Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

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

1.1. **product identifiers**

Article No. (manufacturer/supplier)	89
Trade name/designation	BRICACRYL Acryl-Klarlack farblos

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

Relevant identified uses:
Coating material to protecting surfaces

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

supplier (manufacturer/importer/downstream user/distributor)

Knuchel Farben AG
Farben + Lacke
Steinackerweg 11
CH-4537 Wiedlisbach

Telephone: +41 (0) 32 636 50 40
Telefax: +41 (0) 32 636 50 45

Department responsible for information:
laboratory Manager

E-mail (competent person) info@knuchel.ch

1.4. **Emergency telephone number**

Emergency telephone number 145 (+41 (0)44 251 51 51)

SECTION 2: Hazards identification

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

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
STOT SE 3 / H335	STOT-single exposure	May cause respiratory irritation.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.
STOT RE 2 / H373	STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.

2.2. **Label elements**

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

Hazard pictograms

Danger

Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe vapour.

P261	Avoid breathing vapours.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye/face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
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 CENTER or doctor/physician if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use extinguishing powder or sand to extinguish.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Keep locked up.
P501	Dispose of contents/container to industrial incineration plant.

Hazard components for labelling

Xylene
Hydrocarbons, C9, aromatics

Supplemental hazard information

not applicable

2.3. **Other hazards**

No information available.

SECTION 3: Composition/information on ingredients

3.2. **Mixtures**

Description solvent-based acrylic resin, containing the following hazardous substances:

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

EC No. CAS No. Index No.	REACH No. Designation classification // Remark	weight-%
215-535-7 1330-20-7 601-022-00-9	01-2119488216-32 Xylene Acute Tox. 4 H312 / Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / STOT SE 3 H335 / STOT RE 2 H373 / Asp. Tox. 1 H304 / Flam. Liq. 3 H226	15 - 25
265-199-0 64742-95-6 649-356-00-4	01-2119455851-35 Hydrocarbons, C9, aromatics Flam. Liq. 3 H226 / Asp. Tox. 1 H304 / STOT SE 3 H335 / STOT SE 3 H336 / Aquatic Chronic 2 H411	15 - 25
918-668-5	01-2119455851-35 Hydrocarbons, C9, aromatics, <0.1% benzene STOT SE 3 H336 / Asp. Tox. 1 H304 / Aquatic Chronic 2 H411	10 - 15
204-658-1 123-86-4 607-025-00-1	01-2119485493-29 n-butyl acetate Flam. Liq. 3 H226 / STOT SE 3 H336 / EUH066	5 - 10
202-849-4 100-41-4 601-023-00-4	01-2119489370-35 ethylbenzene Flam. Liq. 2 H225 / Acute Tox. 4 H332 / STOT RE 2 H373 / Asp. Tox. 1 H304	1 - 5
203-631-1 108-94-1 606-010-00-7	01-2119453616-35 Cyclohexanone Acute Tox. 4 H332 / Flam. Liq. 3 H226 Acute toxicity estimate (ATE), ATE (inhalation, vapour): 11.00 mg/L	1 - 5

203-620-1		
108-83-8	2,6-dimethylheptan-4-one	1 - 5
606-005-00-X	Flam. Liq. 3 H226 / STOT SE 3 H335	
	Specific concentration limit (SCL): STOT SE 3 H335 >= 10	

Additional information
Full text of classification: see section 16

SECTION 4: First aid measures

4.1. **Description of first aid measures**

General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation
Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact
Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

After eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion
If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

4.2. **Most important symptoms and effects, both acute and delayed**
In all cases of doubt, or when symptoms persist, seek medical advice.

4.3. **Indication of any immediate medical attention and special treatment needed**
First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. **Extinguishing media**

Suitable extinguishing media
alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Unsuitable extinguishing media
strong water jet

5.2. **Special hazards arising from the substance or mixture**
Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3. **Advice for firefighters**
Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. **Personal precautions, protective equipment and emergency procedures**
Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2. **Environmental precautions**
Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3. **Methods and material for containment and cleaning up**
Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

6.4. **Reference to other sections**
Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

7.1. **Precautions for safe handling**

Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Further information

Vapours are heavier than air. Vapours form explosive mixtures with air.

