

## SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

## **EPPA 220**

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

#### 1.1. Product identifier

Product name Synonyms Registration number REACH Product type REACH

- : EPPA 220
- : Electrically conductive paint
- : Not applicable (mixture)
- : Mixture

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

#### 1.2.1 Relevant identified uses

Lacquer/varnish Professional use

#### 1.2.2 Uses advised against

No uses advised against known

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

#### Supplier of the safety data sheet

TYCO ELECTRONICS Raychem GmbH - Energy Division Finsinger Feld 1 85521 Ottobrunn, Germany **2** +49 89 608 90 MSDSEnergy@te.com

### 1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) : +32 14 58 45 45 (BIG)

## SECTION 2: Hazards identification

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

Classified as dang	erous according to	the criteria of Regulation (EC) No 1272/2008
Class	Category	Hazard statements
Flam. Liq.	category 3	H226: Flammable liquid and vapour.
Repr.	category 2	H361d: Suspected of damaging the unborn child.
STOT RE	category 2	H373: May cause damage to organs through prolonged or repeated exposure if inhaled.
Eye Dam.	category 1	H318: Causes serious eye damage.
STOT SE	category 3	H335: May cause respiratory irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.
Aquatic Chronic	category 3	H412: Harmful to aquatic life with long lasting effects.

#### 2.2. Label elements



Contains: n-butyl acetate; 4-hydroxy-4-methylpentan-2-one; hydrocarbons, C9-10, n-alkanes, isoalkanes, cyclics, 2-25% aromatics; ethyl (S)-2hydroxypropionate.

Signal word	Danger		
H-statements			
H226	Flammable liquid and vapour.		
H361d	Suspected of damaging the unborn child.		
H373	May cause damage to organs through prolong	ed or repeated exposure if inhaled.	
H318	Causes serious eye damage.		
H335	May cause respiratory irritation.		
H336	May cause drowsiness or dizziness.		
H412	Harmful to aquatic life with long lasting effect	S.	
P-statements			
P210	Keep away from heat, hot surfaces, sparks, o	en flames and other ignition sources. No smoking.	
P280	Wear protective gloves, protective clothing ar	d eye protection/face protection.	
P260	Do not breathe vapours/mist.		
P304 + P340	IF INHALED: Remove person to fresh air and ke	ep comfortable for breathing.	
Created by: Brandweerinforma	tiecentrum voor gevaarlijke stoffen vzw (BIG)	Publication date: 2001-10-02	-en
Technische Schoolstraat 43 A,	3-2440 Geel	Date of revision: 2022-01-17	031
http://www.big.be		Reference number: 04587E	22-
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P303 + P361 + P353 P305 + P351 + P338

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental information EUH066

Repeated exposure may cause skin dryness or cracking.

#### 2.3. Other hazards

May build up electrostatic charges: risk of ignition Gas/vapour spreads at floor level: ignition hazard

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name REACH Registration No	CAS No EC No List No	Conc. (C)	Classification according to CLP	Note	Remark	M-factors and ATE
n-butyl acetate 01-2119485493-29	123-86-4 204-658-1	25% <c<50%< td=""><td>Flam. Liq. 3; H226 STOT SE 3; H336 EUH066</td><td>(1)(2)(10)</td><td>Constituent</td><td></td></c<50%<>	Flam. Liq. 3; H226 STOT SE 3; H336 EUH066	(1)(2)(10)	Constituent	
4-hydroxy-4-methylpentan-2-one 01-2119473975-21	123-42-2 204-626-7	10% <c<25%< td=""><td>Flam. Liq. 3; H226 Repr. 2; H361d Eye Irrit. 2; H319 STOT SE 3; H335 Eye Irrit. 2; H319: C≥10%, (CLP Annex VI (ATP 0))</td><td>(1)(2)(6)(10)</td><td>Constituent</td><td></td></c<25%<>	Flam. Liq. 3; H226 Repr. 2; H361d Eye Irrit. 2; H319 STOT SE 3; H335 Eye Irrit. 2; H319: C≥10%, (CLP Annex VI (ATP 0))	(1)(2)(6)(10)	Constituent	
Carbon black 01-2119384822-32	1333-86-4 215-609-9	2.5% <c<10%< td=""><td></td><td>(2)</td><td>Constituent</td><td></td></c<10%<>		(2)	Constituent	
hydrocarbons, C9-10, n-alkanes, isoalkanes, cyclics, 2-25% aromatics 01-2119463586-28	927-344-2	2.5% <c<10%< td=""><td>Flam. Liq. 3; H226 STOT RE 1; H372 Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411</td><td>(1)(10)</td><td>Constituent</td><td></td></c<10%<>	Flam. Liq. 3; H226 STOT RE 1; H372 Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411	(1)(10)	Constituent	
ethyl (S)-2-hydroxypropionate 01-2119516234-49	687-47-8 211-694-1	2.5% <c<10%< td=""><td>Flam. Liq. 3; H226 Eye Dam. 1; H318 STOT SE 3; H335</td><td>(1)(2)(10)</td><td>Constituent</td><td></td></c<10%<>	Flam. Liq. 3; H226 Eye Dam. 1; H318 STOT SE 3; H335	(1)(2)(10)	Constituent	

(1) For H- and EUH-statements in full: see section 16

(2) Substance with a Community workplace exposure limit

(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data (10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

Note: numbers 9xx-xxx-x are provisional list numbers assigned by Echa pending an official EC inventory number

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

#### General:

Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

#### After inhalation:

Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

#### After skin contact:

If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

#### After eye contact:

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a doctor/medical service.

#### After ingestion:

Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

#### 4.2.1 Acute symptoms

#### After inhalation:

Dizziness. Drowsiness. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSURE TO HIGH CONCENTRATIONS: Nausea. Headache. Disturbances of consciousness. Central nervous system depression. Feeling of weakness.

#### After skin contact:

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Cracking of the skin.

#### After eye contact:

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Corrosion of the eye tissue.

#### After ingestion:

Irritation of the gastric/intestinal mucosa. AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Symptoms similar to those listed under inhalation.

### 4.2.2 Delayed symptoms

### No effects known.

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

If applicable and available it will be listed below.

## SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

#### 5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher. Major fire: Class B foam (not alcohol-resistant).

#### 5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion. Major fire: Water; risk of puddle expansion.

#### 5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

#### 5.3. Advice for firefighters

#### 5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

#### 5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Protective goggles (EN 166). Head/neck protection. Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: selfcontained breathing apparatus (EN 136 + EN 137).

