

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 : SGP 21/204/209 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
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335
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. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Warning

Contains :

cyclohexanol; Pine oil; 1,2,4-trimethylbenzene; Hydrocarbons, terpene processing by-products

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Hazard statements (CLP)	: H226 - Flammable liquid and vapour. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. 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, mist, gas. P264 - Wash hands, forearms and face thoroughly after handling. P273 - Avoid release to the environment. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 - Call a POISON CENTRE or doctor if you feel unwell. 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]
cyclohexanol	CAS-No.: 108-93-0 EC-No.: 203-630-6 EC Index-No.: 603-009-00-3	10 – 20	Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Oral), H302 STOT SE 3, H335 Skin Irrit. 2, H315
Solvent naphtha (petroleum), heavy arom.; Kerosine— unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).]	CAS-No.: 64742-94-5 EC-No.: 265-198-5 EC Index-No.: 649-424-00-3	5 – 10	Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Pine oil	CAS-No.: 8002-09-3 EC-No.: 692-006-0	5 – 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Tin Dioxide	CAS-No.: 18282-10-5 EC-No.: 242-159-0	5 – 10	Not classified

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Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,2,4-trimethylbenzene	CAS-No.: 95-63-6 EC-No.: 202-436-9 EC Index-No.: 601-043-00-3	2.5 – 5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Aquatic Chronic 2, H411
Hydrocarbons, terpene processing by-products	CAS-No.: 68956-56-9 EC-No.: 273-309-3	2.5 – 5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

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 poison center or a doctor if you feel unwell. 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. Call a poison center or a doctor if you feel unwell.
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	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: 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	: 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.

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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.
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 breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. 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	: 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. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. 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

cyclohexanol (108-93-0)	
France - Occupational Exposure Limits	
Local name	Cyclohexanol
VME (OEL TWA)	200 mg/m ³
VME (OEL TWA) [ppm]	50 ppm
VLE (OEL C/STEL)	300 mg/m ³
VLE (OEL C/STEL) [ppm]	75 ppm
Note (FR)	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Spain - Occupational Exposure Limits	
Local name	Ciclohexanol
VLA-ED (OEL TWA) [1]	208 mg/m ³
VLA-ED (OEL TWA) [2]	50 ppm
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).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2019. INSHT

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1,2,4-trimethylbenzene (95-63-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	1,2,4-Trimethylbenzene
IOEL TWA	100 mg/m ³
IOEL TWA [ppm]	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
France - Occupational Exposure Limits	
Local name	1,2,4-Triméthylbenzène
VME (OEL TWA)	100 mg/m ³
VME (OEL TWA) [ppm]	20 ppm
VLE (OEL C/STEL)	250 mg/m ³
VLE (OEL C/STEL) [ppm]	50 ppm
Note (FR)	Valeurs réglementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 984, 2016; Décret n° 2019-1487)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	1,2,4-Trimethylbenzol
AGW (OEL TWA) [1]	100 mg/m ³
AGW (OEL TWA) [2]	20 ppm
Peak exposure limitation factor	2(II)
Remark	DFG;EU;Y
Regulatory reference	TRGS900
Germany - Biological limit values (TRGS 903)	
Local name	Trimethylbenzol (alle Isomeren): 1,2,4-Trimethylbenzol
BLV	400 mg/g creatinine Parameter: Dimethylbenzoesäuren (Summe aller Isomeren nach Hydrolyse) - Untersuchungsmaterial: U = Urin - Probenahmezeitpunkt: c) bei Langzeitexposition: am Schichtende nach mehreren vorangegangenen Schichten, b) Expositionsende, bzw. Schichtende - Festlegung/Begründung: 11/2012 DFG
Remark	Alle Isomeren: 1,2,3-Trimethylbenzol, 1,2,4-Trimethylbenzol, Mesitylen (1,3,5-Trimethylbenzol)
Regulatory reference	TRGS 903
Italy - Occupational Exposure Limits	
Local name	1,2,4-Trimetilbenzene
OEL TWA	100 mg/m ³
OEL TWA [ppm]	20 ppm
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Spain - Occupational Exposure Limits	
Local name	1,2,4-Trimetilbenceno
VLA-ED (OEL TWA) [1]	100 mg/m ³
VLA-ED (OEL TWA) [2]	20 ppm
Notes	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2019. INSHT