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

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

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

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. **Control parameters**

Occupational exposure limit values:

Xylene
Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

WEL, TWA: 220 mg/m3; 50 ppm
WEL, STEL: 441 mg/m3; 100 ppm
Remark: (may be absorbed through the skin)

BMGV, TWA: 650 mmol/mol creatinine
Remark: methyl hippuric acid; urine; end of exposure or end of shift

Hydrocarbons, C9, aromatics
Index No. 649-356-00-4 / EC No. 265-199-0 / CAS No. 64742-95-6

WEL, TWA: 500 mg/m3
Remark: (Aromatics)

ethylbenzene
Index No. 601-023-00-4 / EC No. 202-849-4 / CAS No. 100-41-4

WEL, TWA: 441 mg/m3; 100 ppm
WEL, STEL: 552 mg/m3; 125 ppm
Remark: (may be absorbed through the skin)

Cyclohexanone
Index No. 606-010-00-7 / EC No. 203-631-1 / CAS No. 108-94-1

WEL, TWA: 41 mg/m3; 10 ppm
WEL, STEL: 82 mg/m3; 20 ppm
Remark: (may be absorbed through the skin)

BMGV, TWA: 2 mmol/mol creatinine
Remark: cyclohexanol; urine; end of exposure or end of shift

2,6-dimethylheptan-4-one

Index No. 606-005-00-X / EC No. 203-620-1 / CAS No. 108-83-8

WEL, TWA: 148 mg/m3; 25 ppm

Additional information

TWA : Long-term occupational exposure limit value
STEL : short-term occupational exposure limit value
Ceiling : peak limitation

DNEL:

Xylene
Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7
DNEL long-term dermal (systemic), Workers: 212 mg/kg bw/day
DNEL acute inhalative (local), Workers: 442 mg/m³
DNEL acute inhalative (systemic), Workers: 442 mg/m³
DNEL long-term inhalative (local), Workers:
DNEL long-term inhalative (systemic), Workers: 221 mg/m³
DNEL long-term oral (repeated), Consumer: 12,5 mg/kg bw/day
DNEL long-term dermal (systemic), Consumer: 125 mg/kg bw/day
DNEL acute inhalative (local), Consumer: 260 mg/m³
DNEL acute inhalative (systemic), Consumer: 260 mg/m³
DNEL long-term inhalative (local), Consumer: 65,3 mg/m³
DNEL long-term inhalative (systemic), Consumer: 65,3 mg/m³

ethylbenzene
Index No. 601-023-00-4 / EC No. 202-849-4 / CAS No. 100-41-4
DNEL long-term dermal (systemic), Workers: 180 mg/kg bw/day
DNEL long-term inhalative (systemic), Workers: 77 mg/m³
DNEL long-term oral (repeated), Consumer: 1,6 mg/kg bw/day
DNEL long-term inhalative (systemic), Consumer: 15 mg/m³

2,6-dimethylheptan-4-one
Index No. 606-005-00-X / EC No. 203-620-1 / CAS No. 108-83-8
DNEL long-term oral (repeated), Workers:
DNEL long-term dermal (systemic), Workers: 80 mg/kg
DNEL acute inhalative (local), Workers: 290 mg/m³
DNEL acute inhalative (systemic), Workers: 290 mg/m³
DNEL long-term inhalative (local), Workers: 290 mg/m³
DNEL long-term inhalative (systemic), Workers: 479 mg/m³
DNEL long-term oral (repeated), Consumer: 7,14 mg/kg bw/day
DNEL long-term dermal (systemic), Consumer: 28,5 mg/kg
DNEL acute inhalative (local), Consumer: 145 mg/m³
DNEL acute inhalative (systemic), Consumer: 145 mg/m³
DNEL long-term inhalative (local), Consumer: 145 mg/m³
DNEL long-term inhalative (systemic), Consumer: 171 mg/m³

