

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

Product form : Mixture
Name : Direct polyurea topcoat - gloss
Trade name : NOVORUST HYBRID 2290 UHS

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

Main use category : Professional use
Use of the substance/mixture : The product is intended for professional use

1.3. Details of the supplier of the safety data sheet

NOVOL Sp. z o.o.
Żabikowska 7/9
62-052 KOMORNIKI, Poland
Poland
T +48618109800, F +48618109809
sekretariat@novol.com, www.novol.com
E-mail address of competent person responsible for the SDS : dokumentacja@novol.com

1.4. Emergency telephone number

Emergency number : 112

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flammable liquids, Category 3 H226
Skin sensitisation, Category 1 H317
Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP)



Signal word (CLP) : Warning
Contains : tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate
Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H317 - May cause an allergic skin reaction.
H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
P261 - Avoid breathing vapours, spray.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.

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P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P312 - Call doctor if you feel unwell.

2.3. Other hazards

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

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate	CAS-No.: 136210-30-5 EC-No.: 429-270-1 EC Index-No.: 607-521-00-8 REACH-no: 01-0000017556-64	< 30	Skin Sens. 1, H317 Aquatic Chronic 3, H412
Hydrocarbons, C9, aromatics	CAS-No.: 128601-23-0 EC-No.: 918-668-5 REACH-no: 01-2119455851-35	< 10	Flam. Liq. 3, H226 STOT SE 3, H336 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066
Aluminium dihydrogen triphosphate	CAS-No.: 13939-25-8 EC-No.: 237-714-9 REACH-no: 01-2119970565-28	< 8	Eye Irrit. 2, H319
2-methoxy-1-methylethyl acetate substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 108-65-6 EC-No.: 203-603-9 EC Index-No.: 607-195-00-7 REACH-no: 01-2119475791-29	< 6	Flam. Liq. 3, H226
n-butyl acetate substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 123-86-4 EC-No.: 204-658-1 EC Index-No.: 607-025-00-1 REACH-no: 01-2119485493-29	< 5	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066
zinc oxide	CAS-No.: 1314-13-2 EC-No.: 215-222-5 EC Index-No.: 030-013-00-7 REACH-no: 01-2119463881-32	< 5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	CAS-No.: 136210-32-7 EC-No.: 412-060-9 EC Index-No.: 607-350-00-9 REACH-no: 01-0000015937-58	< 5	Skin Sens. 1, H317 Aquatic Chronic 3, H412

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Diethyl fumarate	CAS-No.: 623-91-6 EC-No.: 210-819-7	< 3	Acute Tox. 4 (Oral), H302 (ATE=1367 mg/kg bodyweight) Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: General information. Refer to section 11.
First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. If skin irritation continues, consult a doctor.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
First-aid measures after ingestion	: If swallowed: rinse mouth. Do NOT induce vomiting. Call a physician immediately.

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

Symptoms/effects after inhalation	: Vapours may cause drowsiness and dizziness.
Symptoms/effects after skin contact	: Prolonged or repeated contact may cause skin to become dry.
Symptoms/effects after eye contact	: May cause eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Dry chemical, CO2, alcohol-resistant foam or waterspray.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Carbon monoxide. Other toxic gases.
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5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment	: Remove ignition sources. Ensure that there is a suitable ventilation system. Avoid any direct or indirect contact with ingredients released. Avoid contact with skin and eyes. Use personal protective equipment as required. See Section 8.
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For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. See Section 8.

6.2. Environmental precautions

Avoid release to the environment. Do not allow to enter into surface water or drains. Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

6.3. Methods and material for containment and cleaning up

For containment : Cover spill with non combustible material, e.g.: sand, earth, vermiculite. Mechanically recover the product.

6.4. Reference to other sections

Disposal considerations. See Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Storage temperature : 5 – 35 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

n-butyl acetate (123-86-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	n-Butyl acetate
IOEL TWA	241 mg/m ³
	50 ppm
IOEL STEL	723 mg/m ³
	150 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831
United Kingdom - Occupational Exposure Limits	
Local name	Butyl acetate
WEL TWA (OEL TWA)	724 mg/m ³
	150 ppm
WEL STEL (OEL STEL)	966 mg/m ³

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n-butyl acetate (123-86-4)	
	200 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
2-methoxy-1-methylethyl acetate (108-65-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-Methoxy-1-methylethylacetate
IOEL TWA	275 mg/m ³
	50 ppm
IOEL STEL	550 mg/m ³
	100 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom - Occupational Exposure Limits	
Local name	1-Methoxypropyl acetate
WEL TWA (OEL TWA)	274 mg/m ³
	50 ppm
WEL STEL (OEL STEL)	548 mg/m ³
	100 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Recommended monitoring procedures

Monitoring methods	
Monitoring methods	EN 482. Workplace exposure - General requirements for the performance of procedures for the measurement of chemical agents.