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. 6.1.1 Protective equipment for non-emergency personnel

See section 8.2

#### 6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Protective goggles (EN 166). Head/neck protection. Protective clothing (EN 14605 or EN 13034). Suitable protective clothing

#### See section 8.2

#### 6.2. Environmental precautions

Contain released product. Dam up the liquid spill. Try to reduce evaporation. Take account of toxic/corrosive precipitation water. Prevent soil and water pollution. Prevent spreading in sewers.

#### 6.3. Methods and material for containment and cleaning up

Take up liquid spill into inert absorbent material. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

#### 6.4. Reference to other sections

See section 13.

### SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

#### 7.1. Precautions for safe handling

Keep away from naked flames/heat. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: use spark-/ explosionproof appliances and lighting system. Insufficient ventilation: keep naked flames/sparks away. Gas/vapour heavier than air at 20°C. Observe strict hygiene. Remove contaminated clothing immediately. Keep container tightly closed. Do not discharge the waste into the drain.

#### 7.2. Conditions for safe storage, including any incompatibilities

#### 7.2.1 Safe storage requirements:

Storage temperature: 5 °C - 30 °C. Meet the legal requirements. Store at ambient temperature. Keep container in a well-ventilated place. Fireproof storeroom.

7.2.2 Keep away from:

Heat sources, ignition sources, oxidizing agents, (strong) acids, (strong) bases.

- 7.2.3 Suitable packaging material:
  - Glass

7.2.4 Non suitable packaging material:

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No data available

#### 7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

## SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.1.1 Occupational exposure

a) Occupational exposure limit values If limit values are applicable and available these will be listed below.

EU

n-Butyl acetate	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	50 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational	241 mg/m³
	Short time value (Indicative occupational exposure limit value)	150 ppm
	Short time value (Indicative occupational exposure limit value)	723 mg/m³

#### Belgium

4-Hydroxy-4-méthyl-2-pentanone	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	241 mg/m³
Acétate de butyle, tous isomères: n-, iso, sec, tert	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	238 mg/m <sup>3</sup>
	Short time value	150 ppm
	Short time value	712 mg/m <sup>3</sup>
Carbone (noir de)	Time-weighted average exposure limit 8 h	3 mg/m <sup>3</sup>

#### The Netherlands

The Netherlands		
n-Butylacetaat	Time-weighted average exposure limit 8 h (Public occupational exposure	50 ppm
	limit value)	
	Time-weighted average exposure limit 8 h (Public occupational exposure	241 mg/m³
	limit value)	
	Short time value (Public occupational exposure limit value)	150 ppm
	Short time value (Public occupational exposure limit value)	723 mg/m <sup>3</sup>

#### France

Tanee		
Acétate de n-butyle	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	150 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	710 mg/m <sup>3</sup>
	Short time value (VL: Valeur non réglementaire indicative)	200 ppm
	Short time value (VL: Valeur non réglementaire indicative)	940 mg/m <sup>3</sup>
Diacétone-alcool	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	50 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	240 mg/m <sup>3</sup>
Noir de carbone	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	3.5 mg/m <sup>3</sup>

### Germany

4-Hydroxy-4-methyl-pentan-2-on	Time-weighted average exposure limit 8 h (TRGS 900)	20 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	96 mg/m³
n-Butylacetat	Time-weighted average exposure limit 8 h (TRGS 900)	62 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	300 mg/m³

#### Austria

4-Hydroxy-4-methylpentan-2-on	Tagesmittelwert (MAK)	50 ppm
	Tagesmittelwert (MAK)	240 mg/m³
Butylacetat alle Isomere (außer tert-Butylacetat): Isobutylacetat n-Butylacetat sec-Butylacetat	Tagesmittelwert (MAK)	50 ppm
	Tagesmittelwert (MAK)	241 mg/m³
	Kurzzeitwert Mow (MAK)	100 ppm
	Kurzzeitwert Mow (MAK)	480 mg/m³