Cyclohexanone
Index No. 606-010-00-7 / EC No. 203-631-1 / CAS No. 108-94-1
DNEL acute dermal, short-term (systemic), Workers: 100 mg/kg bw/day
DNEL long-term dermal (systemic), Workers: 10 mg/kg bw/day
DNEL acute inhalative (local), Workers: 100 mg/m³
DNEL acute inhalative (systemic), Workers: 100 mg/m³
DNEL long-term inhalative (local), Workers: 20 mg/m³
DNEL long-term inhalative (systemic), Workers: 20 mg/m³
:
The substance is skin resorptive (can enter the body through the skin).
DNEL long-term oral (repeated), Consumer: 5 mg/kg bw/day
DNEL acute dermal, short-term (systemic), Consumer: 30 mg/kg bw/day
DNEL long-term dermal (systemic), Consumer: 20 mg/kg bw/day
DNEL acute inhalative (local), Consumer: 50 mg/m³
DNEL acute inhalative (systemic), Consumer: 50 mg/m³
DNEL long-term inhalative (local), Consumer: 20 mg/m³
DNEL long-term inhalative (systemic), Consumer: 20 mg/m³
DNEL acute oral (systemic): 10 mg/kg bw/day

n-butyl acetate
Index No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4
DNEL short-term oral (acute), Workers:
DNEL long-term inhalative (systemic), Workers: 480 mg/m³
DNEL long-term inhalative (systemic), Consumer: 102,34 mg/m³

Hydrocarbons, C9, aromatics
Index No. 649-356-00-4 / EC No. 265-199-0 / CAS No. 64742-95-6
DNEL long-term dermal (systemic), Workers: 25 mg/kg bw/day
DNEL long-term inhalative (systemic), Workers: 150 mg/m³
DNEL long-term oral (repeated), Consumer: 11 mg/kg
DNEL long-term dermal (systemic), Consumer: 11 mg/kg bw/day
DNEL long-term inhalative (systemic), Consumer: 32 mg/m³

PNEC:

Xylene
Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7
PNEC aquatic, freshwater: 0,327 mg/L
PNEC aquatic, marine water: 0,327 mg/L
PNEC sediment, freshwater: 12,46 mg/kg
PNEC sediment, marine water: 12,46 mg/kg
PNEC sewage treatment plant (STP): 6,58 mg/L
soil: 2,31 mg/kg

ethylbenzene
Index No. 601-023-00-4 / EC No. 202-849-4 / CAS No. 100-41-4
PNEC aquatic, freshwater: 0,1 mg/L
PNEC aquatic, marine water: 0,01 mg/L
PNEC sediment, freshwater: 13,7 mg/kg
PNEC sediment, marine water: 1,37 mg/kg
PNEC, soil: 2,68 mg/kg
PNEC sewage treatment plant (STP): 9,6 mg/L

2,6-dimethylheptan-4-one
Index No. 606-005-00-X / EC No. 203-620-1 / CAS No. 108-83-8
PNEC sediment, freshwater: 0,46 mg/kg
PNEC sediment, marine water: 0,46 mg/kg
PNEC, soil: 0,0746 mg/kg
PNEC sewage treatment plant (STP): 2,55 mg/L

Cyclohexanone
Index No. 606-010-00-7 / EC No. 203-631-1 / CAS No. 108-94-1
PNEC aquatic, freshwater: 0,0329 mg/L
PNEC aquatic, marine water: 0,0032 mg/L
PNEC aquatic, intermittent release: 0,329 mg/L
PNEC sediment, freshwater: 0,0951 mg/kg Sediment dry weight
PNEC, soil: 0,0143 mg/kg dw
PNEC sewage treatment plant (STP): 10 mg/L

n-butyl acetate
Index No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4
PNEC aquatic, freshwater: 0,18 mg/L
PNEC aquatic, marine water: 0,018 mg/L
PNEC aquatic, intermittent release: 0,36 mg/L
PNEC sediment, freshwater: 0,981 mg/kg Sediment dry weight
PNEC sediment, marine water: 0,0981 mg/kg Sediment dry weight
PNEC, soil: 0,0903 mg/kg Sediment dry weight
PNEC sewage treatment plant (STP): 35,6 mg/L

8.2. **Exposure controls**

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protection equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection

must be used. Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection
For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)
Thickness of the glove material > 0,4 mm ; Breakthrough time: > 480 min.
Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374
Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection
Wear closely fitting protective glasses in case of splashes.