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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

cyclohexanol (108-93-0)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	3.58 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	130 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	1.79 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	32.5 mg/m ³
Long-term - systemic effects, dermal	1.79 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.017 mg/l
PNEC aqua (marine water)	0.0017 mg/l
PNEC aqua (intermittent, freshwater)	0.17 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.042 mg/kg dwt
PNEC sediment (marine water)	0.0042 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.005 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	199.5 mg/l
Solvent naphtha (petroleum), heavy arom.; Kerosine— unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	23.4 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	3.25 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	2.1 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	10.2 mg/m ³
Long-term - systemic effects, dermal	42.4 mg/kg bodyweight/day
1,2,4-trimethylbenzene (95-63-6)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	100 mg/m ³
Acute - local effects, inhalation	100 mg/m ³
Long-term - systemic effects, dermal	16171 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	100 mg/m ³

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1,2,4-trimethylbenzene (95-63-6)	
Long-term - local effects, inhalation	100 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	29.4 mg/m ³
Acute - local effects, inhalation	29.4 mg/m ³
Long-term - systemic effects, oral	15 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	29.4 mg/m ³
Long-term - systemic effects, dermal	9512 mg/kg bodyweight/day
Long-term - local effects, inhalation	29.4 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.12 mg/l
PNEC aqua (marine water)	0.12 mg/l
PNEC aqua (intermittent, freshwater)	0.12 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	13.56 mg/kg dwt
PNEC sediment (marine water)	13.56 mg/kg dwt
PNEC (Soil)	
PNEC soil	2.34 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	2.41 mg/l
Hydrocarbons, terpene processing by-products (68956-56-9)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0.8 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2.9 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.7 mg/m ³
Long-term - systemic effects, dermal	0.3 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	2.1 µg/l
PNEC aqua (marine water)	0.21 µg/l
PNEC aqua (intermittent, freshwater)	21 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.542 mg/kg dwt
PNEC sediment (marine water)	54.2 µg/kg dw
PNEC (Soil)	
PNEC soil	110 µg/kg dw
PNEC (Oral)	
PNEC oral (secondary poisoning)	13.1 mg/kg food

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Hydrocarbons, terpene processing by-products (68956-56-9)	
PNEC (STP)	
PNEC sewage treatment plant	6.4 mg/l
Tin Dioxide (18282-10-5)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	5.7 mg/kg bodyweight/day
Acute - systemic effects, inhalation	2 mg/m ³
Long-term - systemic effects, dermal	5.7 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	2 mg/kg bodyweight/day
Acute - systemic effects, inhalation	6 mg/m ³
Acute - systemic effects, oral	2 mg/kg bodyweight/day
Long-term - systemic effects, oral	2 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	6 mg/m ³
Long-term - systemic effects, dermal	2 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.1 mg/l
PNEC aqua (marine water)	0.01 mg/l
PNEC aqua (intermittent, freshwater)	1 mg/l
PNEC (STP)	
PNEC sewage treatment plant	100 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.

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

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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 insufficient ventilation, wear suitable respiratory equipment

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	: Viscous liquid.
Colour	: According to product specification.
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	: 57 °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	: No data available
Viscosity, dynamic	: 2000 mPa·s
Explosive properties	: No data available
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.

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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

cyclohexanol (108-93-0)

LD50 oral rat	1400 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1260 - 1550
LD50 oral	1400 mg/kg bodyweight
LC50 Inhalation - Rat	> 3.6 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
LC50 Inhalation - Rat (Vapours)	11 mg/l/4h

Solvent naphtha (petroleum), heavy arom.; Kerosine— unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: other:EPA Fed Reg Vol 50, No. 188 1985 and as amended in Fed Reg Vol 52, No. 97, 1987
LD50 dermal rabbit	> 2000 mg/kg
LD50 dermal	3160 mg/kg
LC50 Inhalation - Rat	> 4688 mg/m ³

1,2,4-trimethylbenzene (95-63-6)

LD50 oral rat	6000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: EU Method B.1 (Acute Toxicity (Oral)), 95% CL: 4920 - 7320
LC50 Inhalation - Rat	10.2 mg/l air Animal: rat

Hydrocarbons, terpene processing by-products (68956-56-9)

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

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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	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

Solvent naphtha (petroleum), heavy arom.; Kerosine— unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)

NOAEL (animal/male, F0/P)	35 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:OPPTS 870.3650 Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test
NOAEL (animal/female, F0/P)	125 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:OPPTS 870.3650 Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test

STOT-single exposure : May cause respiratory irritation.

cyclohexanol (108-93-0)

STOT-single exposure : May cause respiratory irritation.