#### UK

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1-Hydroxy-1-methylponton 2 a	-	Time weighted average	o ovnocuro limit 9 h (Markalaca a	voocure limit	50
+ myuruxy-+-metnyipentail-2-0	nic -	(EH40/2005))	e exposure minit o n (workplace e	vhozni e illilli	50 ppm
		Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))		xposure limit	241 mg/r
		Short time value (Worl	kplace exposure limit (EH40/2005	))	75 ppm
		Short time value (Worl	kplace exposure limit (EH40/2005	))	362 mg/r
Butyl acetate		Time-weighted average (EH40/2005))	e exposure limit 8 h (Workplace e	xposure limit	150 ppm
		Time-weighted average (EH40/2005))	e exposure limit 8 h (Workplace e	xposure limit	724 mg/r
		Short time value (Worl	kplace exposure limit (EH40/2005	))	200 ppm
		Short time value (Worl	kplace exposure limit (EH40/2005	))	966 mg/r
Carbon black		Time-weighted average (EH40/2005))	e exposure limit 8 h (Workplace e	xposure limit	3.5 mg/n
		Short time value (Worl	kplace exposure limit (EH40/2005	))	7 mg/m <sup>3</sup>
ISA (TI V-ACGIH)					
Butyl acetates, all isomers		Time-weighted average	e exposure limit 8 h (TI V - Adonte	d Value)	50 nnm
		Short time value (TLV -	- Adopted Value)		150 nnm
Carbon black		Time-weighted average	e exposure limit 8 h (TI V - Adonte	d Value)	3 mg/m <sup>3</sup>
Diacetone alcohol		Time-weighted average	e exposure limit 8 h (TLV - Adopte	d Value)	50 nnm
(I): Inhalable fraction		inne neighted averag			oo pp
Butyl acetate (Volatile Organic co	impounds)	NIOSH	2549		
f limit values are applicable and	<u>-</u> available these will be listed b	elow.			
Product name	(ampounds)		Number 2540		
Carbon Black	impounds)	NIOSH	5000		
Carbon Black		NIOSH	5100		
Carbon Black		OSHA	ID 196		
diacetone alcohol (Alcohols Com	bined)	NIOSH	1405		
Diacetone Alcohol (Alcohols III)		NIOSH	1402		
Diacetone Alcohol		OSHA	7		
n-Butyl Acetate (Esters I)		NIOSH	1450		
n-Butyl Acetate		OSHA	1009		
f limit values are applicable a 4 Threshold values DNEL/DMEL - Workers h-butyl acetate	and available these will be	listed below.		- I	
Effect level (DNEL/DMEL)	Type		Value	Remark	
	Acute systemic effects in	nalation	600 mg/m <sup>3</sup>		
	Long-term local effects i	nhalation	300 mg/m <sup>3</sup>		
	Acute local effects inhali	ation	600 mg/m <sup>3</sup>		
	Long-term systemic effe	cts dermal	11 mg/kg bw/dav		
Long-term systemic effects der		ermal	11 mg/kg bw/day		
	2				
4-hydroxy-4-methylpentan-2-one	ffect level (DNEL/DMEL) Type		Value	Remark	
4-hydroxy-4-methylpentan-2-one Effect level (DNEL/DMEL)	11:-	cts inhalation	32.6 mg/m <sup>3</sup>		
4-hydroxy-4-methylpentan-2-one Effect level (DNEL/DMEL) DNEL	Long-term systemic effe	Acute local effects inhalation			
4- <u>hydroxy-4-methylpentan-2-one</u> Effect level (DNEL/DMEL) DNEL	Long-term systemic effe Acute local effects inhal	ation			
L-hydroxy-4-methylpentan-2-one Effect level (DNEL/DMEL) DNEL	Long-term systemic effe Acute local effects inhale Long-term systemic effe	ation cts dermal	467 mg/kg bw/day		
4-hydroxy-4-methylpentan-2-one Effect level (DNEL/DMEL) DNEL Carbon black	Long-term systemic effe Acute local effects inhala Long-term systemic effe	ation cts dermal	467 mg/kg bw/day	<b>R</b> 1	
4-hydroxy-4-methylpentan-2-one Effect level (DNEL/DMEL) DNEL Carbon black Effect level (DNEL/DMEL)	Long-term systemic effe Acute local effects inhala Long-term systemic effe	ation cts dermal	467 mg/kg bw/day	Remark	
4-hydroxy-4-methylpentan-2-one Effect level (DNEL/DMEL) DNEL Carbon black Effect level (DNEL/DMEL) DNEL DNEL DNEL	Long-term systemic effe Acute local effects inhali Long-term systemic effe Type Long-term systemic effe	ation cts dermal cts inhalation natics	467 mg/kg bw/day Value 1 mg/m <sup>3</sup>	Remark	
4-hydroxy-4-methylpentan-2-one Effect level (DNEL/DMEL) DNEL Carbon black Effect level (DNEL/DMEL) DNEL hydrocarbons, C9-10, n-alkanes, Effect level (DNEL/DMEL)	Long-term systemic effe Acute local effects inhali Long-term systemic effe Type Long-term systemic effe isoalkanes, cyclics, 2-25% aror	ation cts dermal cts inhalation <u>natics</u>	467 mg/kg bw/day Value 1 mg/m <sup>3</sup>	Remark	
4-hydroxy-4-methylpentan-2-one Effect level (DNEL/DMEL) DNEL Carbon black Effect level (DNEL/DMEL) DNEL Tydrocarbons, C9-10, n-alkanes, Effect level (DNEL/DMEL) DNEL	Long-term systemic effe Acute local effects inhali Long-term systemic effe Ung-term systemic effe isoalkanes, cyclics, 2-25% aror Type Long-term systemic effe	ation cts dermal cts inhalation matics cts inhalation	467 mg/kg bw/day Value 1 mg/m <sup>3</sup> Value 330 mg/m <sup>3</sup>	Remark Remark	
4-hydroxy-4-methylpentan-2-one Effect level (DNEL/DMEL) DNEL Carbon black Effect level (DNEL/DMEL) DNEL hydrocarbons, C9-10, n-alkanes, Effect level (DNEL/DMEL) DNEL	Long-term systemic effe Acute local effects inhali Long-term systemic effe Long-term systemic effe isoalkanes, cyclics, 2-25% aror Type Long-term systemic effe	ation cts dermal cts inhalation matics cts inhalation	467 mg/kg bw/day Value 1 mg/m <sup>3</sup> Value 330 mg/m <sup>3</sup>	Remark Remark	

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Effect level (DNEL/DMEL)	Туре		Value	Remark	
DNEL	Long-term s	systemic effects inhalation	35.7 mg/m <sup>3</sup>		
	Acute syste	mic effects inhalation	300 mg/m <sup>3</sup>		
	Long-term I	ocal effects inhalation	35.7 mg/m <sup>3</sup>		
	Acute local	effects inhalation	300 mg/m <sup>3</sup>		
	Long-term s	systemic effects dermal	6 mg/kg bw/day		
	Acute syste	mic effects dermal	6 mg/kg bw/day		
	Long-term s	systemic effects oral	2 mg/kg bw/day		
	Acute syste	mic effects oral	2 mg/kg bw/day		
hydroxy-4-methylpentan-2-one			6, 6 , 7 , 7 ,		
Effect level (DNEL/DMEL)	Туре		Value	Remark	
DNEL	Long-term s	systemic effects inhalation	5.8 mg/m <sup>3</sup>		
	Long-term	systemic effects dermal	33 mg/kg bw/day		
	Long-term	systemic effects oral	1.67 mg/kg bw/day		
arbon black					
Effect level (DNEL/DMEL)	Туре		Value	Remark	
DNEL	Long-term s	systemic effects inhalation	0.06 mg/m <sup>3</sup>		
/drocarbons, C9-10, n-alkanes, i	soalkanes, cyclic	s, 2-25% aromatics		•	
Effect level (DNEL/DMEL)	Туре		Value	Remark	
DNEL	Long-term s	systemic effects inhalation	71 mg/m³		
	Long-term s	systemic effects dermal	26 mg/kg bw/day		
	Long-term s	systemic effects oral	26 mg/kg bw/day		
NEC				•	
butyl acetate					
Compartments		Value	Remark		
Fresh water		0.18 mg/l			
Marine water		0.018 mg/l			
Fresh water (intermittent releas	ses)	0.36 mg/l			
STP		35.6 mg/l			
Fresh water sediment		0.981 mg/kg sediment dw			
Marine water sediment		0.098 mg/kg sediment dw			
Soil		0.09 mg/kg soil dw			
hydroxy-4-methylpentan-2-one	<u>.</u>		•		
Compartments		Value	Remark		
Fresh water		2 mg/l			
Marine water		0.2 mg/l			
Fresh water (intermittent releas	ses)	1 mg/l			
STP	,	100 mg/l			
Fresh water sediment		7.4 mg/kg sediment dw			
Marine water sediment		0.74 mg/kg sediment dw			
Soil		0.3 mg/kg soil dw			
arbon black		1510 11.8/ 18 001 011			
Compartments		Value	Remark		
Fresh water		50 mg/l			
hyl (S)-2-hydroxypropionate			ł		
Compartments		Value	Remark		
Fresh water		0.32 mg/l			
Marine water		0.032 mg/l			
Aqua (intermittent releases)		3.2 mg/l			
		5.2			
Fresh water sediment		1 66 mg/kg sediment dw			
Fresh water sediment		1.66 mg/kg sediment dw			

..5 Control banding If applicable and available it will be listed below.