Body protection
Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

Protective measures
After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls
Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. **Information on basic physical and chemical properties**

Physical state:	**Liquid**
Colour:	**refer to label**
Odour:	**characteristic**
Odour threshold:	**not applicable**
Melting point/freezing point:	**not applicable**
Initial boiling point and boiling range:	**126 °C** Source: n-butyl acetate
Flammability:	**Highly flammable liquid and vapour.**
Lower and upper explosion limit:	
Lower explosion limit:	**0.9 Vol-%**
Upper explosion limit:	**9.4 Vol-%** Source: Cyclohexanone
Flash point:	**4 °C** Method: DIN 53213
Auto-ignition temperature:	**345 °C** Source: 2,6-dimethylheptan-4-one
Decomposition temperature:	**not applicable**
pH at 20 °C:	**not applicable**
Cinematic viscosity (40°C):	**< 135 mm²/s**
Viscosity at 20 °C:	**28 - 32 sec DIN 4 mm**
Solubility(ies):	
Water solubility at 20 °C:	**insoluble**
Partition coefficient: n-octanol/water:	**see section 12**
Vapour pressure at 20 °C:	**13 mbar** Source: n-butyl acetate
Density and/or relative density:	
Density at 20 °C:	**0.92 g/cm³**
Relative vapour density:	**not applicable**
particle characteristics:	**not applicable**

9.2. **Other information**

Solid content:	**33 weight-%**
solvent content:	
Organic solvents:	**67 weight-%**

Water: **0 weight-%**

SECTION 10: Stability and reactivity

10.1. **Reactivity**
No information available.

10.2. **Chemical stability**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. **Possibility of hazardous reactions**
Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. **Conditions to avoid**
Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. **Incompatible materials**
not applicable

10.6. **Hazardous decomposition products**
Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

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

Acute toxicity

Xylene
oral, LD50, Rat, male: 5,523 mg/kg
Method: EU Test B.1
inhalative (vapours), LC50, Rat, male: 6700 ppm (4 h)

ethylbenzene
oral, LD50, Rat: 3,5 mg/kg
dermal, LD50, Rabbit: 15,4 mg/kg

2,6-dimethylheptan-4-one
oral, LD50, Rat: 5750 mg/kg
dermal, LD50, Rat: > 2000 mg/kg
Method: OECD 402
dermal, LD50, Rabbit: 16000 mg/kg
inhalative (vapours), LC50, Rat: 14,5 mg/L (4 h)
Method: OECD 403

Cyclohexanone
oral, LD50, Rat: 1535 mg/kg
dermal, LD50, Rabbit: 948 mg/kg
inhalative (vapours), LC50, Rat: 11 mg/L (4 h)

n-butyl acetate
oral, LD50, Rat: 10760 mg/kg
Method: OECD 423
dermal, LD50, Rabbit: 14112 mg/kg
Method: OECD 402
inhalative (dust and mist), LC50, Rat: 23,4 mg/L (4 h)
Method: OECD 403

Hydrocarbons, C9, aromatics
oral, LD50, Rat: 3492 mg/kg
Method: OECD 401
dermal, LD50, Rabbit: > 3160 mg/kg
Method: OECD 402

Hydrocarbons, C9, aromatics, <0.1% benzene
oral, LD50, Rat: 3492 mg/kg
dermal, LD50, Rabbit: > 3160 mg/kg
inhalative (vapours), LC50, Rat: 6 mg/m³ 10 (4 h)

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes skin irritation.

Causes serious eye irritation.

ethylbenzene
Skin, Rabbit (24 h)
Causes mild skin irritation.
eyes, Rabbit
Causes slight eye irritation

2,6-dimethylheptan-4-one
Skin
Slight skin irritation
eyes, Rabbit
Method: OECD 405
No irritant effect; Fumes can irritate the eyes.
Inhalation
Inhalation of fumes or mists may irritate the respiratory tract.

