouv.qc.ca/fi/showdoc/cr/S.....">http://legisquebec.gouv.qc.ca/fi/showdoc/cr/S.....</a>
		<a href="https://www.csst.qc.ca/Pages/index.aspx">https://www.csst.qc.ca/Pages/index.aspx</a>	
CYP	Cyprus	<a href="http://www.mlsi.gov.cy/">http://www.mlsi.gov.cy/</a>	
CAE	Czech Republic	<a href="https://www.mzcr.cz/">https://www.mzcr.cz/</a>	
HRV	Croatia	<a href="https://www.hzrt.hr">https://www.hzrt.hr</a>	
DNK	Denmark	<a href="https://www.dguv.de/ifa/...../limit-values-denmark/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-denmark/index-2.jsp</a>	<a href="https://www.retsinformation.dk/eli/ta/2019/1458">https://www.retsinformation.dk/eli/ta/2019/1458</a>
EST	Estonia	<a href="http://www.16662.ee/">http://www.16662.ee/</a>	
EU <sup>(2)</sup>	European Union	<a href="https://www.dguv.de/ifa/...../limit-values-european-union/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-european-union/index-2.jsp</a>	<a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=152337258043&amp;uri=CELEX:31998L0024">https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=152337258043&amp;uri=CELEX:31998L0024</a>
		<a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=152337258043&amp;uri=CELEX:32004L0037">https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=152337258043&amp;uri=CELEX:32004L0037</a>	
FIN	Finland	<a href="https://www.dguv.de/ifa/...../limit-values-finland/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-finland/index-2.jsp</a>	<a href="https://ulkaisut.valtioneuvosto.fi/handle/10024/160967">https://ulkaisut.valtioneuvosto.fi/handle/10024/160967</a>
FRA	France	<a href="https://www.dguv.de/ifa/...../limit-values-france/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-france/index-2.jsp</a>	<a href="https://www.anses.fr/fr">https://www.anses.fr/fr</a>
		<a href="http://www.inrs.fr/accueil/dms/inrs/CataloguePapier/ED/TI-ED-984/ed984.pdf">http://www.inrs.fr/accueil/dms/inrs/CataloguePapier/ED/TI-ED-984/ed984.pdf</a>	
DEU	Germany (AGS)	<a href="https://www.dguv.de/ifa/...../limit-values-germany-(ags)/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-germany-(ags)/index-2.jsp</a>	<a href="https://www.baua.de/DE/...../Regelwerk/TRGS/pdf/TRGS-900.pdf">https://www.baua.de/DE/...../Regelwerk/TRGS/pdf/TRGS-900.pdf</a>
DEU	Germany (DFG)	<a href="https://www.dguv.de/ifa/...../limit-values-germany-(dfg)/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-germany-(dfg)/index-2.jsp</a>	<a href="https://www.dfg.de/en/dfg_profile/...../health_hazards/index.html">https://www.dfg.de/en/dfg_profile/...../health_hazards/index.html</a>
		<a href="https://www.dfg.de/dfg_profil/gremien/senat/arbeitsstoffe/publikationen/index.html">https://www.dfg.de/dfg_profil/gremien/senat/arbeitsstoffe/publikationen/index.html</a>	
GRC	Greece	<a href="http://www.gcsl.gr/">http://www.gcsl.gr/</a>	
HUN	Hungary	<a href="https://www.dguv.de/ifa/...../limit-values-hungary/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-hungary/index-2.jsp</a>	<a href="https://www.biztonsagiadatlap.hu/...../S_2020-II-6-ITM-rendelet.pdf">https://www.biztonsagiadatlap.hu/...../S_2020-II-6-ITM-rendelet.pdf</a>
ISL	Iceland	<a href="https://www.ust.is/the-environment-agency-of-iceland/chemicals/">https://www.ust.is/the-environment-agency-of-iceland/chemicals/</a>	
IRL	Ireland	<a href="https://www.dguv.de/ifa/...../limit-values-ireland/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-ireland/index-2.jsp</a>	<a href="https://www.hsa.ie/eng/..../2016_CodePracticeChemicalAgentsRegulations/">https://www.hsa.ie/eng/..../2016_CodePracticeChemicalAgentsRegulations/</a>
ITA	Italy	<a href="https://www.dguv.de/ifa/...../limit-values-italy/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-italy/index-2.jsp</a>	<a href="http://www.preparativipericolosi.iss.it">http://www.preparativipericolosi.iss.it</a>
JPN	Japan (MHLW)	<a href="https://www.dguv.de/ifa/...../limit-values-japan/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-japan/index-2.jsp</a>	<a href="https://www.mhlw.go.jp/english/index.html">https://www.mhlw.go.jp/english/index.html</a>
JPN	Japan (JSOH)	<a href="https://www.dguv.de/ifa/...../limit-values-japan-jsoh/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-japan-jsoh/index-2.jsp</a>	<a href="https://www.sanei.or.jp/">https://www.sanei.or.jp/</a>
LVA	Latvia	<a href="https://www.dguv.de/ifa/...../limit-values-latvia/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-latvia/index-2.jsp</a>	<a href="https://likumi.lv/doc.php?id=157382&amp;from=off">https://likumi.lv/doc.php?id=157382&amp;from=off</a>
LTU	Lithuania	<a href="http://www.gamta.lt/">http://www.gamta.lt/</a>	
LUX	Luxembourg	<a href="http://www.ms.public.lu/fr/">http://www.ms.public.lu/fr/</a>	
MLT	Malta	<a href="https://mccaa.org.mt/">https://mccaa.org.mt/</a>	
NZL	New Zealand	<a href="https://www.dguv.de/ifa/...../limit-values-new-zealand/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-new-zealand/index-2.jsp</a>	<a href="https://worksafe.govt.nz/_work-health/_-std-biol-exposure-indices/">https://worksafe.govt.nz/_work-health/_-std-biol-exposure-indices/</a>
NOR	Norway	<a href="http://www.miljodirektoratet.no/">http://www.miljodirektoratet.no/</a>	<a href="https://www.fhi.no/en/">https://www.fhi.no/en/</a>
CHN	People's Republic of China	<a href="https://www.dguv.de/ifa/...../limit-values-china/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-china/index-2.jsp</a>	<a href="http://www.nhfpc.gov.cn/zhuz/pyl/200704/38838.shtml">http://www.nhfpc.gov.cn/zhuz/pyl/200704/38838.shtml</a>
POL	Poland	<a href="https://www.dguv.de/ifa/...../limit-values-poland/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-poland/index-2.jsp</a>	<a href="http://www.ciop.pl/">http://www.ciop.pl/</a>
PRT	Portugal	<a href="http://www.inem.pt/ciav">http://www.inem.pt/ciav</a>	
ROU	Romania	<a href="https://www.dguv.de/ifa/...../limit-values-romania/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-romania/index-2.jsp</a>	<a href="http://www.mmuncii.ro/.../5114-11042018_modif_HG-1218_Ag_chimici.pdf">http://www.mmuncii.ro/.../5114-11042018_modif_HG-1218_Ag_chimici.pdf</a>
SGP	Singapore	<a href="https://www.dguv.de/ifa/...../limit-values-singapore/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-singapore/index-2.jsp</a>	<a href="https://sso.agc.gov.sg/Act/WSHA2006">https://sso.agc.gov.sg/Act/WSHA2006</a>
SVK	Slovakia	<a href="http://www.ntic.sk/">http://www.ntic.sk/</a>	
SVN	Slovenia	<a href="http://www.uk.gov.si/">http://www.uk.gov.si/</a>	
KOR	South Korea	<a href="https://www.dguv.de/ifa/...../limit-values-south-korea/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-south-korea/index-2.jsp</a>	<a href="http://www.kiha.kr/main/community_view.htm?uid=763&amp;tbn=gongi&amp;page=3">http://www.kiha.kr/main/community_view.htm?uid=763&amp;tbn=gongi&amp;page=3</a>
ESP	Spain	<a href="https://www.dguv.de/ifa/...../limit-values-spain/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-spain/index-2.jsp</a>	<a href="https://www.insst.es/">https://www.insst.es/</a>