#### 8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

#### 8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: use spark-/ explosionproof appliances and lighting system. Insufficient ventilation: keep naked flames/sparks away. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

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

Observe strict hygiene. Do not eat, drink or smoke during work.

#### a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

#### b) Hand protection:

Protective gloves against chemicals (EN 374). Remark

Materials

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nitrile rubber

c) Eye protection:

Protective goggles (EN 166).

d) Skin protection:

Protective clothing (EN 14605 or EN 13034). Head/neck protection.

8.2.3 Environmental exposure controls: See sections 6.2, 6.3 and 13

## SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Good resistance

Physical form	Liquid
Odour	Solvent-like odour
Odour threshold	No data available in the literature
Colour	Black
Particle size	Not applicable (liquid)
Explosion limits	0.6 - 11.4 vol %
Flammability	Flammable liquid and vapour.
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available in the literature
Kinematic viscosity	No data available in the literature
Melting point	No data available in the literature
Boiling point	110 °C
Relative vapour density	> 2
Vapour pressure	1.1 hPa ; 20 °C
	55 hPa ; 50 °C
Solubility	Water ; insoluble
Relative density	1.09
Absolute density	1092 kg/m <sup>3</sup>
Decomposition temperature	No data available in the literature
Auto-ignition temperature	201 °C
Flash point	≥ 23 °C
рН	Not applicable (non-soluble in water)

#### 9.2. Other information

91 seconds ; 4 mm ; 23 °C

## SECTION 10: Stability and reactivity

Extrapolated kinematic viscosity

#### 10.1. Reactivity

May be ignited by sparks. May build up electrostatic charges: risk of ignition. Gas/vapour spreads at floor level: ignition hazard.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Reacts exothermically with (strong) oxidizers and (strong) acids/bases.

#### 10.4. Conditions to avoid

Precautionary measures Keep away from naked flames/heat. Insufficient ventilation: take precautions against electrostatic charges. Insufficient ventilation: use spark-/ explosionproof appliances and lighting system. Insufficient ventilation: keep naked flames/sparks away.

#### 10.5. Incompatible materials

Oxidizing agents, (strong) acids, (strong) bases.

#### 10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Test results

### Acute toxicity

<u>EPPA 220</u>

No (test)data on the mixture available Judgement is based on the relevant ingredients

Reason for revision: 2020/878

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 423	10760 mg/kg bw - 12789 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 14112 mg/kg bw		Rabbit (male / female)	Experimental value	
Inhalation (aerosol)	LC50	OECD 403	0.74 mg/l	4 h	Rat (male / female)	Experimental value	

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	Equivalent to OECD	3002 mg/kg bw		Rat (male /	Experimental value	
		401			lemale)		
Dermal	LD0	Equivalent to OECD 402	> 1875 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation (vapours)	LCO	Equivalent to OECD	≥ 7.6 mg/l air	4 h	Rat (male / female)	Experimental value	

## Carbon black

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	Equivalent to OECD 401	> 10000 mg/kg		Rat (male / female)	Experimental value	
Dermal						Data waiving	
Inhalation (dust)	LC0	Equivalent to OECD 403	4.6 mg/m³ air		Rat	Experimental value	

### ethyl (S)-2-hydroxypropionate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	OECD 401	> 2000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal						Data waiving	
Inhalation (vapours)	LC50	OECD 403	> 5.4 mg/l air	4 h	Rat (male / female)	Experimental value	

#### **Conclusion**

Not classified for acute toxicity

### Corrosion/irritation

#### <u>EPPA 220</u>

No (test)data on the mixture available

Classification is based on the relevant ingredients <u>n-butyl acetate</u>

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment without rinsing
Dermal	Not irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	
-hydroxy-4-methylpe	ntan-2-one			-			
Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment with rinsing
Skin	Slightly irritating	Equivalent to OECD 404	24 h	24; 72 hours	Rabbit	Experimental value	
Inhalation	Irritating	Human observation	15 minutes		Human	Experimental value	
arbon black		•					•
Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		24; 48; 72 hrs; 4 days	Rabbit	Experimental value	Single treatment without rinsing
Skin	Not irritating	OECD 404	4 h	1; 24; 48; 72 hours	Rabbit	Experimental	

Reason for revision: 2020/878

ethyl (S)-2-hydroxypro	<u>opionate</u>						
Route of exposure	Result	Method	Exposure time	Time point	Species	Value	Remark
Not applicable (in	Moderately		10 seconds	4 hours	Isolated chicken	Experimental	
vitro test)	irritating			- nours	eye	value	
Eye	Serious eye damage; category 1					Annex VI	
Skin	Not irritating	OECD 404	4 h	1; 24; 48; 72 hrs; 7 days	Rabbit	Experimental value	
Inhalation	Irritating; STOT SE cat.3					Annex VI	

**Conclusion** 

Causes serious eye damage.

May cause respiratory irritation.

Not classified as irritating to the skin

### Respiratory or skin sensitisation

#### <u>EPPA 220</u>

No (test)data on the mixture available

Judgement is based on the relevant ingredients <u>n-butyl acetate</u>

				l	a	la .		
	Route of exposure	Result	Method	Exposure time	Observation time	Species	Value determination	Remark
					point			
	Skin	Not sensitizing	Equivalent to OECD			Guinea pig	Experimental value	
		Ũ	406					
4- 4-	hydroxy-4-methylpe	entan-2-one	100					
	Route of exposure	Recult	Method	Exposure time	Observation time	Species	Value determination	Romark
	Noute of exposure	nesure	incuiou	Exposure time	noint	Species	value determination	incinarik
	-1.				point			
	Skin	Not sensitizing	OECD 406			Guinea pig (male	Experimental value	
						/ female)		
<u>C</u>	arbon black					-		
	Route of exposure	Result	Method	Exposure time	Observation time	Species	Value determination	Remark
	·				point	·		
	Skin	Not sensitizing	OECD 429			Mouse (female)	Experimental value	
	Inhalation	Not sensitizing				Mouse (female)	Experimental value	
et	hyl (S)-2-hydroxypro	opionate		•	•	•		
	Route of exposure	Result	Method	Exposure time	Observation time	Species	Value determination	Remark
					point			
	Skin	Not sensitizing	OECD 429			Mouse (female)	Experimental value	

