

Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878

ESSENTIAL COLOR

Date of first edition: 2/17/2022

Safety Data Sheet dated 2/17/2022

version 1

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

1.1. Product identifier

Mixture identification:

Trade name: ESSENTIAL COLOR

Trade code: K75436

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

Recommended use: Mineral Paint coatings and Coverings

Uses advised against: Data not available.

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL IBÉRICA S.A.

Carretera de Alcora, Km. 10,450 – 12006 Castellón de la Plana – España

Tel. +34 964 251 500 – Fax +34 964 241 100

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Kerakoll Italy - +39-0536-816511

Ireland

Poison information centre: 01 809 2166 (Daily 8am-10pm)

In case of emergency call 999 or 112

Malta

In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

EUH208 Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

EUH208 Contains . May produce an allergic reaction.

Dir. 2004/42/EC (VOC directive)

Interior matt walls and ceilings (Gloss < 25@60)

EU limit value for this product (cat. A/a): 30 g/l

This product contains max 2.67 g/l VOC.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$.

Other Hazards: Contains biocidal product:: C(M)IT/MIT (3:1)

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: ESSENTIAL COLOR

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
1-2,4 %	1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	CAS:6846-50-0 EC:229-934-9	Repr. 2, H361; Aquatic Chronic 3, H412	
< 0,1 %	2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve	CAS:111-76-2 EC:203-905-0 Index:603-014-00-0	Acute Tox. 4, H332 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Toxicity Estimate: ATE - Oral: 1200mg/kg bw	01-2119475108-36
< 0,1 %	diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea	CAS:330-54-1 EC:206-354-4 Index:006-015-00-9	Carc. 2, H351; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302, M-Chronic:10, M-Acute:10	
< 0,1 %	ethyl acetate	CAS:141-78-6 EC:205-500-4 Index:607-022-00-5	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	01-2119475103-46
< 0,05 %	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS:2634-33-5 EC:220-120-9 Index:613-088-00-6	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, H302 Skin Sens. 1, H317 Aquatic Chronic 2, H411, M-Acute:1 Specific Concentration Limits: C $\geq 0.05\%$: Skin Sens. 1 H317	01-2120761540-60
< 0,01 %	Pyrrithione zinc	CAS:13463-41-7 EC:236-671-3 Index:613-333-00-7	Acute Tox. 2, H330 Acute Tox. 3, H301 STOT RE 1, H372 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Repr. 1B, H360, M-Chronic:10, M-Acute:1000 Acute Toxicity Estimate: ATE - Oral: 221mg/kg bw	
< 0,0015 %	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS:55965-84-9 Index:613-167-00-5	Acute Tox. 2, H330 Acute Tox. 2, H310 Acute Tox. 3, H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:100, M-Acute:100, EUH071 Specific Concentration Limits: C $\geq 0.6\%$: Skin Corr. 1C H314 0.06% $\leq$ C < 0.6%: Skin Irrit. 2 H315 C $\geq 0.6\%$: Eye Dam. 1 H318 0.06% $\leq$ C < 0.6%: Eye Irrit. 2 H319 C $\geq 0.0015\%$: Skin Sens. 1A H317	
< 0,0015 %	octhilinone (ISO); 2-octyl-2H-isothiazol-3-one	CAS:26530-20-1 EC:247-761-7 Index:613-112-00-5	Acute Tox. 2, H330 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Corr. 1, H314 Eye Dam. 1, H318	

Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Corrosive to the respiratory tract., M-Chronic:100, M-Acute:100

Specific Concentration Limits:
C ≥ 0.0015%: Skin Sens. 1A H317

Acute Toxicity Estimate:
ATE - Oral: 125mg/kg bw
ATE - Dermal: 311mg/kg bw

< 0,0015 % formaldehyde

CAS:50-00-0
EC:200-001-8
Index:605-001-00-5

Carc. 1B, H350 Muta. 2, H341 01-2119488953-20
Acute Tox. 3, H301 Acute Tox. 3,
H311 Acute Tox. 3, H331 Skin
Corr. 1B, H314 Skin Sens. 1, H317

Specific Concentration Limits:
25% ≤ C < 100%: Skin Corr. 1B
H314
5% ≤ C < 25%: Skin Irrit. 2 H315
5% ≤ C < 25%: Eye Irrit. 2 H319
5% ≤ C < 100%: STOT SE 3 H335
0.2% ≤ C < 100%: Skin Sens. 1
H317

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

N.A.

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

N.A.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

Component	OEL Type	Country	Ceiling	Long Term mg/m ³	Long Term ppm	Short Term mg/m ³	Short Term ppm	Notes
2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve	EU	NNN		98	20	246	50	Skin
	NATIONAL	AUSTRIA		98.000	20.000	200.000	40.000	
	NATIONAL	BELGIUM		98.000	20.000	246.000	50.000	
	NATIONAL	CANADA			20.000			Ontario
	NATIONAL	CANADA		97.000	20.000			Quebec
	NATIONAL	DENMARK		98.000	20.000	196.000	40.000	
	NATIONAL	FINLAND		98.000	20.000	250.000	50.000	
	NATIONAL	FRANCE		49.000	10.000	246.000	50.000	
	NATIONAL	GERMANY		49.000	10.000	196.000	40.000	AGS
	NATIONAL	GERMANY		49.000	10.000	98.000	20.000	DFG
	NATIONAL	HUNGARY		98.000		246.000		
	NATIONAL	IRELAND		98.000	20.000	246.000	50.000	
	NATIONAL	ISRAEL		97.000	20.000			
	NATIONAL	ITALY		98.000	20.000	246.000	50.000	
	NATIONAL	JAPAN			25.000			MHLW
	NATIONAL	LATVIA		98.000	20.000	246.000	50.000	
	NATIONAL	NEW ZEALAND		121.000	25.000			
	NATIONAL	POLAND		98.000		200.000		
	NATIONAL	ROMANIA		98.000	20.000	246.000	50.000	
	NATIONAL	SINGAPORE		121.000	225.000			
	NATIONAL	KOREA,		97.000	20.000			

