

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



Article No.: 2 05610 BN000 epple-easy 5610-new
Print date 28.02.2023 Revision date 28.02.2023
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Article No. (manufacturer/supplier): 2 05610 BN000
Trade name/designation epple-easy 5610-new
adhesive
component B
UFI: AKH0-U0YQ-E00W-GWK4

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

Relevant identified uses:
Adhesive for the gluing of most diverse substrates.

1.3. Details of the supplier of the safety data sheet

supplier (manufacturer/importer/downstream user/distributor)

E. Epple & Co. GmbH
Hertzstr. 8 Telephone: +49 7032 / 9771-17
71083 Herrenberg Telefax: +49 7032 / 9771-60
www.epple-chemie.de

Department responsible for information:

laboratory
E-mail (competent person) labor@epple-chemie.de

1.4. Emergency telephone number

Information center against poisoning Bonn +49 (0) 228 / 19 240 (Advice in German)

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].

Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Skin Corr. 1B / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Muta. 2 / H341	Germ cell mutagenicity	Suspected of causing genetic defects.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.

2.2. Label elements

The product is classified and labelled according to EC directives or corresponding national laws.

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

Hazard pictograms



Danger

Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe vapour.
P280 Wear protective gloves.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.

Hazard components for labelling

Phenol
Amines, polyethylenepoly-, tetraethylenepentamine fraction

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Formaldehyde, polymer with 1,3-benzenedimethaneamine and phenol
m-phenylenebis(methylamine)

Supplemental hazard information

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Description modified aminic hardener

Hazardous ingredients

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

EC No. CAS No. Index No.	REACH No. Designation classification: // Remark	weight-%
292-587-7 90640-66-7	01-2119487290-37 Amines, polyethylenepoly-, tetraethylenepentamine fraction Acute Tox. 4 H302 / Acute Tox. 4 H312 / Skin Corr. 1B H314 / Eye Dam. 1 H318 / Skin Sens. 1 H317 / Aquatic Chronic 2 H411	24,9 - 49,9
500-137-0 57214-10-5	01-2119966906-20 Formaldehyde, polymer with 1,3-benzenedimethaneamine and phenol Skin Corr. 1C H314 / Skin Sens. 1B H317 / Aquatic Chronic 3 H412	24,9 - 49,9
202-859-9 100-51-6 603-057-00-5	01-2119492630-38 benzyl alcohol Acute Tox. 4 H332 / Acute Tox. 4 H302 Acute toxicity estimate (ATE): ATE (oral): 1230 mg/kg bw / ATE (inhalation, vapour): 4,17 mg/L	9,9 - 19,9
216-032-5 1477-55-0	01-2119480150-50 m-phenylenebis(methylamine) Acute Tox. 4 H302 / Acute Tox. 4 H332 / Skin Corr. 1B H314 / Skin Sens. 1B H317 / Aquatic Chronic 3 H412 Acute toxicity estimate (ATE): ATE (oral): 930 mg/kg bw	9,9 - 19,9
203-180-0 104-15-4 016-030-00-2	01-2119538811-39 Toluene-4-sulfonic acid Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / STOT SE 3 H335	2,4 - 9,9
203-632-7 108-95-2 604-001-00-2	01-2119471329-32 Phenol Muta. 2 H341 / Acute Tox. 3 H331 / Acute Tox. 3 H311 / Acute Tox. 3 H301 / STOT RE 2 H373 / Skin Corr. 1B H314 Specific concentration limit (SCL): Skin Corr. 1B H314 >= 3 / Skin Irrit. 2 H315 >= 1 / Eye Irrit. 2 H319 >= 1 Acute toxicity estimate (ATE): ATE (oral): 340 mg/kg bw / ATE (inhalation, vapour): 0,31 mg/L	2,4 - 9,9
236-675-5 13463-67-7	01-2119489379-17 Titanium dioxide Carc. 2 H351	0,9 - 2,4
200-712-3 69-72-7 607-732-00-5	01-2119486984-17 salicylic acid Acute Tox. 4 H302 / Skin Irrit. 2 H315 / Eye Dam. 1 H318 / Repr. 2 H361 / STOT SE 3 H335 Acute toxicity estimate (ATE): ATE (oral): 891 mg/kg bw	0,9 - 2,4

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. Do not allow water used to extinguish fire to enter drains, ground or waterways. Cool closed containers that are near the source of the fire.

