

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

1.1. Product identifier

Product form : Mixture
 Product name : Organometallic dye for industrial use
 Product code : GG 501/11 H

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

1.2.1. Relevant identified uses

Main use category : Industrial use
 Use of the substance/mixture : Dyestuff/pigment

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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1.4. Emergency telephone number

Emergency number : +90 (232) 877 2410

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3	H226
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Germ cell mutagenicity, Category 2	H341
Carcinogenicity, Category 2	H351
Reproductive toxicity, Category 2	H361
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Suspected of causing cancer. Suspected of causing genetic defects. Suspected of damaging fertility or the unborn child. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :



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Signal word (CLP)	: Danger
Contains	: Naphthenic acid; toluene; Lemon oil; Eucalyptus oil; Lavandin Oil; Oils, spike; Fennel oil, sweet; Rosemary oil; turpentine, oil; Pine oil; rosin; colophony
Hazard statements (CLP)	: H226 - Flammable liquid and vapour. H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H341 - Suspected of causing genetic defects. H351 - Suspected of causing cancer. H361 - Suspected of damaging fertility or the unborn child. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P201 - Obtain special instructions before use. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 - Avoid breathing vapours, spray, mist, gas. P273 - Avoid release to the environment. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P301+P310+P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - IF exposed or concerned: Get medical advice/attention. P321 - Specific treatment (see supplemental first aid instruction on this label). P391 - Collect spillage. P501 - Dispose of contents and container to a hazardous or special waste collection point.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Oils, spike	CAS-No.: 8016-78-2 EC-No.: 616-988-7	≥ 10 – < 25	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Rosemary oil	CAS-No.: 84604-14-8 EC-No.: 283-291-9	≥ 5 – < 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 STOT SE 2, H371 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Terpineol	CAS-No.: 8000-41-7 EC-No.: 232-268-1	≥ 5 – < 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319

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Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Fennel oil, sweet	CAS-No.: 84455-29-8 EC-No.: 282-892-3	≥ 5 – < 10	Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Chronic 2, H411
Pine oil	CAS-No.: 8002-09-3 EC-No.: 692-006-0	≥ 3 – < 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
turpentine, oil	CAS-No.: 8006-64-2 EC-No.: 232-350-7 EC Index-No.: 650-002-00-6	≥ 3 – < 5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302 Asp. Tox. 1, H304 Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411
toluene	CAS-No.: 108-88-3 EC-No.: 203-625-9 EC Index-No.: 601-021-00-3	≥ 3 – < 5	Flam. Liq. 2, H225 Repr. 2, H361d Asp. Tox. 1, H304 STOT RE 2, H373 Skin Irrit. 2, H315 STOT SE 3, H336
Lavandin Oil	CAS-No.: 8022-15-9 EC-No.: 617-009-6	≥ 3 – < 5	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412
1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one	CAS-No.: 76-22-2 EC-No.: 200-945-0	≥ 1 – < 3	Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Oral), H302 Flam. Sol. 2, H228 STOT SE 2, H371
Abietic acid	CAS-No.: 514-10-3 EC-No.: 208-178-3	≥ 1 – < 3	Not classified
rosin; colophony	CAS-No.: 8050-09-7 EC-No.: 232-475-7 EC Index-No.: 650-015-00-7	≥ 1 – < 3	Skin Sens. 1, H317
Eucalyptus oil	CAS-No.: 8000-48-4 EC-No.: 296-357-7	≥ 1 – < 3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Lemon oil	CAS-No.: 8008-56-8 EC-No.: 616-925-3	≥ 1 – < 3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Bismuth tris(2-ethylhexanoate)	CAS-No.: 67874-71-9 EC-No.: 267-499-7	≥ 1 – < 3	Skin Irrit. 2, H315 Eye Dam. 1, H318 Repr. 2, H361d

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Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
sulfur	CAS-No.: 7704-34-9 EC-No.: 231-722-6 EC Index-No.: 016-094-00-1	≥ 0.1 – < 1	Skin Irrit. 2, H315
Naphthenic acid	CAS-No.: 1338-24-5 EC-No.: 215-662-8	≥ 0.1 – < 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Chromium tris((2-ethylhexanoate)	CAS-No.: 3444-17-5 EC-No.: 222-357-3	≥ 0.1 – < 1	Aquatic Chronic 3, H412

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately. Never give anything by mouth to an unconscious person. People with over sensibility problems are not allowed to work or be exposed to the product. In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Risk of lung oedema.