		REPUBLIC OF				
	NATIONAL	SPAIN	98.000	20.000	245.000	50.000
	NATIONAL	SWEDEN	50.000	10.000	246.000	50.000
	NATIONAL	SWITZERLAND	49.000	10.000	98.000	20.000
	NATIONAL	NETHERLANDS	100.000		246.000	
	NATIONAL	TURKEY	98.000	20.000	246.000	50.000
	NATIONAL	UNITED STATES OF AMERICA	24.000	5.000		NIOSH
	NATIONAL	UNITED STATES OF AMERICA	240.000	50.000		OSHA
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	123.000	25.000	246.000	50.000
	NATIONAL	ARGENTINA		20.000		
	NATIONAL	BULGARIA	98.000	20.000	246.000	50.000
	NATIONAL	CZECHIA	100.000		200.000	
	NATIONAL	CHILE	85.000	18.000		
	NATIONAL	CROATIA	98.000	20.000	246.000	50.000
	NATIONAL	ESTONIA	98.000	20.000	246.000	50.000
	NATIONAL	GREECE	120.000	25.000		
	NATIONAL	INDONESIA		20.000		
	NATIONAL	ICELAND	100.000	20.000	246.000	50.000
	NATIONAL	LITHUANIA	50.000	10.000	100.000	20.000
	NATIONAL	MALAYSIA	96.700	20.000		
	NATIONAL	MEXICO		20.000		
	NATIONAL	NORWAY	50.000	10.000		
	NATIONAL	PORTUGAL		20.000		
	NATIONAL	RUSSIAN FEDERATION	5.000			
	NATIONAL	SLOVAKIA	98.000	20.000	946.000	50.000
	NATIONAL	SLOVENIA	98.000	20.000	946.000	50.000
	NATIONAL	SOUTH AFRICA	120.000	25.000		
	NATIONAL	TAIWAN, PROVINCE OF CHINA	121.000	25.000		
	ACGIH	NNN		20		A3, BEI - Eye and URT irr
	EU	NNN	98	20	246	50
diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea	NATIONAL	AUSTRALIA	10			Skin
	NATIONAL	AUSTRIA	5.000		10.000	Long Term and Short term: inhalable aerosol
	NATIONAL	BELGIUM	10.000			
	NATIONAL	CANADA	10.000			Canada-Ontario
	NATIONAL	CANADA	10.000			Canada-Quebec
	NATIONAL	DENMARK	5.000		10.000	

ethyl acetate	NATIONAL	FINLAND	10.000		20.000		
	NATIONAL	FRANCE	10.000				
	NATIONAL	IRELAND	10.000				
	NATIONAL	NEW ZEALAND	10.000				
	NATIONAL	CHINA	10.000				
	NATIONAL	SINGAPORE	10.000				
	NATIONAL	KOREA, REPUBLIC OF	10.000				
	NATIONAL	SPAIN	10.000				
	NATIONAL	SWITZERLAND	10.000				inhalable aerosol
	NATIONAL	UNITED STATES OF AMERICA	10.000				
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	10.000				
	NATIONAL	ITALY	10.000				
	NATIONAL	CHILE	8.800				
	NATIONAL	MALAYSIA	10.000				
	NATIONAL	PORTUGAL	10.000				
	NATIONAL	ARGENTINA	10.000				
	NATIONAL	GREECE	10.000				
	NATIONAL	NORWAY	5.000				
	NATIONAL	SLOVENIA	5.000				
	ACGIH	NNN	10				A4 - URT irr
	EU	NNN	734	200	1468	400	
	NATIONAL	AUSTRIA	734.000	200.000	1468.000	400.000	
	NATIONAL	BELGIUM	734.000	200.000	1468.000	400.000	
	NATIONAL	CANADA		400.000			Ontario
	NATIONAL	CANADA	1440.000	400.000			Québec
	NATIONAL	DENMARK	540.000	150.000	1080.000	300.000	
	NATIONAL	FINLAND	730.000	200.000	1470.000	400.000	
	NATIONAL	FRANCE	734.000	200.000	1468.000	400.000	
	NATIONAL	GERMANY	730.000	200.000	1460.000	400.000	AGS
	NATIONAL	GERMANY	750.000	200.000	1500.000	400.000	DFG
	NATIONAL	HUNGARY	1400.000		1400.000		
	NATIONAL	IRELAND		200.000		400.000	
	NATIONAL	JAPAN		400.000			MHLW
	NATIONAL	JAPAN	720.000	200.000			JSOH
	NATIONAL	LATVIA	200.000	54.000	1468.000	400.000	JSOH
	NATIONAL	NEW ZEALAND	720.000	200.000			
	NATIONAL	CHINA	200.000		300.000		
	NATIONAL	POLAND	200.000		600.000		
	NATIONAL	ROMANIA	400.000	111.000	500.000	139.000	
	NATIONAL	SINGAPORE	1440.000	400.000			
	NATIONAL	KOREA, REPUBLIC OF	1440.000	400.000			