Cyclohexanone
Skin (4 h)
Method: OECD 404
Irritating to skin and mucous membranes.
eyes

n-butyl acetate
Skin, Rabbit (4 h)
Method: OECD 404
No skin irritation
eyes
Method: OECD 405
No eye irritation

Hydrocarbons, C9, aromatics
Skin (4 h)
Method: OECD 404
Not to be classified as skin etching/irritant.
eyes
Method: OECD 405
Not to be classified as severe eye damage or eye irritation.

Hydrocarbons, C9, aromatics, <0.1% benzene
Skin (4 h)
Method: OECD 404
Not to be classified as skin etching/irritant.
eyes
Method: OECD 405
Not to be classified as severe eye damage or eye irritation.

Respiratory or skin sensitisation

2,6-dimethylheptan-4-one
Skin, Maximization test, Guinea pig: ; Evaluation not sensitising.
Method: OECD 406

Cyclohexanone
Skin: ; Evaluation not sensitising.
Respiratory system: ; Evaluation not sensitising.

n-butyl acetate
Skin, Guinea pig: ; Evaluation not sensitising.
Method: OECD 406
Mouse mouse ear swelling test (MEST)

Hydrocarbons, C9, aromatics
Skin:
Method: OECD 406
Not to be classified as skin sensitising.
Respiratory system:

No data available

Hydrocarbons, C9, aromatics, <0.1% benzene
Skin:
Method: OECD 406
Not to be classified as skin sensitising.
Respiratory system:
No data available

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

ethylbenzene
Germ cell mutagenicity; Evaluation negative
Hamster; Mouse; ovaries
Carcinogenicity; Evaluation Carc. Cat. 2
Method: Group II B (IARC): Possible carcinogenic to humans (ethylbenzene)
human

2,6-dimethylheptan-4-one
Germ cell mutagenicity; Evaluation Not known as mutagenic.
Carcinogenicity; Evaluation Based on available data, the classification criteria are not met.
Reproductive toxicity; Evaluation Based on available data, the classification criteria are not met.
Lactation; Evaluation Based on available data, the classification criteria are not met.

Cyclohexanone
Germ cell mutagenicity; Evaluation Based on available data, the classification criteria are not met.
Carcinogenicity; Evaluation Based on available data, the classification criteria are not met.
Reproductive toxicity; Evaluation Based on available data, the classification criteria are not met.
teratogenicity; Evaluation Based on available data, the classification criteria are not met.

n-butyl acetate
Germ cell mutagenicity; Evaluation Ames test negative.

Hydrocarbons, C9, aromatics
Germ cell mutagenicity
Not to be classified as germ cell mutagen (mutagen).
Carcinogenicity
No data available
Reproductive toxicity
No data available

Hydrocarbons, C9, aromatics, <0.1% benzene
Germ cell mutagenicity
Not to be classified as germ cell mutagen (mutagen).
Carcinogenicity
There are in vivo studies that indicate positive results of kidney cancer.
Reproductive toxicity
Does not qualify as a carcinogen.
In vitro mutagenicity; Evaluation positive

STOT-single exposure; STOT-repeated exposure

May cause respiratory irritation.

May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

Xylene
Specific target organ toxicity (repeated exposure)
Liver and kidney damage; central nervous system
Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Liver and kidney damage; central nervous system; hearing organs

ethylbenzene
Repeated dose toxicity, Rat: 75 mg/kg
Method OECD 407
RTECS-no.:; DA0700000
Depression of central nervous system
movement disorders; headache; Vomiting

2,6-dimethylheptan-4-one
Specific target organ toxicity (single exposure) Evaluation Inhalation of high vapour concentrations may cause impairment of the central nervous system.
headache; dizziness; Nausea
Specific target organ toxicity (repeated exposure) Evaluation Repeated exposure may cause skin dryness or cracking.
Specific target organ toxicity (single exposure), Category 1
Causes kidney damage in male rats that is considered irrelevant to humans.

Cyclohexanone
Specific target organ toxicity (single exposure) Evaluation Inhalation of high vapour concentrations can lead to CNS depression and anesthesia.
headache; Unconsciousness
Specific target organ toxicity (repeated exposure)
No data available

n-butyl acetate
Specific target organ toxicity (single exposure)
central nervous system; May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)
human; Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).; Steam in high concentration leads to unconsciousness.