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	: Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂).
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable liquid and vapour. Keep away from ignition sources (including static discharges). Contact with combustible material may cause fire.
Explosion hazard	: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
Reactivity in case of fire	: At high temperature may liberate dangerous gases.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire	: Approach from upwind. Use water spray or fog for cooling exposed containers. Keep away from combustible materials.
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Firefighting instructions	: Use water spray or fog for cooling exposed containers. Cool adjacent tanks / containers / drums with water jet. Do not allow water to enter the vessels, a violent reaction may occur. Do not enter fire area without proper protective equipment, including respiratory protection. Exercise caution when fighting any chemical fire. Keep upwind. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: High temperature decomposition products are harmful by inhalation. Inhalation of vapour can cause breathing difficulties.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not touch or walk on the spilled product. Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Only qualified personnel equipped with suitable protective equipment may intervene.
Emergency procedures	: Avoid contact with skin and eyes. Do not touch spilled material. Evacuate unnecessary personnel. Keep public away from danger area. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage. Comply with the safety instructions.
Methods for cleaning up	: Notify authorities if product enters sewers or public waters. Clean up any spills as soon as possible, using an absorbent material to collect it. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Sweep or shovel spills into appropriate container for disposal. Minimise generation of dust.
Other information	: Dispose of materials or solid residues at an authorized site. Dispose of contaminated materials in accordance with current regulations.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Use adequate ventilation to keep vapour concentrations below applicable standard. Take all necessary technical measures to avoid or minimize the release of the product on the workplace.
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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. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid dust formation. Avoid prolonged and repeated contact with skin. Contaminated work clothing should not be allowed out of the workplace. Do not spray on an open flame or other ignition source.
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. Ensure adequate ventilation, especially in confined areas. Comply with applicable regulations.
Storage conditions	: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Incompatible products	: Strong acids. Strong bases. Strong oxidizing agents. Peroxides.
Incompatible materials	: Extremely high or low temperatures.
Heat and ignition sources	: Do not smoke. KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.
Information on mixed storage	: Keep away from food, drink and animal feeding stuffs.
Storage area	: Avoid: Extremely high or low temperatures. Heat and ignition sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

toluene (108-88-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Toluene
IOEL TWA	192 mg/m ³
IOEL TWA [ppm]	50 ppm
IOEL STEL	384 mg/m ³
IOEL STEL [ppm]	100 ppm
Notes	skin
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
France - Occupational Exposure Limits	
Local name	Toluène
VME (OEL TWA)	76.8 mg/m ³
VME (OEL TWA) [ppm]	20 ppm
VLE (OEL C/STEL)	384 mg/m ³
VLE (OEL C/STEL) [ppm]	100 ppm
Note (FR)	Valeurs réglementaires contraignantes; substance classée toxique pour la reproduction de catégorie 2; risque de pénétration percutanée
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 984, 2016; Décret n° 2019-1487)

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toluene (108-88-3)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Toluol
AGW (OEL TWA) [1]	190 mg/m ³
AGW (OEL TWA) [2]	50 ppm
Peak exposure limitation factor	4(II)
Remark	DFG,EU,H,Y
Regulatory reference	TRGS900
Germany - Biological limit values (TRGS 903)	
Local name	Toluol
BLV	600 µg/l Parameter: Toluol - Untersuchungsmaterial: B = Vollblut - Probenahmezeitpunkt: g) unmittelbar nach Exposition - Festlegung/Begründung: 11/2017 DFG 75 µg/l Parameter: Toluol - Untersuchungsmaterial: U = Urin - Probenahmezeitpunkt: b) Expositionsende, bzw. Schichtende - Festlegung/Begründung: 11/2018 DFG 1.5 mg/l Parameter: o-Kresol (nach Hydrolyse) - Untersuchungsmaterial: U = Urin - Probenahmezeitpunkt: b) Expositionsende, bzw. Schichtende, c) bei Langzeitexposition: am Schichtende nach mehreren vorangegangenen Schichten - Festlegung/Begründung: 11/2018 DFG
Regulatory reference	TRGS 903
Italy - Occupational Exposure Limits	
Local name	Toluene
OEL TWA	192 mg/m ³
OEL TWA [ppm]	50 ppm
Notes	pelle
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Spain - Occupational Exposure Limits	
Local name	Tolueno
VLA-ED (OEL TWA) [1]	192 mg/m ³
VLA-ED (OEL TWA) [2]	50 ppm
VLA-EC (OEL STEL)	384 mg/m ³
VLA-EC (OEL STEL) [ppm]	100 ppm