Solvent naphtha (petroleum), heavy arom.; Kerosine— unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)

STOT-single exposure : May cause drowsiness or dizziness.

1,2,4-trimethylbenzene (95-63-6)

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

cyclohexanol (108-93-0)

NOAEL (oral, rat, 90 days) : 143 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Solvent naphtha (petroleum), heavy arom.; Kerosine— unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)

LOAEC (inhalation, rat, vapour, 90 days) : 4.71 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)

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)

1,2,4-trimethylbenzene (95-63-6)

NOAEL (oral, rat, 90 days) : 600 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

NOAEC (inhalation, rat, vapour, 90 days) : 1.8 mg/l air Animal: rat, Guideline: OECD Guideline 452 (Chronic Toxicity Studies)

Hydrocarbons, terpene processing by-products (68956-56-9)

NOAEL (oral, rat, 90 days) : 435.8 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

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Tin Dioxide (18282-10-5)

NOAEL (oral, rat, 90 days) ≥ 10000 mg/kg bodyweight Animal: rat

Aspiration hazard : Not classified

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

cyclohexanol (108-93-0)

LC50 - Fish [1] 704 mg/l Test organisms (species): Pimephales promelas

EC50 - Crustacea [1] 17 mg/l Test organisms (species): Daphnia magna

EC50 72h - Algae [1] > 500 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

Solvent naphtha (petroleum), heavy arom.; Kerosine— unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)

LC50 - Fish [1] 2 – 5 mg/l (96h oncorhynchus mykiss)

LC50 - Fish [2] 0.58 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

EC50 - Crustacea [1] 3 – 10 mg/l

EC50 - Crustacea [2] 0.76 mg/l Test organisms (species): Daphnia magna

ErC50 algae 11 mg/l (72h pseudokirchneriella subcapitata)

1,2,4-trimethylbenzene (95-63-6)

LC50 - Fish [1] 7.72 mg/l Test organisms (species): Pimephales promelas

EC50 96h - Algae [1] 2.356 mg/l Test organisms (species): other:Green algae

Hydrocarbons, terpene processing by-products (68956-56-9)

LC50 - Fish [1] 5.07 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)

EC50 - Crustacea [1] 2.1 mg/l Test organisms (species): Daphnia magna

Tin Dioxide (18282-10-5)

LC50 - Fish [1] > 100 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

EC50 - Crustacea [1] > 0.1 g/l Test organisms (species): Daphnia magna

EC50 72h - Algae [1] > 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

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12.2. Persistence and degradability

Solvent naphtha (petroleum), heavy arom.; Kerosine— unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 165 °C to 290 °C (330 °F to 554 °F).] (64742-94-5)

Persistence and degradability	Readily biodegradable.
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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 (1,2,4-trimethylbenzene)	PAINT (1,2,4-trimethylbenzene)	Paint (1,2,4-trimethylbenzene)	PAINT (1,2,4-trimethylbenzene)	PAINT (1,2,4-trimethylbenzene)
Transport document description				
UN 1263 PAINT / PAINT RELATED MATERIAL (1,2,4-trimethylbenzene), 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT (1,2,4-trimethylbenzene), 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1263 Paint (1,2,4-trimethylbenzene), 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT (1,2,4-trimethylbenzene), 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT (1,2,4-trimethylbenzene), 3, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
3	3	3	3	3

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ADR	IMDG	IATA	ADN	RID
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
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

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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

15.1.2. National regulations

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

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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
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

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Abbreviations and acronyms	
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 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, 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
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

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Full text of H- and EUH-statements	
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Safety Data Sheet (SDS), EU

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