#### **Conclusion**

Not classified as sensitizing for skin Not classified as sensitizing for inhalation

Specific target organ toxicity

#### <u>EPPA 220</u>

No (test)data on the mixture available

Classification is based on the relevant ingredients

#### n-butyl acetate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Subchronic toxicity test	125 mg/kg bw/day		No effect	13 week(s)	Rat (male / female)	Read-across
Oral (stomach tube)	LOAEL	Subchronic toxicity test	500 mg/kg bw/day	Central nervous system	Central nervous system depression	13 day(s)	Rat (male / female)	Read-across
Inhalation (vapours)	NOAEC	EPA OTS 798.2450	500 ppm		No adverse systemic effects	13 weeks (daily, 5 days / week)	Rat (male / female)	Experimental value

Reason for revision: 2020/878

ydroxy-4-methylpen	tan-2-one							
Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	600 mg/kg bw/day		No effect	13 week(s)	Rat (male / female)	Experimental value
Inhalation (vapours)	NOAEC systemic effects	Equivalent to OECD 412	4685 mg/m <sup>3</sup> air		No adverse systemic effects	6 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation (vapours)	NOAEC local effects	Equivalent to OECD 412	≥ 4685 mg/m³ air	Respiratory tract	No effect	6 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation (vapours)	NOEC	Equivalent to OECD 412	1041 mg/m³ air		No adverse systemic effects	6 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
<u>rbon black</u>								
Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	Dose level	Equivalent to OECD 452	2050 mg/kg bw/day		No effect	2 year(s)	Rat (female)	Experimental value
Dermal	NOEL		20 %		No effect	12 month(s) - 18 month(s)	Mouse (male / female)	Experimental value
Inhalation (aerosol)	NOEC	Subchronic toxicity test	1 mg/m³ air	Lungs	No effect	13 weeks (6h / day, 5 days / week)	Rat (female)	Experimental value
Inhalation (aerosol)	LOEC	Subchronic toxicity test	7 mg/m³ air	Lungs	Pneumonia	13 weeks (6h / day, 5 days / week)	Rat (female)	Experimental value
drocarbons, C9-10, n-	alkanes, isoa	alkanes, cyclics,	2-25% aromatics			-1		
Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Equivalent to OECD 408	1056 mg/kg/d		No effect	30 day(s)	Rat (male / female)	Experimental value
Dermal	NOAEL	Equivalent to OECD 411	≥ 495 mg/kg bw/day		No effect	90 day(s)	Rat (male / female)	Read-across
Inhalation	NOAEC		570 mg/m <sup>3</sup> air	Central nervous system	No effect	4 week(s)	Human (male)	Read-across
Inhalation	NOAEC		600 mg/m³ air	Central nervous system	No effect	3 days (8h / day)	Rat (male)	Read-across
Inhalation	Dose level		2400 mg/m <sup>3</sup> air		neurotoxic effects	3 days (8h / day)	Rat (male)	Read-across
yl (S)-2-hydroxyprop	<u>ionate</u>				_			
Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (vapours)	NOAEC local effects	OECD 412	200 mg/m <sup>3</sup> air		No effect	4 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure if inhaled.

## Mutagenicity (in vitro)

### <u>EPPA 220</u>

No (test)data on the mixture available

Judgement is based on the relevant ingredients <u>n-butyl acetate</u>

-D	<u>utyracetate</u>											
	Result	Method	Test substrate	Effect	Value determination	Remark						
	Negative with metabolic	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value							
	activation, negative											
	without metabolic											
	activation											

Reason for revision: 2020/878

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)		Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 473	CHL/IU cells		Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value	
on black		•		·	
Result	Method	Test substrate	Effect	Value determination	Remark
Positive without metabolic activation	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value	
Negative	Equivalent to OECD 471			Experimental value	
I (S)-2-hydroxypropionate	2				
Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 473	Human lymphocytes	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	

### <u>EPPA 220</u>

No (test)data on the mixture available

Judgement is based on the relevant ingredients

n-butyl acetate

	Result	Method	Exposure time	Test substrate	Organ	Value determination			
	Negative (Oral (stomach tube))	OECD 474		Mouse (male / female)		Read-across			
Car	irbon black								
	Result	Method	Exposure time	Test substrate	Organ	Value determination			
	Negative (Inhalation (aerosol))		13 week(s)	Rat (female)		Experimental value			

<u>Conclusion</u>

Not classified for mutagenic or genotoxic toxicity

#### Carcinogenicity

#### <u>EPPA 220</u>

No (test)data on the mixture available

Judgement is based on the relevant ingredients

Carbon black

Route of	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
exposure								
Inhalation (dust)	NOAEC	Human observation study		≥1 year(s)	Human	No carcinogenic effect		Experimental value
Dermal	NOEC		20 %	12 weeks (3 times / week) - 18 weeks (3 times / week)	Mouse (male / female)			Experimental value
Oral (diet)	NOEL		104 mg/kg bw/day	2 year(s)	Rat (female)			Experimental value

#### **Conclusion**

Not classified for carcinogenicity

### Reproductive toxicity

<u>EPPA 220</u>

No (test)data on the mixture available

Classification is based on the relevant ingredients

Reason for revision: 2020/878

<u>n-butyl acetate</u>								
	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (vapours))	LOAEC	Equivalent to OECD 414	1500 ppm		Rat	Fetotoxicity		Experimental value
Maternal toxicity (Inhalation (vapours))	LOAEC	Equivalent to OECD 414	1500 ppm		Rat	Maternal toxicity		Experimental value
Effects on fertility (Inhalation (vapours))	NOAEC	OECD 416	2000 ppm	> 90 day(s)	Rat (male / female)	No effect		Experimental value
4-hydroxy-4-methylpentan	2-one	•				•		
	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	≥ 1000 mg/kg bw/day	15 days (gestation, daily)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	≥ 1000 mg/kg bw/day	15 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL (P)	OECD 422	100 mg/kg bw/day	41 day(s) - 45 day (s)	Rat (male / female)	No effect		Experimental value
Carbon black								
	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Inhalation (aerosol))	NOEC	Developmenta I toxicity study	42 mg/m <sup>3</sup> air	11 days (gestation, daily)	Mouse	No effect		Experimental value
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	1000 mg/kg bw/day	15 days (gestation, daily)	Rat (female)	No effect		Experimental value
Maternal toxicity (Inhalation (aerosol))	LOAEC	Developmenta I toxicity study	42 mg/m <sup>3</sup> air	11 days (gestation, daily)	Mouse	Lung tissue affection/degen eration	Lungs	Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	1000 mg/kg bw/day	15 days (gestation, daily)	Rat (female)	No effect		Experimental value
Effects on fertility	NOEL		500 mg/kg bw/day	5 day(s)	Mouse (female)	No effect		Experimental value
ethyl (S)-2-hydroxypropion	ate							