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toluene (108-88-3)	
Notes	Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 de este documento), VLB® (Agente químico que tiene Valor Límite Biológico específico en este documento), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país), r (Esta sustancia tiene establecidas restricciones a la fabricación, la comercialización o el uso en los términos especificados en el "Reglamento (CE) n° 1907/2006 sobre Registro, Evaluación, Autorización y Restricción de sustancias y preparados químicos" (REACH) de 18 de diciembre de 2006 (DOUE L 369 de 30 de diciembre de 2006). Las restricciones de una sustancia pueden aplicarse a todos los usos o sólo a usos concretos. El anexo XVII del Reglamento REACH contiene la lista de todas las sustancias restringidas y especifica los usos que se han restringido).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2019. INSHT
Spain - Biological limit values	
Local name	Tolueno
BLV	0.6 mg/l Parámetro: o-Cresol - Medio: Orina - Momento de muestreo: Final de la jornada laboral - Notas: F (Fondo. El indicador está generalmente presente en cantidades detectables en personas no expuestas laboralmente. Estos niveles de fondo están considerados en el valor VLB) 0.05 mg/l Parámetro: Tolueno - Medio: Sangre - Momento de muestreo: Principio de la última jornada de la semana laboral 0.08 mg/l Parámetro: Tolueno - Medio: orina - Momento de muestreo: Final de la jornada laboral
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2019. INSHT
1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one (76-22-2)	
France - Occupational Exposure Limits	
Local name	Camphre
VME (OEL TWA)	12 mg/m ³
VME (OEL TWA) [ppm]	2 ppm
Note (FR)	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Spain - Occupational Exposure Limits	
Local name	Alcanfor sintético
VLA-ED (OEL TWA) [1]	13 mg/m ³
VLA-ED (OEL TWA) [2]	2 ppm
VLA-EC (OEL STEL)	19 mg/m ³
VLA-EC (OEL STEL) [ppm]	3 ppm
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2019. INSHT
turpentine, oil (8006-64-2)	
France - Occupational Exposure Limits	
Local name	Térébenthine

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turpentine, oil (8006-64-2)	
VME (OEL TWA)	560 mg/m ³
VME (OEL TWA) [ppm]	100 ppm
Note (FR)	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Spain - Occupational Exposure Limits	
Local name	Aguarrás, incluyendo los monoterpenos
VLA-ED (OEL TWA) [1]	113 mg/m ³
VLA-ED (OEL TWA) [2]	20 ppm
Notes	Sen (Sensibilizante).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2019. INSHT
rosin; colophony (8050-09-7)	
Spain - Occupational Exposure Limits	
Local name	Resina núcleo de soldadura (Colofonia)
Notes	m (Los productos de descomposición térmica en el ambiente de la resina núcleo de soldadura, colo-fonia, tienen un marcado carácter sensibilizante, lo que aconseja reducir la exposición laboral a los mismos lo máximo posible), Sen (Sensibilizante).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2019. INSHT
8.1.2. Recommended monitoring procedures	
No additional information available	
8.1.3. Air contaminants formed	
No additional information available	
8.1.4. DNEL and PNEC	
Naphthenic acid (1338-24-5)	
DNEL/DMEL (Workers)	
Acute - local effects, dermal	1.81 mg/cm ²
Long-term - systemic effects, dermal	3.33 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	7.76 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, dermal	0.9 mg/cm ²
Long-term - systemic effects, oral	0.167 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.91 mg/m ³
Long-term - systemic effects, dermal	1.67 mg/kg bodyweight/day
PNEC (STP)	
PNEC sewage treatment plant	0.13 mg/l
toluene (108-88-3)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	384 mg/m ³
Acute - local effects, inhalation	384 mg/m ³
Long-term - systemic effects, dermal	384 mg/kg bodyweight/day