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	NATIONAL	SPAIN	1460.000	400.000			
	NATIONAL	SWEDEN	550.000	150.000	1100.000	300.000	
	NATIONAL	SWITZERLAND	730.000	200.000	1460.000	400.000	
	NATIONAL	UNITED STATES OF AMERICA	1400.000	400.000			NIOSH
	NATIONAL	UNITED STATES OF AMERICA	1400.000	400.000			OSHA
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	730.000	200.000	1460.000	400.000	OSHA
	NATIONAL	ITALY	734.000	200.000	1468.000	400.000	
	NATIONAL	ARGENTINA		400.000			
	NATIONAL	BULGARIA	1468.000	400.000	734.000	200.000	
	NATIONAL	CZECHIA	700.000		900.000		
	NATIONAL	CHILE	1260.000	350.000			
	NATIONAL	CROATIA	734.000	200.000	1468.000	400.000	
	NATIONAL	ESTONIA	500.000	150.000	1100.000	300.000	
	NATIONAL	GREECE	734.000	200.000	1468.000	400.000	
	NATIONAL	INDONESIA		400.000			
	NATIONAL	ICELAND	540.000	150.000			
	NATIONAL	LITHUANIA	400.000	150.000			
	NATIONAL	LITHUANIA C			1100.000	300.000	
	NATIONAL	MALAYSIA	1440.000	400.000			
	NATIONAL	MEXICO		400.000			
	NATIONAL	NORWAY	734.000	200.000	1468.000	400.000	
	NATIONAL	NETHERLANDS	550.000	150.000	1100.000	300.000	
	NATIONAL	PORTUGAL		400.000			
	NATIONAL	RUSSIAN FEDERATION	50.000		200.000		
	NATIONAL	SLOVAKIA	734.000	200.000	1468.000	400.000	
	NATIONAL	SLOVENIA	734.000	200.000	1468.000	400.000	
	NATIONAL	SOUTH AFRICA	700.000	200.000			
	NATIONAL	TAIWAN, PROVINCE OF CHINA	1440.000	400.000			
	ACGIH	NNN		400			URT and eye irr
	EU	NNN	734	200	1468	400	
	NATIONAL	AUSTRIA	0.050				
	NATIONAL	GERMANY	0.200		0.400		DFG; Long term and short term: inhalable fraction
	NATIONAL	SWITZERLAND	0.200		0.400		Inhalable fraction
	NATIONAL	KOREA, REPUBLIC	0.100				

		OF					
	NATIONAL	NETHERLANDS	0.200				
octhilinone (ISO); 2-octyl-2H-isothiazol-3-one	NATIONAL	AUSTRIA	0.050		0.050		Long term and short term: inhalable aerosol
	NATIONAL	GERMANY	0.050		0.100		AGS; Long term and short term: inhalable aerosol
	NATIONAL	GERMANY	0.050		0.100		DFG; Long term and short term: inhalable aerosol
	NATIONAL	SWITZERLAND	0.050		0.100		Long term and short term: inhalable aerosol
	NATIONAL	SLOVENIA	0.050		0.100		Long term and short term: inhalable fraction
formaldehyde	NATIONAL	AUSTRALIA	1.200	1.000	2.500	2.000	
	NATIONAL	AUSTRIA	0.370	0.300			
	NATIONAL	AUSTRIA C			0.600	0.740	
	NATIONAL	BELGIUM			0.380	0.300	
	NATIONAL	CANADA				1.000	
	NATIONAL	CANADA C				1.500	
	NATIONAL	CANADA C			3.000	2.000	
	NATIONAL	DENMARK	0.400	0.300	0.400	0.300	
	NATIONAL	FINLAND	0.370	0.300			
	NATIONAL	FINLAND C			1.200	1.000	
	NATIONAL	FRANCE		0.500		1.000	
	NATIONAL	GERMANY	0.370	0.300	0.740	0.600	ASG
	NATIONAL	GERMANY	0.370	0.300	0.740	0.600	DFG; Short term: a momentary value of 1 ml/m ³ (1,2 mg/m ³) should not be exceeded.
	NATIONAL	HUNGARY	0.600		0.600		
	NATIONAL	IRELAND	2.500	2.000	2.500	2.000	
	NATIONAL	ISRAEL	0.240	0.200	0.370	0.300	
	NATIONAL	JAPAN		0.100			MHLW
	NATIONAL	JAPAN	0.120	0.100			JSOH
	NATIONAL	JAPAN C	0.240	0.200			JSOH
	NATIONAL	LATVIA	0.500				
	NATIONAL	NEW ZEALAND		0.330			Short term: 12 hour shift
	NATIONAL	NEW ZEALAND C				1.000	
	NATIONAL	NEW ZEALAND C		0.500			12 hour shift
	NATIONAL	CHINA C			0.500		
	NATIONAL	POLAND	0.500		1.000		
	NATIONAL	ROMANIA	1.200	1.000	3.000	2.000	
	NATIONAL	SINGAPORE			0.370	0.300	
	NATIONAL	KOREA, REPUBLIC OF	0.750	0.500	1.500	1.000	
	NATIONAL	SPAIN	0.370	0.300	0.740	0.600	
	NATIONAL	SWEDEN	0.370	0.300	0.740	0.600	
	NATIONAL	SWITZERLAND	0.370	0.300	0.740	0.600	
	NATIONAL	NETHERLANDS	0.150			0.500	

	NDS					
NATIONAL	UNITED STATES OF AMERICA	0.016				NIOSH
NATIONAL	UNITED STATES OF AMERICA			0.100		NIOSH
NATIONAL	UNITED STATES OF AMERICA	0.750		2.000		OSHA
NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	2.500	2.000	2.500	2.000	
NATIONAL	ITALY	0.600	0.500	0.600	0.500	
NATIONAL	BULGARIA	1.000		2.000		
NATIONAL	CZECHIA	0.500		1.000		
NATIONAL	CROATIA	2.500	2.000	2.500	2.000	
NATIONAL	ESTONIA	0.600	0.500	1.200	1.000	
NATIONAL	GREECE	2.500	2.000	2.500	2.000	
NATIONAL	INDONESIA				0.300	
NATIONAL	LITHUANIA			0.600	0.500	
NATIONAL	SLOVAKIA	0.370	0.300	0.740	0.600	
NATIONAL	SLOVENIA	0.620	0.500			
NATIONAL	RUSSIAN FEDERATION	0.500				
NATIONAL	SOUTH AFRICA	2.500	2.000	1.200	1.000	
NATIONAL	TAIWAN, PROVINCE OF CHINA	1.200	1.000			
ACGIH	NNN		0.1		0.3	DSEN, RSEN, A1 - URT and eye irr, URT cancer
EU	NNN	0.37	0.3	0.74	0.6	Dermal sensitisation