Hydrocarbons, C9, aromatics
Specific target organ toxicity (single exposure)
May cause respiratory irritation.; May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)
No data available

Hydrocarbons, C9, aromatics, <0.1% benzene
Specific target organ toxicity (single exposure)
May cause respiratory irritation and depression of central nervous system with drowsiness, dizziness, weakness, loss of consciousness, nausea and headache.
Specific target organ toxicity (repeated exposure)
No data available

Aspiration hazard

2,6-dimethylheptan-4-one
Aspiration hazard; Evaluation Based on available data, the classification criteria are not met.

Cyclohexanone
Aspiration hazard
No data available

n-butyl acetate
Aspiration hazard; Evaluation No classification for aspiration toxicity

Hydrocarbons, C9, aromatics
Aspiration hazard
May be fatal if swallowed and enters airways.

Hydrocarbons, C9, aromatics, <0.1% benzene
Aspiration hazard
May be fatal if swallowed and enters airways.

Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

Overall assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

11.2. **Information on other hazards**

Endocrine disrupting properties
No information available.

SECTION 12: Ecological information

Classification according to Regulation (EC) No 1272/2008 [CLP]
Do not allow to enter into surface water or drains.

12.1. **Toxicity**

Xylene
Fish toxicity, LC50, fish: 2,6 mg/L (96 h)
Method: OECD 203
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 4,6 mg/L (72 h)
Method: OECD 201
Algae toxicity, EC50, Pseudokirchneriella subcapitata: 4,6 mg/L (72 h)
Method: OECD 201
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout) (96 h)
Method: OECD 203
Daphnia toxicity, IC50, Daphnia magna: 1 mg/L (24 h)
Method: OECD 202
Algae toxicity, EC50, Selenastrum capricornutum: 2,2 mg/L (73 h)
Method: OECD 201
Daphnia toxicity, growth test (Eb-Cx) 10%“ , Daphnia magna: 1,91 mg/L (21 d)
Method: OECD 211
Bacteria toxicity, NOEC, Activated sludge: 16 mg/L (28 t)
Method: OECD 301 F

ethylbenzene
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 4,2 mg/L (96 h)
Daphnia toxicity, EC50, Daphnia magna (Big water flea) 1,8 - 2,4 mg/L (48 h)
Algae toxicity, EC50, Skeletonema costatum: 4,9 mg/L (72 h)
Algae toxicity, EC50, Pseudokirchneriella subcapitata: 7,2 mg/L (48 h)
Shellfish Toxicity, LC50, Mysidopsis bahia: > 5,2 mg/L (48 h)
Toxicity of Microoganisms, EC50, microorganisms: 96 mg/L (24 h)

2,6-dimethylheptan-4-one
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 30 mg/L (96 h)
Method: OECD 203
Daphnia toxicity, EC50: 37,2 mg/L (48 h)
Method: OECD 202
Bacteria toxicity, LC/EC/IC 50: > 100 mg/L ; Evaluation slightly toxic
estimated
Algae toxicity, LC/EC/IC 50 10 - 100 mg/L; Evaluation Harmful
Algae toxicity, EC50, Pseudokirchneriella subcapitata: 37,3 mg/L (72 h)
Method: OECD 201

Cyclohexanone
Fish toxicity, LC50, Pimephales promelas (fathead minnow) 527 - 732 mg/L (96 h)
Daphnia toxicity, EC50: 820 mg/L (48 h)
Fish toxicity, LC50, Leuciscus idus (golden orfe) 536 - 752 (48 h)
Daphnia toxicity, LC50, Daphnia magna (Big water flea): 800 mg/L (24 h)
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 820 (24 h)
Algae toxicity, EC50, Chlamydomonas reinhardii: 32,9 mg/L (72 h)
Algae toxicity, EC10, Chlamydomonas reinhardii: 3,56 mg/L (72 h)

n-butyl acetate
Fish toxicity, LC50, Pimephales promelas (fathead minnow): 18 mg/L (96 h)
Method: OECD 203
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 44 mg/L (48 h)
Algae toxicity, ErC50
Algae toxicity, EC50, Desmodesmus subspicatus: 647,7 mg/L (72 h)
(Growth inhibition)
Algae toxicity, NOEC, Desmodesmus subspicatus: 200 mg/L
Bacteria toxicity, IC50, Tetrahymena: 356 mg/L (40 h)