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Dermal)	NOAEL	EPA OTS 798.4900	> 3619 mg/kg bw/day	10 days (6h / day)	Rat	No effect	Foetus	Experimental value
Maternal toxicity (Dermal)	NOAEL	EPA OTS 798.4900	1551 mg/kg bw/day - 3619 mg/kg bw/day	10 days (6h / day)	Rat	No effect		Experimental value
Effects on fertility								Data waiving

#### **Conclusion**

Suspected of damaging the unborn child.

#### Toxicity other effects

#### <u>EPPA 220</u>

 $\label{eq:classification} \begin{array}{c} \text{Classification is based on the relevant ingredients} \\ \underline{n\text{-butyl acetate}} \end{array}$ 

	Route of	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value
	exposure								determination
		NOEC	EPA OTS	1500 ppm		Hypoactivity	6 h	Rat (male /	Experimental
			798.6050					female)	value
		NOAEC	EPA OTS	500 ppm		no neurotoxic	13 week(s)	Rat (male /	Experimental
			798.6050			effects		female)	value
hyd	rocarbons, C9-10,	n-alkanes, isoal	anes, cyclics, 2-2	25% aromatics					

Route of	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value
exposure								determination
					Skin dryness or			Literature study
					cracking			

Conclusion

Repeated exposure may cause skin dryness or cracking.

### Chronic effects from short and long-term exposure

<u>EPPA 220</u>

No effects known.

Reason for revision: 2020/878

#### 11.2. Information on other hazards

No evidence of endocrine disrupting properties

## SECTION 12: Ecological information

#### 12.1. Toxicity

<u>EPPA 220</u>

No (test)data on the mixture available

 $\label{eq:classification} \begin{array}{l} \text{Classification is based on the relevant ingredients} \\ \underline{\text{n-butyl acetate}} \end{array}$ 

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	18 mg/l	96 h	Pimephales promelas	Flow- through system	Fresh water	Experimental value; Lethal
Acute toxicity crustacea	EC50	Equivalent to OECD 202	44 mg/l	48 h	Daphnia sp.	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	ErC50	OECD 201	397 mg/l	72 h	Pseudokirchneri ella subcapitata	Static system	Fresh water	Read-across; GLP
	NOEC	OECD 201	196 mg/l	72 h	Pseudokirchneri ella subcapitata	Static system	Fresh water	Read-across; Growth rate
Long-term toxicity aquatic crustacea	NOEC	OECD 211	23.2 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Read-across; Reproduction
Toxicity aquatic micro- organisms	IC50	TETRATOX assay	356 mg/l	40 h	Tetrahymena pyriformis	Static system	Fresh water	Experimental value; Growth
	Parameter	Method	v	alue	Duration	Spec	ies	Value determination
Toxicity terrestrial plants	EC50	Equivalen 208	t to OECD >	1000 mg/kg so w	il 14 day(s)	Lact	uca sativa	Experimental value
4-hydroxy-4-methylpentan-2-on	e			-				
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 100 mg/l	96 h	Oryzias latipes	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	> 1000 mg/l	48 h	Daphnia magna	Semi-static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	ErC50	OECD 201	> 1000 mg/l	72 h	Pseudokirchneri ella subcapitata	Static system	Fresh water	Experimental value; Nominal concentration
	NOEC	OECD 201	≥ 1000 mg/l	72 h	Pseudokirchneri ella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC	OECD 211	100 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; Nominal concentration
Toxicity aquatic micro- organisms	EC50	OECD 209	> 1000 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value; Nominal concentration
	EC0		825 mg/l	16 h	Pseudomonas putida	Static system	Fresh water	Experimental value
Carbon black								
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 1000 mg/l	96 h	Danio rerio	Static system	Fresh water	Experimental value; Lethal
Acute toxicity crustacea	EC50	OECD 202	> 5600 mg/l	24 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	ErC50	OECD 201	> 10000 mg/	′l 72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Nominal concentration
Long-term toxicity fish								Data waiving
Toxicity aquatic micro- organisms	EC10	TTC-test	800 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value; Enzyme effect

Reason for revision: 2020/878

hydrocarbons, C9-10, n-alkanes,	isoalkanes, cyc	lics, 2-25% aro	matics					
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Long-term toxicity aquatic crustacea	NOEC	OECD 211	0.097 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Read-across; Reproduction
ethyl (S)-2-hydroxypropionate								
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	320 mg/l	96 h	Brachydanio rerio	Semi-static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	683 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	NOEC	OECD 201	320 mg/l	72 h	Pseudokirchneri ella subcapitata	Semi-static system	Fresh water	Experimental value; Nominal concentration
	ErC50	OECD 201	3500 mg/l	72 h	Pseudokirchneri ella subcapitata	Semi-static system	Fresh water	Experimental value; Nominal concentration
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea								Data waiving
Toxicity aquatic micro- organisms	NOEC	OECD 209	≥ 1000 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value; Nominal concentration

Conclusion Harmful to aquatic life with long lasting effects.