Biological limit values

CAS-No.	Component	Value	UoM	Medium	Biological Indicator	Sampling Period
111-76-2	2-butoxyethanol; 150 ethyleneglycol monobutyl ether; butyl cellosolve	mg/g		Urine	2-Butoxyethylacetat	End of turn; End of working week

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	6846-50-0	14.000 µg/l	Freshwater	
		1.400 µg/l	Marine water	
		3.000 mg/l	Marine water sediments	
		5.290 mg/kg	Freshwater sediments	
		529.000 µg/kg	Marine water sediments	
		1.050 mg/kg	Soil	
		83.300 mg/kg	Secondary poisoning	
2-butoxyethanol; ethyleneglycol monobutyl	111-76-2	8.800 mg/l	Freshwater	

ether; butyl cellosolve

diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea	330-54-1	26.400 mg/l	Intermittent releases (freshwater)
		880.000 µg/l	Marine water
		463.000 mg/l	Microorganisms in sewage treatments
		34.600 mg/kg	Freshwater sediments
		3.460 mg/kg	Marine water sediments
		2.330 mg/kg	Soil
		20.000 mg/kg	Secondary poisoning
		320.000 ng/L	Freshwater
		220.000 ng/L	Intermittent releases (freshwater)
		32.000 ng/L	Marine water
		58.000 mg/l	Microorganisms in sewage treatments
		51.720 µg/kg	Freshwater sediments
		5.172 µg/kg	Marine water sediments
		12.000 µg/kg	Soil
ethyl acetate	141-78-6	240.000 µg/l	Freshwater
		1.650 mg/l	Intermittent releases (freshwater)
		24.000 µg/l	Marine water
		650.000 mg/l	Microorganisms in sewage treatments
		1.150 mg/kg	Freshwater sediments
		115.000 µg/kg	Marine water sediments
		148.000 µg/kg	Soil
		200.000 mg/kg	Secondary poisoning
		4.030 µg/l	Freshwater
		1.100 µg/l	Intermittent releases (freshwater)
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	2634-33-5	403.000 ng/L	Marine water
		110.000 ng/L	Intermittent releases (marine water)
		1.030 mg/l	Microorganisms in sewage treatments
		49.900 µg/kg	Freshwater sediments
		4.990 µg/kg	Marine water sediments
		3.000 mg/kg	Soil
		90.000 ng/L	Freshwater
		90.000 ng/L	Marine water
		10.000 µg/l	Microorganisms in sewage treatments
		9.500 µg/kg	Freshwater sediments
Pyrithione zinc	13463-41-7	9.500 µg/kg	Marine water sediments
		1.020 mg/kg	Soil
		3.390 µg/l	Freshwater
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-	55965-84-9		

one (3:1)

octhilonone (ISO); 2-octyl-2H-isothiazol-3-one	26530-20-1	3.390 µg/l	Intermittent releases (freshwater)
		3.390 µg/l	Marine water
		3.390 µg/l	Intermittent releases (marine water)
		230.000 µg/l	Microorganisms in sewage treatments
		27.000 µg/l	Freshwater sediments
		27.000 µg/l	Marine water sediments
		10.000 µg/l	Soil
		2.200 µg/l	Freshwater
		1.220 µg/l	Intermittent releases (freshwater)
		220.000 ng/L	Marine water
formaldehyde	50-00-0	122.000 ng/L	Intermittent releases (marine water)
		47.500 µg/kg	Freshwater sediments
		47.500 µg/kg	Marine water sediments
		8.200 µg/kg	Soil
		440.000 µg/l	Freshwater
		4.440 mg/l	Intermittent releases (freshwater)
		440.000 µg/l	Marine water
		190.000 µg/l	Microorganisms in sewage treatments
		2.300 mg/kg	Freshwater sediments
		2.300 mg/kg	Marine water sediments
		200.000 µg/kg	Marine water sediments

Derived No Effect Level (DNEL) values

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	6846-50-0		17.620 mg/m ³	4.350 mg/m ³	Human Inhalation	Long Term, systemic effects
			5.000 mg/kg	5.000 mg/kg	Human Dermal	Long Term, systemic effects
				5.000 mg/kg	Human Oral	Long Term, systemic effects
2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve	111-76-2		98.000 mg/m ³	59.000 mg/m ³	Human Inhalation	Long Term, systemic effects
			1091.000 mg/m ³	426.000 mg/m ³	Human Inhalation	Short Term, systemic effects
			246.000 mg/m ³	147.000 mg/m ³	Human Inhalation	Short Term, local effects
			125.000 mg/kg	75.000 mg/kg	Human Dermal	Long Term, systemic effects
			89.000 mg/kg	89.000 mg/kg	Human Dermal	Short Term, systemic effects
				6.300 mg/kg	Human Oral	Long Term, systemic effects
				26.700 mg/kg	Human Oral	Short Term, systemic effects

diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea	330-54-1	170.000 µg/m³		Human Inhalation	Long Term, systemic effects
		5.790 mg/kg		Human Dermal	Long Term, systemic effects
ethyl acetate	141-78-6	734.000 mg/m³	367.000 mg/m³	Human Inhalation	Long Term, systemic effects
		1468.000 mg/m³	734.000 mg/m³	Human Inhalation	Short Term, systemic effects
		734.000 mg/m³	367.000 mg/m³	Human Inhalation	Long Term, local effects
		1468.000 mg/m³	734.000 mg/m³	Human Inhalation	Short Term, local effects
		63.000 mg/kg	37.000 mg/kg	Human Dermal	Long Term, systemic effects
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	2634-33-5		4.500 mg/kg	Human Oral	Long Term, systemic effects
		6.810 mg/m³	1.200 mg/m³	Human Inhalation	Long Term, systemic effects
		966.000 µg/kg	345.000 µg/kg	Human Dermal	Long Term, systemic effects
Pyrrithione zinc	13463-41-7	10.000 µg/kg		Human Dermal	Long Term, systemic effects
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	20.000 µg/m³	20.000 µg/m³	Human Inhalation	Long Term, local effects
		40.000 µg/m³	20.000 µg/m³	Human Inhalation	Short Term, local effects
			90.000 µg/kg	Human Oral	Long Term, systemic effects
			110.000 µg/kg	Human Oral	Short Term, systemic effects
formaldehyde	50-00-0	9.000 mg/m³	3.200 mg/m³	Human Inhalation	Long Term, systemic effects
		375.000 µg/m³	100.000 µg/m³	Human Inhalation	Long Term, local effects
		750.000 µg/m³			Short Term, local effects
		240.000 mg/kg	102.000 mg/kg	Human Dermal	Long Term, systemic effects
			4.100 mg/kg	Human Oral	Long Term, systemic effects

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

N.A.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid

Color: In compliance with the product description

Odour: Characteristic

Odour threshold: N.A.

pH: N.A.

Kinematic viscosity: N.A.

Melting point / freezing point: N.A.

Initial boiling point and boiling range: 103 °C (217 °F)

Flash point: > 60 °C (140 °F)

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.47 g/cm³

Solubility in water: N.A.

Solubility in oil: N.A.

Partition coefficient (n-octanol/water): N.A.

Auto-ignition temperature: 238.00 °C

Decomposition temperature: N.A.

Flammability: N.A.

Volatile Organic compounds - VOCs = 0.51 % ; 2.67 g/l

Particle characteristics:

Particle size: N.A.

9.2. Other information

Miscibility: N.A.

Conductivity: N.A.

Evaporation rate: N.A. No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

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	Not classified Based on available data, the classification criteria are not met
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

Toxicological information on main components of the mixture:

1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	a) acute toxicity	LD50 Oral Rat > 2000.00 mg/kg	
		LC50 Inhalation Rat > 0.12 mg/l	
		LD50 Skin Rabbit > 2000.00 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Negative	
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 276.00 mg/kg	
2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve	a) acute toxicity	ATE - Oral : 1200 mg/kg bw	
		LD50 Oral Guineapig = 1414.00 mg/kg	
		LC50 Inhalation Vapour Rat = 2.56 mg/l 4h	
		LD50 Skin Guineapig > 2000.00 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes 24h	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Negative	Mouse intraperitoneal route
		Carcinogenicity Inhalation Rat = 125.00 mg/m3	NOAEC
	g) reproductive toxicity	No Observed Adverse Effect Level Oral = 720.00 mg/kg	Mouse
diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea	a) acute toxicity	LD50 Oral Rat = 4150.00000 mg/kg 48h	
		LC50 Inhalation of aerosol Rat > 5050.00000 mg/l 4h	
		LD50 Skin Rat > 5000.00000 mg/kg 48h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Negative	
		Carcinogenicity Oral Rat = 1.00000 mg/kg	NOAEL
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat =	

		18.90000 mg/kg	
ethyl acetate	a) acute toxicity	LD50 Oral Rat = 5620.00 mg/kg LC50 Inhalation Vapour Rat > 22.50 mg/l 6h LD50 Skin Rabbit > 20000.00 mg/kg 24h	No mortality occurred
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 24h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Negative	Hamster oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral = 13800.00 mg/kg	Mouse
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	a) acute toxicity	LD50 Oral Rat = 670.00000 mg/kg LD50 Skin Rat > 2000.00000 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Corrosive Positive	irreversible damage
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive	
	f) carcinogenicity	Genotoxicity Rat Negative	Oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 112.00000 mg/kg	
Pyrithione zinc	a) acute toxicity	ATE - Oral : 221 mg/kg bw LD50 Oral Rat = 269.00000 mg/kg LC50 Inhalation Rat = 1.03000 mg/l 4h LD50 Skin Rat > 2000.00000 mg/kg 24h	14 days
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Negative Carcinogenicity Oral Rat = 0.50000 mg/kg Carcinogenicity Skin = 5.00000 mg/kg	NOAEL NOAEL; mouse
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 1.40000 mg/kg	
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	a) acute toxicity	LD50 Oral Rat = 69.00 mg/kg LD50 Skin Rabbit = 141.00 mg/kg LC50 Inhalation Rat = 0.33 mg/l 4h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive	
	c) serious eye damage/irritation	Eye Corrosive Rabbit Positive	
	d) respiratory or skin sensitisation	Skin Sensitization Positive	
	f) carcinogenicity	Genotoxicity Negative	

		Carcinogenicity Skin Negative	
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 22.70000 mg/kg	
octhiline (ISO); 2-octyl-2H-isothiazol-3-one	a) acute toxicity	ATE - Oral : 125 mg/kg bw	
		ATE - Dermal : 311 mg/kg bw	
		LD50 Oral Rat = 500.00 mg/kg	
		LC50 Inhalation Rat = 0.78 mg/l 4h	
		LD50 Skin Rat = 311.00000 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Guinea pig Positive	
formaldehyde	a) acute toxicity	LD50 Oral Rat = 640.00000 mg/kg	
		LC50 Inhalation Vapour Rat < 463.00000 Ppm 4h	
	b) skin corrosion/irritation	Skin Corrosive Rabbit Positive	
	c) serious eye damage/irritation	Eye Corrosive Rabbit Positive	
	d) respiratory or skin sensitisation	Skin Sensitization Positive	mouse
	f) carcinogenicity	Genotoxicity Rat Positive	
		Carcinogenicity Rat Positive	
	i) STOT-repeated exposure	No Observed Adverse Effect Level Oral Rat = 15.00000 mg/kg	effects in the stomach