Hydrocarbons, C9, aromatics
Daphnia toxicity, EL50, Daphnia magna: 3,2 mg/L (48 h)
Method: OECD 202
Algae toxicity, EL50, Pseudokirchneriella subcapitata: 3,8 mg/L (72 h)

Method: OECD 201
Fish toxicity, LL50:, Oncorhynchus mykiss (Rainbow trout): 9,2 mg/L (96 h)
Method: OECD 203

Hydrocarbons, C9, aromatics, <0.1% benzene
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 9,2 mg/L (96 h)
Daphnia toxicity, EC50, Daphnia magna: 1,6 mg/L (48 h)

Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

Xylene
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 4,36 mg/L (73 h)
Method: OECD 201
Fish toxicity, NOEC, fish: > 1,3 mg/L (56 d)
Daphnia toxicity, NOEC, Daphnia pulex (water flea): 1,17 mg/L (7 d)
Method: US EPA 600/4-91-003
Daphnia toxicity, EL50, Daphnia magna: 2,9 mg/L (21 d)
Method: OECD 211
Algae toxicity, EC50, Pseudokirchneriella subcapitata: 2,2 mg/L (73 h)
Method: OECD 201
Daphnia toxicity, LOEC:, Daphnia magna (Big water flea): 3,16 mg/L (21 d)
Method: OECD 211
Algae toxicity, growth test (Eb-Cx) 10%“ , Pseudokirchneriella subcapitata: 0,72 mg/L (73 h)
Method: OECD 201

ethylbenzene
Daphnia toxicity, NOEC, Ceriodaphnia dubia (Wasserfloh): 0,96 mg/L (7 d)
Daphnia toxicity, LC50, Ceriodaphnia dubia (Wasserfloh): 3,6 mg/L (7 d)
Bacteria toxicity, EC50, Nitrosomonas sp: 96 mg/L (24 h)
Algae toxicity, NOEC, Pseudokirchneriella subcapitata: 3,4 mg/L (96 h)
Daphnia toxicity, LOEC:, Ceriodaphnia dubia (Wasserfloh): 1,7 mg/L (7 d)

Hydrocarbons, C9, aromatics
Algae toxicity, NOEC, Pseudokirchneriella subcapitata: 0,07 mg/L (72 h)
Method: OECD 201

12.2. **Persistence and degradability**

Xylene
Persistence and degradability:
Method: Rapid photochemical oxidation in air
Biodegradation: 98 percent (28 d)
Readily biodegradable (according to OECD criteria)

ethylbenzene
Biodegradation, aerobic: 70 - 80 percent (28 d); Evaluation Readily biodegradable (according to OECD criteria)

2,6-dimethylheptan-4-one
Persistence and degradability: Evaluation Rapid photochemical oxidation in air
Biodegradation: 88 percent (20 d); Evaluation Readily biodegradable (according to OECD criteria)
Method: OECD 301D

Cyclohexanone
Persistence and degradability:
No data available
Biodegradation: 90 - 100 percent (28 d); Evaluation Readily biodegradable (according to OECD criteria) ; Exposure duration: 14 days = 87 %

n-butyl acetate
Persistence and degradability: Evaluation No data available
Biodegradation: 83 percent (28 d); Evaluation Readily biodegradable (according to OECD criteria).
Method: OECD 301D
aerobic.

Hydrocarbons, C9, aromatics
Biodegradation: Evaluation Readily biodegradable (according to OECD criteria).

Hydrocarbons, C9, aromatics, <0.1% benzene
Biodegradation: Evaluation Readily biodegradable (according to OECD criteria).