## 12.2. Persistence and degradability

ethod	Value	Duration	Value determination
DECD 301D	83 %; Oxygen consumption	28 day(s)	Experimental value
droxy-4-methylpentan-2-one	L. C.	•	
odegradation water			
Method	Value	Duration	Value determination
Equivalent to OECD 301A	98.51 %	28 day(s)	Experimental value
hototransformation air (DT50 air)			
Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	32.597 h	1.5E6 /cm <sup>3</sup>	Calculated value
iodegradation soil			
Method	Value	Duration	Value determination
			Data waiving
alf-life water (t1/2 water)			
Method	Value	Primary degradation/mineralisation	Value determination
			Data waiving
drocarbons, C9-10, n-alkanes, isoalka	anes, cyclics, 2-25% aromatics	•	
iodegradation water			
Method	Value	Duration	Value determination
OECD 301F	74.7 %; GLP	28 day(s)	Experimental value
yl (S)-2-hydroxypropionate			
iodegradation water			
Method	Value	Duration	Value determination
EU Method C.5	85 %; GLP	28 day(s)	Experimental value
hototransformation air (DT50 air)			
Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	2.626 day(s)	1.5E6 /cm <sup>3</sup>	QSAR
iodegradation soil			
Method	Value	Duration	Value determination
			Data waiving
alf-life water (t1/2 water)			
Method	Value	Primary degradation/mineralisation	Value determination
			Data waiving

Water

Reason for revision: 2020/878	Publication date: 2001-10-02	
	Date of revision: 2022-01-17	
	Reference number: 04587E	
Revision number: 0500	BIG number: 36592	14 / 20

Does not contain	any not readily biodegradable	component(s)

Method	Dom	ark		Value	-	Cemperature	Value determination
vietnou	Not a	applicable	e (mixture)	Value		emperature	value determination
butyl acotato			- (/	-			
Method	R	Remark		Value		Temperature	Value determination
OECD 117				2.3		25 °C	Experimental value
1-hydroxy-4-methy	pentan-2-one						1 ·
BCF fishes							
Parameter	Method	V	/alue	Duration	Specie	es and a second s	Value determination
							Data waiving
Method	R	Remark		Value		Temperature	Value determination
				-0.09			QSAR
Carbon black				•			•
Log Kow							
Method	R	Remark		Value		Temperature	Value determination
vdrocarbons. C9-1	0. n-alkanes. isoa	alkanes. c	cvclics. 2-25% a	) romatics			
Log Kow							
Method	R	Remark		Value		Temperature	Value determination
	N	lo data av	vailable				
etnyl (S)-2-hydroxy	propionate						
BCF fishes	Mothed		/alue	Duration	Snorie		Value determination
raidmeter	Internoa		alue	Duration	specie		Data waiving
Log Kow	I						Data Hannib
Method	R	Remark		Value		Temperature	Value determination
				0.31		20 °C	QSAR
Parameter				Method		Value	Value determination
log Koc				SRC PCKOC	WIN v2.0	1.268 - 1.844	Calculated value
1-hydroxy-4-methy	pentan-2-one						
(log) Koc							
Parameter					WIN v2 0	-0.0661	
ethyl (S)-2-hydroxy	propionate			экстскос		-0.0001	QSAN
(log) Koc							
Parameter				Method		Value	Value determination
log Koc				SRC PCKOC	WIN v2.0	0.348	Calculated value
nclusion	t(c) with potonti	ial for mo	bility in the coi	I.			
				I			
2.5. Results of F	BT and vPvB	assessi	ment				· (50) N 4007 /2006
Joes not contain	component(s) t	that mee	et(s) the criter	la of PB1 and/or vi	vB as listed	In Annex XIII of Regulat	10h (EC) NO 1907/2006.
2.6. Endocrine o	lisrupting pro	operties	S				
No evidence of end	ocrine disrupting	g properti	ies				
2.7. Other adve	rse effects						
<u>A 220</u>							
reenhouse gases					(a. 1		
one of the known co cone-depleting poto ot classified as da	omponents is inc ential (ODP) ngerous for the	e ozone	layer (Regulat	nated greennouse ga ion (EC) No 1005/2	oo9)	on (EU) No 517/2014)	
n-butyl acetate roundwater							
oundwater pollut	ant						
n for revision: 2020	/878					Publication date: 20	001-10-02

Reference number: 04587E

BIG number: 36592

<u>4-hydroxy-4-methylpentan-2-one</u> Groundwater

Groundwater pollutant

ethyl (S)-2-hydroxypropionate

Groundwater

Groundwater pollutant Water ecotoxicity pH

pH shift

## SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

#### 13.1. Waste treatment methods

#### 13.1.1 Provisions relating to waste

#### **European Union**

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 01 11\* (wastes from MFSU and removal of paint and varnish: waste paint and varnish containing organic solvents or other hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

#### 13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

#### 13.1.3 Packaging/Container

#### European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 10\* (packaging containing residues of or contaminated by dangerous substances).

## SECTION 14: Transport information

#### Road (ADR)

14. <u>1</u> . UN number	
UN number	1263
14.2. UN proper shipping name	
Proper shipping name	paint related material
14.3. Transport hazard class(es)	
Hazard identification number	30
Class	3
Classification code	F1
14.4. Packing group	
Packing group	III
Labels	3
14. <u>5. Environmental hazards</u>	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	163
Special provisions	367
Special provisions	650
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

#### Rail (RID)

14.1. UN number		
UN number	1263	
14.2. UN proper shipping name		
Proper shipping name	paint related material	
14.3. Transport hazard class(es)		
Hazard identification number	30	
Class	3	
Classification code	F1	
14.4. Packing group		
Packing group	III	
Labels	3	
14.5. Environmental hazards		
Environmentally hazardous substance mark	no	
14.6. Special precautions for user		
Special provisions	163	
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Special provisions	367
Special provisions	650
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for
	liquids. A package shall not weigh more than 30 kg. (gross mass)

### Inland waterways (ADN)

14. <u>1</u> . UN number					
UN number	1263				
14.2. UN proper shipping name					
Proper shipping name	paint related material				
14.3. Transport hazard class(es)					
Class	3				
Classification code	F1				
14.4. Packing group					
Packing group	III				
Labels	3				
14.5. Environmental hazards					
Environmentally hazardous substance mark	no				
14.6. Special precautions for user					
Special provisions	163				
Special provisions	367				
Special provisions	650				
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)				

#### Sea (IMDG/IMSBC)

14.1. UN number					
UN number	1263				
14.2. UN proper shipping name					
Proper shipping name	paint related material				
14.3. Transport hazard class(es)					
Class	3				
14.4. Packing group					
Packing group	III				
Labels	3				
14. <u>5. Environmental hazards</u>					
Marine pollutant	-				
Environmentally hazardous substance mark	no				
14.6. Special precautions for user					
Special provisions	163				
Special provisions	223				
Special provisions	367				
Special provisions	955				
Limited quantities	Combination packagings: not more than 5 liters per inner packaging for				
	liquids. A package shall not weigh more than 30 kg. (gross mass)				
14.7. Maritime transport in bulk according to IMO instruments					
Annex II of MARPOL 73/78	Not applicable, based on available data				