11.2 Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

Harmful to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 3(H412)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	CAS: 6846-50-0 - EINECS: 229-934-9	a) Aquatic acute toxicity : NOEC Fish <i>Lepomis macrochirus</i> > 6.00 mg/L 96h „OECD Guideline 203 (Fish, Acute Toxicity Test)
		a) Aquatic acute toxicity : NOEC <i>Daphnia magna</i> > 1.46 mg/L 48h EU Method C.2 (Acute Toxicity for <i>Daphnia</i>)
		a) Aquatic acute toxicity : EC50 Algae <i>Pseudokirchneriella subcapitata</i> > 7.49 mg/L 72h „OECD Guideline 201 (Alga, Growth Inhibition Test)
2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve	CAS: 111-76-2 - EINECS: 203-905-0 - INDEX: 603-014-00-0	a) Aquatic acute toxicity : LC50 Fish <i>Oncorhynchus mykiss</i> = 1474.00 mg/L 96h
		b) Aquatic chronic toxicity : NOEC Fish <i>Brachydanio rerio</i> = 100.00 mg/L OECD204 - 21days
		a) Aquatic acute toxicity : EC50 freshwater invertebrates = 690.00 mg/L

		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 100.00 mg/L a) Aquatic acute toxicity : EC50 Algae pseudokirchneriella subcapitata = 623.00 mg/L 72h c) Bacteria toxicity : NOEC Uronema parduczi = 463.00 mg/L 48h
diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea	CAS: 330-54-1 - EINECS: 206-354-4 - INDEX: 006-015-00-9	a) Aquatic acute toxicity : EC10 Fish = 0.08000 mg/L 72h OECD 201 a) Aquatic acute toxicity : EC50 Fish = 0.30000 mg/L 72h OECD 201 a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 1.40000 mg/L 72h OECD 202 a) Aquatic acute toxicity : LC50 Oncorhynchus mykiss = 14.70000 mg/L 96h OECD 203 a) Aquatic acute toxicity : NOEC Daphnia = 0.56000 mg/L b) Aquatic chronic toxicity : NOEC Fish freshwater = 1.19000 µg/L OECD 234 a) Aquatic acute toxicity : NOEC Algae Scenedesmus subspicatus = 3.20000 µg/L OECD 201 and 221 a) Aquatic acute toxicity : EC50 Algae Scenedesmus subspicatus = 22.00000 µg/L OECD 201 and 221 e) Plant toxicity : EC50 Lemna gibba = 18.30000 µg/L OECD 221 test - 7days e) Plant toxicity : NOEC Lemna gibba = 3.40000 µg/L OECD 221 test - 7days c) Bacteria toxicity : EC50 Sludge activated sludge = 3080.00000 mg/L OECD guideline 209 with GLP
ethyl acetate	CAS: 141-78-6 - EINECS: 205-500-4 - INDEX: 607-022-00-5	a) Aquatic acute toxicity : LC50 Fish S Gairdneri = 230.00 mg/L 96h b) Aquatic chronic toxicity : NOEC Fish freshwater fish = 6.90 mg/L - 32days a) Aquatic acute toxicity : LC50 Daphnia Daphnia Cucullata = 165.00 mg/L 48h b) Aquatic chronic toxicity : NOEC Daphnia daphnia magna = 2.40 mg/L - 21days a) Aquatic acute toxicity : EC50 Algae S. subspicatus = 5600.00 mg/L 48h c) Bacteria toxicity : NOEC Pseudomonas putida = 650.00 mg/L - 16hr
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS: 2634-33-5 - EINECS: 220-120-9 - INDEX: 613-088-00-6	a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 2.15000 mg/L 96h OECD Guideline 203 a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 2.90000 mg/L 48h OECD Guideline 202 a) Aquatic acute toxicity : EC50 Algae green alga Selenastrum capricornutum freshwater algae = 110.00000 µg/L OECD Guideline 201 d) Terrestrial toxicity : EC50 Worm Eisenia fetida > 410.60000 mg/kg OECD Guideline 207 - Duration 14d d) Terrestrial toxicity : EC10 soil microorganisms = 263.70000 mg/kg - long term a) Aquatic acute toxicity : NOEC Sludge activated sludge 10.30000 mg/L 3h OECD Guideline 209 e) Plant toxicity : LC50 Triticum aestivum = 200.00000 mg/kg OECD Guideline 208
Pyrithione zinc	CAS: 13463-41-7 - EINECS: 236-671-3 - INDEX: 613-333-00-7	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 2.60000 µg/L 96h US EPA-72-1 a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 8.20000 µg/L US

EPA-
72-2

a) Aquatic acute toxicity : EC50 Algae *Navicula pelliculosa* = 3.00000 µg/L dossier ECHA

b) Aquatic chronic toxicity : NOEC Fish *Pimephales promelas* = 1.22000 µg/L „OECD Guideline 210 (Fish, Early-Life Stage Toxicity Test) - 28days

b) Aquatic chronic toxicity : EC50 *Lemna gibba* = 9.60000 µg/L EPA OPPTS 850.4400 (Aquatic Plant Toxicity Test using *Lemna* spp. Tiers I & II))

d) Terrestrial toxicity : LC50 *Folsomia candida* = 822.00000 mg/kg ISO 11267 (Inhibition of Reproduction of *Collembola* by Soil Pollutants)

e) Plant toxicity : NOEC Tomato, Cucumber, Lettuce, Soybean, Cabbage, Carrot, Oat > 0.49000 µg/L USEPA OPPTS 850.4100

d) Terrestrial toxicity : LC50 Avian Northern Bobwhite = 60.00000 mg/kg EPA FIFRA Guideline 71-1 - 14days

d) Terrestrial toxicity : NOEC Avian Northern Bobwhite = 31.20000 mg/kg EPA FIFRA Guideline 71-1 - 14days