12.3. **Bioaccumulative potential**

Xylene
Distribution coefficient n-octanol/water (log KOW): 3,49

ethylbenzene
Distribution coefficient n-octanol/water (log KOW): 3,6

2,6-dimethylheptan-4-one
Distribution coefficient n-octanol/water (log KOW): Evaluation Little bioaccumulation

Cyclohexanone
Distribution coefficient n-octanol/water (log KOW): 0,86 ; Evaluation The product has a low bioaccumulation potential

n-butyl acetate
Distribution coefficient n-octanol/water (log KOW):
No data available

Hydrocarbons, C9, aromatics
Distribution coefficient n-octanol/water (log KOW): 3,7 - 4,5

Hydrocarbons, C9, aromatics, <0.1% benzene
Distribution coefficient n-octanol/water (log KOW): 3,7 - 4,5

12.4. **Mobility in soil**

Xylene
soil: Evaluation Absorbs slowly into the soil
Water: Evaluation Floats on the water

2,6-dimethylheptan-4-one
soil: Evaluation Absorbed into the soil.
Water: Evaluation Floats on the water

Cyclohexanone
soil: Evaluation Highly mobile in the ground

n-butyl acetate
:
No data available

Hydrocarbons, C9, aromatics
soil:
No data available

Hydrocarbons, C9, aromatics, <0.1% benzene
soil:
No data available

12.5. **Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. **Endocrine disrupting properties**

No information available.

12.7. **Other adverse effects**

No information available.

SECTION 13: Disposal considerations

13.1. **Waste treatment methods**

Appropriate disposal / Product
Recommendation
Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Dispose of waste according to applicable legislation.

List of proposed waste codes/waste designations in accordance with EWC
080111* Waste paint and varnish containing organic solvents or other dangerous substances
*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package
Recommendation
Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. **UN number or ID number**

UN 1263

14.2. **UN proper shipping name**

Land transport (ADR/RID):	Paint
Sea transport (IMDG):	PAINT
Air transport (ICAO-TI / IATA-DGR):	Paint

14.3. **Transport hazard class(es)**

3

14.4. **Packing group**

II

14.5. **Environmental hazards**

Land transport (ADR/RID)	UMWELTGEFÄHRDEND
Marine pollutant	p

14.6. **Special precautions for user**

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.
Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

Tunnel restriction code	D/E

Sea transport (IMDG)

EmS-No.	F-E, S-E
in packages <= 5 litres	not restricted 2.10.2.7

14.7. **Maritime transport in bulk according to IMO instruments**

No transport as bulk according IBC - Code.

SECTION 15: Regulatory information

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

EU legislation

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]
VOC-value (in g/L): 617

National regulations

Restrictions of occupation
Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

15.2. **Chemical Safety Assessment**
For the following substances of this mixture a chemical safety assessment has been carried out:

EC No. CAS No.	Designation	REACH No.
215-535-7 1330-20-7	Xylene	01-2119488216-32
265-199-0 64742-95-6	Hydrocarbons, C9, aromatics	01-2119455851-35
918-668-5	Hydrocarbons, C9, aromatics, <0.1% benzene	01-2119455851-35
204-658-1 123-86-4	n-butyl acetate	01-2119485493-29
202-849-4 100-41-4	ethylbenzene	01-2119489370-35

203-631-1 108-94-1	Cyclohexanone	01-2119453616-35

SECTION 16: Other information

Full text of classification in section 3

Acute Tox. 4 / H312	Acute toxicity (dermal)	Harmful in contact with skin.
Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
STOT SE 3 / H335	STOT-single exposure	May cause respiratory irritation.
STOT RE 2 / H373	STOT-repeated exposure	May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Asp. Tox. 1 / H304	Aspiration hazard	May be fatal if swallowed and enters airways.
Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.
Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.

Classification procedure

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Flam. Liq. 2	Flammable liquids	On basis of test data.
Skin Irrit. 2	Skin corrosion/irritation	Calculation method.
Eye Irrit. 2	Serious eye damage/eye irritation	Calculation method.
STOT SE 3	STOT-single exposure	Calculation method.
STOT SE 3	STOT-single exposure	Calculation method.
STOT RE 2	STOT-repeated exposure	Calculation method.
Aquatic Chronic 2	Hazardous to the aquatic environment	Calculation method.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
EAKV	European Waste Catalogue Directive
EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

Further information

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.