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toluene (108-88-3)	
Long-term - systemic effects, inhalation	192 mg/m ³
Long-term - local effects, inhalation	192 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	226 mg/m ³
Acute - local effects, inhalation	226 mg/m ³
Long-term - systemic effects, oral	8.13 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	56.5 mg/m ³
Long-term - systemic effects, dermal	226 mg/kg bodyweight/day
Long-term - local effects, inhalation	56.5 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.68 mg/l
PNEC aqua (marine water)	0.68 mg/l
PNEC aqua (intermittent, freshwater)	0.68 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	16.39 mg/kg dwt
PNEC sediment (marine water)	16.39 mg/kg dwt
PNEC (Soil)	
PNEC soil	2.89 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	13.61 mg/l
1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one (76-22-2)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	10 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	17.6316 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	4.3478 mg/m ³
Long-term - systemic effects, dermal	5 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	9.303 µg/l
PNEC aqua (marine water)	0.9303 µg/l
PNEC aqua (intermittent, freshwater)	93.03 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.139 mg/kg dwt
PNEC sediment (marine water)	0.0139 mg/kg dwt
PNEC (Soil)	
PNEC soil	2.17 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	5.56 mg/kg food

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1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one (76-22-2)	
PNEC (STP)	
PNEC sewage treatment plant	1 mg/l
Lavandin Oil (8022-15-9)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0.249 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.877 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.0889 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.132 mg/m ³
Long-term - systemic effects, dermal	0.0889 mg/kg bodyweight/day
turpentine, oil (8006-64-2)	
DNEL/DMEL (Workers)	
Acute - local effects, dermal	161 µg/cm ²
Long-term - systemic effects, inhalation	5.98 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, dermal	81 µg/cm ²
Long-term - systemic effects, oral	0.31 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.06 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	8.8 µg/l
PNEC aqua (marine water)	0.88 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	2.27 mg/kg dwt
PNEC sediment (marine water)	0.227 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.45 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	1.35 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	6.6 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Avoid contact with skin, eyes and clothing.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Safety glasses. Protective clothing. Gas mask.

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Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses. EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves. EN 374. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Consumer exposure controls:

Do not eat, drink or smoke during use. Always wash hands after handling the product. Avoid contact with skin and eyes. Avoid contact during pregnancy/while nursing.

Other information:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: brown.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: > 35 °C (1.013 hPa)
Flash point	: 33 °C (1.013 hPa)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Vapour pressure at 50 °C	: ≤ 1100 hPa
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: practically insoluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 1 mm ² /s (40 °C)
Viscosity, dynamic	: 60 mPa·s (23 °C)
Explosive properties	: No data available

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Oxidising properties : No data available
Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Peroxides. Explosives.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Terpineol (8000-41-7)	
LD50 oral	4300 mg/kg bodyweight
toluene (108-88-3)	
LD50 oral rat	5580 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: EU Method B.1 (Acute Toxicity (Oral)), 95% CL: 5300 - 5910
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Animal sex: male, 95% CL: 9,63 - 20,77
Lemon oil (8008-56-8)	
LD50 oral rat	2840 mg/kg
1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one (76-22-2)	
LD50 oral	1500 mg/kg bodyweight
turpentine, oil (8006-64-2)	
LC50 Inhalation - Rat	13.7 mg/l air Animal: rat, Animal sex: male, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), 95% CL: 11,1 - 14,8
Fennel oil, sweet (84455-29-8)	
LD50 oral	3004 mg/kg bodyweight