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) CAS: 55965-84-9 - INDEX: 613-167-00-5 a) Aquatic acute toxicity : LC50 Fish *Oncorhynchus mykiss* = 0.19000 mg/L 96h EPA OPP 72-1 (Fish Acute Toxicity Test)

b) Aquatic chronic toxicity : NOEC Fish *Danio rerio* = 0.02000 mg/L „OECD Guideline 210 (Fish, Early-Life Stage Toxicity Test) - 35days

a) Aquatic acute toxicity : LC50 *Daphnia magna* = 0.16000 mg/L 48h EPA OPP 72-2 (Aquatic Invertebrate Acute Toxicity Test)

b) Aquatic chronic toxicity : NOEC *Daphnia magna* = 0.10000 mg/L EPA OPP 72-4 (Fish Early Life-Stage and Aquatic Invertebrate Life-Cycle Studies) - 21days

a) Aquatic acute toxicity : EC50 Algae *Skeletonema costatum* = 0.00 mg/L 96h „OECD Guideline 201 (Alga, Growth Inhibition Test)

a) Aquatic acute toxicity : EC50 Sludge activated sludge = 4.50000 mg/L 3h „OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

d) Terrestrial toxicity : LC50 Worm *Eisenia fetida* = 613.00000 mg/kg „OECD Guideline 207 (Earthworm, Acute Toxicity Tests) - 14days

e) Plant toxicity : NOEC *Trifolium pratense*, *Oryza sativa*, *Brassica napus* = 1000.00000 mg/L OECD Guideline 208 (Terrestrial Plants Test: Seedling Emergence and Seedling Growth Test) - 21days

octhlinone (ISO); 2-octyl-2H-isothiazol-3-one CAS: 26530-20-1 - EINECS: 247-761-7 - INDEX: 613-112-00-5 a) Aquatic acute toxicity : LC50 Fish freshwater fish = 0.12200 mg/L dossier ECHA

b) Aquatic chronic toxicity : EC10 Fish = 0.02200 mg/L dossier ECHA

a) Aquatic acute toxicity : EC50 freshwater invertebrates = 0.18100 mg/L dossier ECHA

b) Aquatic chronic toxicity : EC10 freshwater invertebrates = 0.03500 mg/L dossier ECHA

LC50 Algae freshwater algae = 0.15000 mg/L

formaldehyde CAS: 50-00-0 - EINECS: 200-001-8 - INDEX: 605-001-00-5 a) Aquatic acute toxicity : LC50 Fish *Morone saxatilis* = 6.18000 mg/L

a) Aquatic acute toxicity : EC50 *Daphnia magna* = 5.80000 mg/L 48h OECD guideline 202

b) Aquatic chronic toxicity : NOEC *Daphnia magna* >= 6.40000 mg/L OECD Test Guideline 211

a) Aquatic acute toxicity : EC50 Algae freshwater algae = 5.67000 mg/L 72h

a) Aquatic acute toxicity : EC50 Sludge activated sludge = 19.00000 mg/L 3h

d) Terrestrial toxicity : LC50 Worm *Eisenia fetida* = 1.00000 µg/cm2 48h - 1

12.2. Persistence and degradability

Component	Persistence/Degradability:	Test	Value	Notes
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	Readily biodegradable			readily biodegradable but failing 10-day window
2-butoxyethanol; ethyleneglycol monobutyl ether; butyl cellosolve	Readily biodegradable	Biochemical oxygen demand	98.000	28days
diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea	Non-readily biodegradable	Biochemical oxygen demand	0.000	%, 28days
ethyl acetate	Readily biodegradable	CO2 production	94.000	28days
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Non-readily biodegradable	CO2 production		OECD Guideline 301C
Pyrrithione zinc	Non-readily biodegradable	CO2 production		OECD 301B CO2evolution
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Non-readily biodegradable			
octhiline (ISO); 2-octyl-2H-isothiazol-3-one	Non-readily biodegradable			
formaldehyde	Readily biodegradable	Dissolved organic carbon		OECD guidelines 301 A

12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Value	Notes
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	Bioaccumulative	BCF - Bioconcentration factor	5030.000	whole body BCF - wet weight lipid content
diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea	Bioaccumulative	BCF - Bioconcentration factor		
ethyl acetate	Bioaccumulative	BCF - Bioconcentration factor	30.000	aquatic species
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Bioaccumulative	BCF - Bioconcentration factor	6.620	
Pyrrithione zinc	Bioaccumulative	BCF - Bioconcentration factor	1.400	
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Bioaccumulative	BCF - Bioconcentration factor	54.000	≤ 54
octhiline (ISO); 2-octyl-2H-isothiazol-3-one	Bioaccumulative	BCF - Bioconcentration factor	19.210	L/kg ww
formaldehyde	Not bioaccumulative	BCF - Bioconcentration factor		

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Recover if possible. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N.A.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

N.A.

14.6. Special precautions for user

N.A.

Road and Rail (ADR-RID) :

N.A.

Air (IATA) :

N.A.

Sea (IMDG) :

N.A.

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2020/878

Regulation (EC) nr 648/2004 (Detergents).

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: 28, 40, 72, 75

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

Regulation (EU) 649/2012 (PIC regulation):

No Substance Listed

German Water Hazard Class.

Class 1: slightly hazardous for water.

SVHC Substances:

No data available

Dir. 2004/42/EC (VOC directive)

(ready to use)

Volatile Organic compounds - VOCs = 0.18 %

Volatile Organic compounds - VOCs = 2.67 g/L

REGULATION (EU) No 528/2012

The product is identified as an article treated pursuant to art. 58 of Regulation (EU) no. 528/2012 and subsequent amendments.