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Current revision number: 00

Previous revision date: --/--/----

Previous revision number: --

SWE	Sweden	<a href="https://www.dguv.de/ifa/...../limit-values-sweden/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-sweden/index-2.jsp</a>	<a href="https://www.av.se/..../hygieniska-gransvarden-afs-20181-foreskrifter/">https://www.av.se/..../hygieniska-gransvarden-afs-20181-foreskrifter/</a>
CHE	Switzerland	<a href="https://www.dguv.de/ifa/...../limit-values-switzerland/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-switzerland/index-2.jsp</a>	<a href="http://suissepro.org/">http://suissepro.org/</a>
		<a href="https://www.suva.ch/de-CH/.....">https://www.suva.ch/de-CH/.....</a>	
NLD	The Netherlands	<a href="https://www.dguv.de/ifa/...../limit-values-the-netherlands/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-the-netherlands/index-2.jsp</a>	<a href="https://www.ser.nl/en">https://www.ser.nl/en</a>
		<a href="https://wetten.overheid.nl/BWBR0008587/2017-07-01#BijlageXIII">https://wetten.overheid.nl/BWBR0008587/2017-07-01#BijlageXIII</a>	
TUR	Turkey	<a href="https://www.dguv.de/ifa/...../limit-values-turkey/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-turkey/index-2.jsp</a>	
USA	USA - NIOSH	<a href="https://www.dguv.de/ifa/...../limit-values-usa-niosh/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-usa-niosh/index-2.jsp</a>	<a href="https://www.cdc.gov/niosh/">https://www.cdc.gov/niosh/</a>
USA	USA - OSHA	<a href="https://www.dguv.de/ifa/...../limit-values-usa-osha/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-usa-osha/index-2.jsp</a>	<a href="http://www.osha.gov">www.osha.gov</a>
GBR	United Kingdom	<a href="https://www.dguv.de/ifa/...../limit-values-united-kingdom/index-2.jsp">https://www.dguv.de/ifa/...../limit-values-united-kingdom/index-2.jsp</a>	<a href="https://www.hse.gov.uk/research/hsl_pdf/2002/hsl02-23.pdf">https://www.hse.gov.uk/research/hsl_pdf/2002/hsl02-23.pdf</a>

<sup>(1)</sup> ISO3166-1 alpha-3    <sup>(2)</sup> NO ISO CODE**16.6 Procedures used to derive classification under Regulation (EC)1272/2008 [CLP] in relation to mixtures**

Classification according to Regulation (EC) No. 1272/2008	Classification procedure
H412 Aquatic Chronic 3	Additivity theory - Annex I, section 4.1.3 - Hazardous to the aquatic environment

**16.7 Any appropriate training courses for workers in order to ensure the protection of human health and the environment**

- Training course on the management and interpretation of the SDS
- ADR training for personnel involved in handling
- Training on the use of PPE

**More information**

Safety Data Sheet compliant with regulation (EU) n. 2020/878 of 18 June 2020

This document has been drawn up by a competent SDS technician who has received adequate training and is certified according to the reference practice UNI / PdR 60: 2019. Certificate issued by INTERTEK ITALIA S.p.A. Registration number: EPTAS2018-00225 exp. 25-Nov-2023

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**END OF SAFETY DATA SHEET**

This safety data sheet has been translated with an automatic system.  
 We thank all the people who want to report any anomalies in the translation.