DNEL and PNEC

n-butyl acetate (123-86-4)	
PNEC (Water)	
PNEC aqua (freshwater)	0.18 mg/l
PNEC aqua (marine water)	0.018 mg/l
PNEC aqua (intermittent, freshwater)	0.36 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.981 mg/kg dwt
PNEC sediment (marine water)	0.0981 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.0903 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	35.6 mg/l

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zinc oxide (1314-13-2)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	83 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	5 mg/m³
Long-term - local effects, inhalation	0.5 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.83 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2.5 mg/m³
Long-term - systemic effects, dermal	83 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	20.6 µg/l
PNEC aqua (marine water)	6.1 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	117.8 mg/kg dwt
PNEC sediment (marine water)	56.5 mg/kg dwt
PNEC (Soil)	
PNEC soil	35.6 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	100 µg/l

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Viton® II	6 (> 480 minutes)	0,7 mm		EN 374-3, EN ISO 374-1
Disposable gloves	Nitrile rubber (NBR)	2 (> 30 minutes)	0,4 mm		EN 374-3

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Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Respiratory protection			
Device	Filter type	Condition	Standard
Gas mask with filter type	Filter A1/B1		EN 14387

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Grey.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive properties	: No data available.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 27 °C
Auto-ignition temperature	: 415 °C
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Slightly soluble.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1.6 g/cm³
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

Other safety characteristics

VOC content	: 12 % w/w
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SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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10.4. Conditions to avoid

Keep away from sources of ignition. Prevent build-up of electrostatic charges (e.g. by grounding). Protect from sunlight. Avoid high temperatures.

10.5. Incompatible materials

No contact with: strong acids, strong bases and strong oxidants.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition may produce : Carbon monoxide. Other toxic gases.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met).

n-butyl acetate (123-86-4)

LD50 oral rat	3200 ml/kg Source: ECHA
LD50 dermal rabbit	> 17600 mg/kg Source: ECHA
LC50 Inhalation - Rat (Vapours)	1802 mg/l Source: ECHA

zinc oxide (1314-13-2)

LD50 oral rat	> 5000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg Source: ECHA
LC50 Inhalation - Rat	> 5700 mg/m³ Source: ECHA

Aluminium dihydrogen triphosphate (13939-25-8)

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method), Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure)
LC50 Inhalation - Rat	> 3.46 mg/l air Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)
LC50 Inhalation - Rat (Dust/Mist)	> 3.46 mg/l Source: ECHA

bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane (136210-32-7)

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.1 (Acute Toxicity (Oral))
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal))
LC50 Inhalation - Rat	> 4224 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Diethyl fumarate (623-91-6)

LD50 oral rat	1367 mg/kg Source: SIDS
LD50 dermal rabbit	3560 mg/kg

Hydrocarbons, C9, aromatics (128601-23-0)

LD50 dermal rabbit	> 3160 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 6193 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Remarks on results: other:

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2-methoxy-1-methylethyl acetate (108-65-6)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met).
n-butyl acetate (123-86-4)	
pH	6.2 Temp.: 20 °C Concentration: 5,3 g/L
zinc oxide (1314-13-2)	
pH	6.95 Source: HSDB
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
n-butyl acetate (123-86-4)	
pH	6.2 Temp.: 20 °C Concentration: 5,3 g/L
zinc oxide (1314-13-2)	
pH	6.95 Source: HSDB
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
n-butyl acetate (123-86-4)	
STOT-single exposure	May cause drowsiness or dizziness.
Diethyl fumarate (623-91-6)	
STOT-single exposure	May cause respiratory irritation.
Hydrocarbons, C9, aromatics (128601-23-0)	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
n-butyl acetate (123-86-4)	
LOAEL (oral, rat, 90 days)	500 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 798.2650 (90-Day Oral Toxicity in Rodents)
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 798.2650 (90-Day Oral Toxicity in Rodents)
zinc oxide (1314-13-2)	
LOAEL (dermal, rat/rabbit, 90 days)	75 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEL (oral, rat, 90 days)	31.52 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane (136210-32-7)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
Hydrocarbons, C9, aromatics (128601-23-0)	
NOAEL (oral, rat, 90 days)	600 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