Substances included in Regulation (EU) n. 528/2012 (concerning the making available on the market and use of biocidal products):;

Nomenclature IUPAC: Bis [1-hydroxy-2(1H)-pyridinethionato-O,S](T-4)-zinc

Nomenclature BPR: Pyrithione zinc

CAS number:13463-41-7

Product-type 6: Preservatives for products during storage

Assessment status: Initial application for approval in progress. Competent authority evaluation

Product-type 7: Film preservatives

Assessment status: Initial application for approval in progress. Competent authority evaluation

; Nomenclature IUPAC: Mixture of 5-chloro-2-methyl-2H- isothiazol-3-one (EINECS 247-500-7) and 2-methyl-2H-isothiazol-3-one (EINECS 220-239-6) (Mixture of CMIT/MIT)

Nomenclature BPR: C(M)IT/MIT (3:1)

CAS number: 55965-84-9

Product-type 6: Preservatives for products during storage

Assessment status: Approved

Commission Implementing Regulation (EU) 2016/131 ; Nomenclature IUPAC: octhilinone (ISO); 2-octyl-2H-isothiazol-3-one

Nomenclature BPR: OIT

CAS number: 26530-20-1

Product-type 6: Preservatives for products during storage

Assessment status: Initial application for approval in progress. Competent authority evaluation

Product-type 7: Film preservatives

Assessment status: Initial application for approval in progress. Competent authority evaluation

Product-type 8: Film preservatives

Assessment status: Approved

; Nomenclature IUPAC: diuron (ISO); 3-(3,4-dichlorophenyl)-1,1-dimethylurea

Nomenclature BPR: DIURON

CAS number: 330-54-1

Product-type 7: Film preservatives

Assessment status: Initial application for approval in progress. Competent authority evaluation

; Nomenclature IUPAC: 1,2-benzisothiazol-3(2H)-one

Nomenclature BPR: BIT

CAS number: 2634-33-5

Product-type 6: Preservatives for products during storage

Assessment status: Initial application for approval in progress. Competent authority evaluation

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.

H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child if inhaled and in contact with skin.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/2	Flam. Liq. 2	Flammable liquid, Category 2
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Inhal	Acute Tox. 3	Acute toxicity (inhalation), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.5/2	Muta. 2	Germ cell mutagenicity, Category 2
3.6/1B	Carc. 1B	Carcinogenicity, Category 1B
3.7/2	Repr. 2	Reproductive toxicity, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008 Classification procedure

4.1/C3 Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

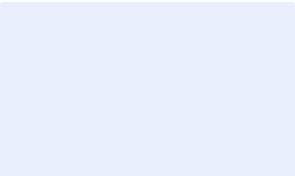
EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: Keep Away From Heat
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.



Exposure Scenario

Ethyl acetate

Exposure Scenario, 13/07/2021

Substance identity	
	Ethyl acetate
CAS No.	141-78-6
INDEX No.	607-022-00-5
EINECS No.	205-500-4
Registration number	01-2119475103-46

Table of contents

1. **ES 1** Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)

1. ES 1		Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)	
1.1 TITLE SECTION			
Exposure Scenario name	Professional application of coatings and inks by brush or roller - Handling and dilution of concentrates		
Date - Version	13/07/2021 - 1.0		
Life Cycle Stage	Widespread use by professional workers		
Main user group	Professional uses		
Sector(s) of use	Professional uses (SU22)		
Product Categories	Coatings and paints, thinners, paint removers (PC9a)		
Environment Contributing Scenario			
CS1	ERC8a - ERC8d		
Worker Contributing Scenario			
CS2 Handling and dilution of concentrates	PROC8a		
CS3 Handling and dilution of concentrates	PROC10		
1.2 Conditions of use affecting exposure			
1.2. CS1: Environment Contributing Scenario (ERC8a, ERC8d)			
Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d)		
<i>Product (article) characteristics</i>			
Physical form of product: Liquid			
Concentration of substance in product: Covers percentage substance in the product up to 100 %.			
1.2. CS2: Worker Contributing Scenario: Handling and dilution of concentrates (PROC8a)			
Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)		
<i>Product (article) characteristics</i>			
Physical form of product: Liquid			
Concentration of substance in product: Covers percentage substance in the product up to 100 %.			
<i>Amount used, frequency and duration of use/exposure</i>			
Duration: Covers daily exposures up to 8 hours			
<i>Technical and organisational conditions and measures</i>			
Technical and organisational measures Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).			
<i>Other conditions affecting worker exposure</i>			
Indoor use Professional use Temperature: Assumes use at not more than 20 °C above ambient temperature.			
1.2. CS3: Worker Contributing Scenario: Handling and dilution of concentrates (PROC10)			

Process Categories	Roller application or brushing (PROC10)																						
<i>Product (article) characteristics</i>																							
Physical form of product: Liquid																							
Concentration of substance in product: Covers percentage substance in the product up to 100 %.																							
<i>Amount used, frequency and duration of use/exposure</i>																							
Duration: Covers daily exposures up to 8 hours																							
<i>Technical and organisational conditions and measures</i>																							
Technical and organisational measures Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Ensure control measures are regularly inspected and maintained. Provide extract ventilation to points where emissions occur.																							
<i>Other conditions affecting worker exposure</i>																							
Indoor use Professional use Temperature: Assumes use at not more than 20 °C above ambient temperature.																							
1.3 Exposure estimation and reference to its source																							
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dermal, systemic, long-term	= 13.71 mg/kg bw/day	ECETOC TRA worker v3	= 0.218																				
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Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	= 51.39 mg/m ³	ECETOC TRA worker v3	= 0.07
inhalative, local, long-term	= 51.39 mg/m ³	ECETOC TRA worker v3	= 0.07
dermal, systemic, long-term	= 27.43 mg/kg bw/day	ECETOC TRA worker v3	= 0.435

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.