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Eucalyptus oil (8000-48-4)	
LD50 oral	2569 mg/kg bodyweight
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: Not classified
toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.
1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one (76-22-2)	
STOT-single exposure	May cause damage to organs.
Rosemary oil (84604-14-8)	
STOT-single exposure	May cause damage to organs.
STOT-repeated exposure	: Not classified
toluene (108-88-3)	
LOAEL (oral, rat, 90 days)	1250 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	625 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, vapour, 90 days)	2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.
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Viscosity, kinematic	1 mm ² /s (40 °C)

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.
Not rapidly degradable	

Naphthenic acid (1338-24-5)	
LC50 - Fish [1]	≈ 5.62 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	≈ 20 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	≈ 29.6 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	≈ 17.7 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	≈ 29.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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Naphthenic acid (1338-24-5)	
EC50 96h - Algae [2]	≈ 18.1 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
toluene (108-88-3)	
LC50 - Fish [1]	5.5 mg/l Test organisms (species): Oncorhynchus kisutch
LOEC (chronic)	2.76 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC (chronic)	0.74 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC chronic fish	1.39 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d'

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Completely empty the packaging prior to decontamination. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation. Comply with applicable regulations for solid waste disposal.
Additional information	: Flammable vapours may accumulate in the container. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.
Ecology - waste materials	: Avoid release to the environment. Do not allow into drains or water courses.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 1263	UN 1263	UN 1263	UN 1263	UN 1263
14.2. UN proper shipping name				
PAINT / PAINT RELATED MATERIAL	PAINT	Paint	PAINT	PAINT

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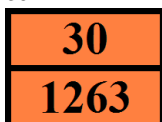
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

ADR	IMDG	IATA	ADN	RID
Transport document description				
UN 1263 PAINT / PAINT RELATED MATERIAL, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT, 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1263 Paint, 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT, 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT, 3, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
3	3	3	3	3
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 163, 367, 650
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T2
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	:



Tunnel restriction code (ADR) : D/E

Transport by sea

Special provisions (IMDG)	: 163, 223, 367, 955
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-E

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EmS-No. (Spillage) : S-E
Stowage category (IMDG) : A
Properties and observations (IMDG) : Miscibility with water depends upon the composition.

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y344
PCA limited quantity max net quantity (IATA) : 10L
PCA packing instructions (IATA) : 355
PCA max net quantity (IATA) : 60L
CAO packing instructions (IATA) : 366
CAO max net quantity (IATA) : 220L
Special provisions (IATA) : A3, A72, A192
ERG code (IATA) : 3L

Inland waterway transport

Classification code (ADN) : F1
Special provisions (ADN) : 163, 367, 650
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : F1
Special provisions (RID) : 163, 367, 650
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Special packing provisions (RID) : PP1
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T2
Portable tank and bulk container special provisions (RID) : TP1, TP29
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Colis express (express parcels) (RID) : CE4
Hazard identification number (RID) : 30

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

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

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

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15.1.2. National regulations

France	
Occupational diseases	
Code	Description
RG 4 BIS	Gastrointestinal disorders caused by benzene, toluene, xylenes and all products containing them
RG 65	Eczematiform lesions of allergic mechanism
RG 66	Occupational rhinitis and asthma
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Employment restrictions

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

Water hazard class (WGK)

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

Hazardous Incident Ordinance (12. BImSchV)

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

Storage class (LGK, TRGS 510)

: LGK 3 - Flammable liquids

Joint storage table

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

Joint storage not permitted for

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

Joint storage with restrictions permitted for

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

Joint storage permitted for

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

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms	
COD	Chemical oxygen demand (COD)
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)
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level

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Abbreviations and acronyms	
EC50	Median effective concentration
EC-No.	European Community number
CAS-No.	Chemical Abstract Service number
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
N.O.S.	Not Otherwise Specified
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
Pow (log)	n-octanol/water partition coefficient
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
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
TRGS	Technical Rules for Hazardous Substances
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Data sources : Classification according to Regulation (EC) No. 1272/2008 [CLP], ECHA (European Chemicals Agency). Supplier's safety documents.

Full text of H- and EUH-statements	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
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

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Full text of H- and EUH-statements	
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
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 2	Flammable solids, Category 2
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 2	Specific target organ toxicity — Single exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
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.

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Full text of H- and EUH-statements

H412	Harmful to aquatic life with long lasting effects.
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