### Air (ICAO-TI/IATA-DGR)

14.1. UN number					
UN number	1263				
14.2. UN proper shipping name					
Proper shipping name	paint related material				
14.3. Transport hazard class(es)					
Class	3				
14.4. Packing group					
Packing group	III				
Labels	3				
14.5. Environmental hazards					
Environmentally hazardous substance mark	no				
14.6. Special precautions for user					
Special provisions	A192				
Special provisions	A3				
Special provisions	A72				
Passenger and cargo transport					
Limited quantities: maximum net quantity per packaging	10 L				

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## SECTION 15: Regulatory information

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

## European legislation:

VOC content Directive 2010/75/EU

	VOC content	Remark
	51.70 %	

Directive 2012/18/EU (Seveso III)

Threshold values under special circumstances						
Substance or category	Special circumstances	Low tier (tonnes)	Top tier (tonnes)	Group	For this substance or mixture the summation rule has to be applied for:	
P5a FLAMMABLE LIQUIDS	Maintained at a temperature above the boiling point	10	50	None	Flammability	
P5b FLAMMABLE LIQUIDS	Particular processing conditions, such as high pressure or high temperature, may create major- accident hazards	50	200	None	Flammability	
Threshold values under normal circumstances						
Substance or category		Low tier (tonnes)	Top tier (tonnes)	Group	For this substance or mixture the summation rule has to be applied for:	
P5c FLAMMABLE LIQUIDS		5000	50000	None	Flammability	

**REACH Annex XVII - Restriction** 

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction	
<ul> <li>n-butyl acetate</li> <li>4-hydroxy-4-methylpentan-2-one</li> <li>hydrocarbons, C9-10, n-alkanes, isoalkanes, cyclics, 2-25% aromatics</li> <li>ethyl (S)-2-hydroxypropionate</li> </ul>	Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 5.1.	<ol> <li>Shall not be used in:         <ul> <li>ornamental articles intended to produce light or colour effects by mean phases, for example in ornamental lamps and ashtrays,</li> <li>tricks and jokes,</li> <li>games for one or more participants, or any article intended to be used a ornamental aspects,</li> <li>Articles not complying with paragraph 1 shall not be placed on the mark 3. Shall not be placed on the market if they contain a colouring agent, unlefiscal reasons, or perfume, or both, if they:</li></ul></li></ol>	s of different as such, even with et. sss required for lic, and, on the market I 14059) adopted is relating to the es, suppliers shall are met: are visibly, legibly he reach of ing the wick of I public are legibly iter may lead to e general public ber 2010.
<ul> <li>n-butyl acetate</li> <li>4-hydroxy-4-methylpentan-2-one</li> <li>hydrocarbons, C9-10, n-alkanes, isoalkanes, cyclics, 2-25% aromatics</li> <li>ethyl (S)-2-hydroxypropionate</li> </ul>	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	<ol> <li>Shall not be used, as substance or as mixtures in aerosol dispensers whe dispensers are intended for supply to the general public for entertainment purposes such as the following:         <ul> <li>metallic glitter intended mainly for decoration,</li> <li>artificial snow and frost,</li> <li>"whoopee" cushions,</li> <li>silly string aerosols,</li> <li>imitation excrement,</li> <li>decorative flakes and foams,</li> <li>artificial cobwebs,</li> <li>stink bombs.</li> </ul> </li> <li>Without prejudice to the application of other Community provisions on a packaging and labelling of substances, suppliers shall ensure before the pla market that the packaging of aerosol dispensers referred to above is market and indelibly with:</li> <li>"For professional users only".</li> <li>By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol of referred to Article 8 (1a) of Council Directive 75/ 324/EEC.</li> </ol>	the classification, acting on the ed visibly, legibly dispensers
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	EPPA	220
		4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirement indicated
• 4-hydroxy-4-methylpentan-2-one • ethyl (\$)-2-hydroxypropionate	Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: — carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — sein sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex. The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.	Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/208
National legislation Belgium         EPPA 220         No data available         National legislation The Nether         EPPA 220         Waterbezwaarlijkheid         National legislation France         EPPA 220         National legislation France         EPPA 220         No data available         No data available         No data available         National legislation Germany	lands A (3); Algemene Beoordelingsmethodie	k (ABM)
EPPA 220	2. Entzündhare Elüssigkeiten	
WGK	2; Verordnung über Anlagen zum Umga	ng mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
<u>n-butyl acetate</u>		
TA-Luft TRGS900 - Risiko der Fruchtschödigung	5.2.5/I n-Butylacetat; Y; Risiko der Fruchtschäd	igung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen
4-hydroxy-4-methylpentan-2	2-one	
TA-Luft	5.2.5	
Hautresorptive Stoffe	4-Hydroxy-4-methyl-pentan-2-on; H; Ha	nutresorptiv
TA-Luft	5.2.1	
ethyl (S)-2-hydroxypropional	te	
TA-Luft	5.2.5	
<u>National legislation Austria</u> EPPA 220 No data available <u>4-hydroxy-4-methylpentan-2</u>	<u>2-one</u>	
besondere Gefahr der Hautresorption	4-Hydroxy-4-methylpentan-2-on; H	
National legislation United King	dom	
EPPA 220 No data available	<u></u>	
Other relevant data		
EPPA 220 No data available		
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Carbon black		
	TLV - Carcinogen	
	IARC - classification	

#### 15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

Carbon black; A3 2B: Carbon black

<u>4-hydroxy-4-methylpentan-2-one</u> A chemical safety assessment has been performed.

#### SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3:

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.H336 May cause drowsiness or dizziness.

H361d Suspected of damaging the unborn child.

H372 Causes damage to organs (central nervous system) through prolonged or repeated exposure if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

(*) ADI AOEL ATE CLP (EU-GHS) DMEL DNEL EC50 ErC50 LC50 LD50 NOAEL NOAEL NOEC OECD PBT PNEC	INTERNAL CLASSIFICATION BY BIG Acceptable daily intake Acceptable operator exposure level Acute Toxicity Estimate Classification, labelling and packaging (Globally Harmonised System in Europe) Derived Minimal Effect Level Derived No Effect Level Effect Concentration 50 % EC50 in terms of reduction of growth rate Lethal Concentration 50 % Lethal Dose 50 % No Observed Adverse Effect Level No Observed Effect Concentration Organisation for Economic Co-operation and Development Persistent, Bioaccumulative & Toxic Predicted No Effect Concentration
PNEC	Predicted No Effect Concentration
STP vPvB	Sludge Treatment Process very Persistent & very Bioaccumulative

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