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2-methoxy-1-methylethyl acetate (108-65-6)	
NOAEL (oral, rat, 90 days)	≥ 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

n-butyl acetate (123-86-4)	
Viscosity, kinematic	0.83 mm ² /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm ² /s)'

11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

n-butyl acetate (123-86-4)	
LC50 - Fish [1]	18 mg/l Source: ECHA
EC50 - Crustacea [1]	44 mg/l Source: ECHA
EC50 - Other aquatic organisms [1]	32 mg/l Test organisms (species): Artemia salina
EC50 72h - Algae [1]	674.7 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	246 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	47.6 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	23.2 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Aluminium dihydrogen triphosphate (13939-25-8)	
LC50 - Fish [1]	> 0.327 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	> 0.245 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 0.911 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	1.5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane (136210-32-7)	
LC50 - Fish [1]	66 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	88.6 mg/l Test organisms (species): Daphnia magna

Diethyl fumarate (623-91-6)	
LC50 - Fish [1]	4.5 mg/l Source: ECOTOX

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Diethyl fumarate (623-91-6)	
EC50 72h - Algae [1]	1.1 mg/l Source: SIDS
Hydrocarbons, C9, aromatics (128601-23-0)	
EC50 72h - Algae [1]	0.42 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.29 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
2-methoxy-1-methylethyl acetate (108-65-6)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	> 500 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	≥ 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	47.5 mg/l Test organisms (species): Oryzias latipes Duration: '14 d'

12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
n-butyl acetate (123-86-4)	
Persistence and degradability	Not rapidly degradable
zinc oxide (1314-13-2)	
Persistence and degradability	Not rapidly degradable
tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate (136210-30-5)	
Persistence and degradability	Not rapidly degradable
Aluminium dihydrogen triphosphate (13939-25-8)	
Persistence and degradability	Not rapidly degradable
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane (136210-32-7)	
Persistence and degradability	Not rapidly degradable
Diethyl fumarate (623-91-6)	
Persistence and degradability	Not rapidly degradable
Hydrocarbons, C9, aromatics (128601-23-0)	
Persistence and degradability	Not rapidly degradable
2-methoxy-1-methylethyl acetate (108-65-6)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

n-butyl acetate (123-86-4)	
Partition coefficient n-octanol/water (Log Pow)	1.78 Source: HSDB
tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate (136210-30-5)	
Partition coefficient n-octanol/water (Log Pow)	5.16 Source: Episuite

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bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane (136210-32-7)	
Partition coefficient n-octanol/water (Log Pow)	5.99 Source: EPISUITE
Diethyl fumarate (623-91-6)	
Partition coefficient n-octanol/water (Log Pow)	2.12

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Do not discharge into drains.
Product/Packaging disposal recommendations : This material and its container must be disposed of as hazardous waste. Do not dispose of with domestic waste. After cleaning, recycle or dispose of at an authorised site.
Additional information : Flammable vapours may accumulate in the container.
European List of Waste (LoW, EC 2000/532) : 08 01 11* - waste paint and varnish containing organic solvents or other dangerous substances
15 01 10* - packaging containing residues of or contaminated by dangerous substances
European List of Waste (LoW, EC 2000/532)

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
UN 1263	UN 1263	UN 1263
14.2. UN proper shipping name		
PAINT	PAINT	Paint
Transport document description		
UN 1263 PAINT, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT, 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS (27°C c.c.)	UN 1263 Paint, 3, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)		
3	3	3

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ADR	IMDG	IATA
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-E EmS-No. (Spillage): S-E	Dangerous for the environment: Yes
No supplementary information available		

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1
Limited quantities (ADR) : 5I
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Orange plates :



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

Transport by sea

Special provisions (IMDG) : 163, 223, 367, 955
Limited quantities (IMDG) : 5 L
Special packing provisions (IMDG) : PP1
Stowage category (IMDG) : A

Air transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

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PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

VOC Directive (2004/42)

VOC content : 12 % w/w

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Germany

Air Quality Control (TA Luft)					
Category	Class	Applicable on	Local name	Max. mass flow	Max. mass concentration

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

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Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association

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Abbreviations and acronyms:	
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Data sources : ECHA (European Chemicals Agency).
Training advice : Handle in accordance with good industrial hygiene and safety procedures.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.

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Full text of H- and EUH-statements:	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Flam. Liq. 3	H226	Expert judgement
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 2	H411	Calculation method

Safety Data Sheet (SDS), EU

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