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 contact with skin, eyes and clothes. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. 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

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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 5 °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

Phenol

Index No. 604-001-00-2 / EC No. 203-632-7 / CAS No. 108-95-2

TWA: 20 mg/m³; 5 ppm

STEL: 39 mg/m³; 10 ppm

Titanium dioxide

EC No. 236-675-5 / CAS No. 13463-67-7

TWA: 10 mg/m³

Additional information

TWA : Long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

DNEL:

benzyl alcohol

Index No. 603-057-00-5 / EC No. 202-859-9 / CAS No. 100-51-6

DNEL acute dermal, short-term (systemic), Workers: 47 mg/kg bw/day

DNEL long-term dermal (systemic), Workers: 9,5 mg/kg

DNEL acute inhalative (systemic), Workers: 450 mg/m³

DNEL long-term inhalative (systemic), Workers: 90 mg/m³

Phenol

Index No. 604-001-00-2 / EC No. 203-632-7 / CAS No. 108-95-2

DNEL long-term inhalative (systemic), Workers: 8 mg/m³

Titanium dioxide

EC No. 236-675-5 / CAS No. 13463-67-7

DNEL long-term inhalative (systemic), Workers: 10 mg/m³

m-phenylenebis(methylamine)

EC No. 216-032-5 / CAS No. 1477-55-0

DNEL long-term dermal (systemic), Workers: 0,33 mg/kg

DNEL long-term inhalative (local), Workers: 0,2 mg/m³

DNEL long-term inhalative (systemic), Workers: 1,2 mg/m³

Toluene-4-sulfonic acid

Index No. 016-030-00-2 / EC No. 203-180-0 / CAS No. 104-15-4

DNEL long-term dermal (systemic), Workers: 7,6 mg/kg bw/day

DNEL long-term inhalative (systemic), Workers: 53,6 mg/m³

Formaldehyde, polymer with 1,3-benzenedimethaneamine and phenol

EC No. 500-137-0 / CAS No. 57214-10-5

DNEL acute dermal, short-term (local), Workers: 2,8 mg/kg bw/day

DNEL acute dermal, short-term (systemic), Workers: 3,85 µg/cm²

DNEL long-term dermal (local), Workers: 0,28 mg/kg bw/day

DNEL long-term dermal (systemic), Workers: 0,385 µg/cm²

DNEL acute inhalative (local), Workers: 6 mg/m³

DNEL acute inhalative (systemic), Workers: 2 mg/m³

DNEL long-term inhalative (local), Workers: 0,6 mg/m³

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DNEL long-term inhalative (systemic), Workers: 0,02 mg/m³

PNEC:

benzyl alcohol

Index No. 603-057-00-5 / EC No. 202-859-9 / CAS No. 100-51-6

PNEC aquatic, freshwater: 1 mg/L

PNEC aquatic, marine water: 0,1 mg/L

PNEC aquatic, intermittent release: 2,3 mg/L

PNEC sediment, freshwater: 5,27 mg/kg

PNEC sediment, marine water: 0,527 mg/kg

PNEC, soil: 0,456 mg/kg

PNEC sewage treatment plant (STP): 39 mg/L

Phenol

Index No. 604-001-00-2 / EC No. 203-632-7 / CAS No. 108-95-2

PNEC aquatic, freshwater: 7,7 µg/L

PNEC aquatic, marine water: 0,77 µg/L

PNEC sediment, freshwater: 91,5 µg/kg

PNEC sediment, marine water: 9,15 µg/kg

PNEC, soil: 136 µg/kg

PNEC sewage treatment plant (STP): 2,1 mg/L

Titanium dioxide

EC No. 236-675-5 / CAS No. 13463-67-7

PNEC aquatic, freshwater: 0,127 mg/L

PNEC aquatic, marine water: 1 mg/L

PNEC aquatic, intermittent release: 0,61 mg/L

PNEC sediment, freshwater: 1000 mg/kg

PNEC sediment, marine water: 100 mg/kg

PNEC, soil: 100 mg/kg

PNEC sewage treatment plant (STP): 100 mg/L

PNEC Secondary Poisoning: 1667 mg/kg

m-phenylenebis(methylamine)

EC No. 216-032-5 / CAS No. 1477-55-0

PNEC aquatic, freshwater: 0,094 mg/L

PNEC aquatic, marine water: 0,009 mg/L

PNEC aquatic, intermittent release: 0,152 mg/L

PNEC sediment, freshwater: 0,43 mg/kg

PNEC sediment, marine water: 0,043 mg/kg

PNEC, soil: 0,045 mg/kg

PNEC sewage treatment plant (STP): 10 mg/L

Toluene-4-sulfonic acid

Index No. 016-030-00-2 / EC No. 203-180-0 / CAS No. 104-15-4

PNEC aquatic, freshwater: 0,73 mg/L

PNEC aquatic, marine water: 0,0073 mg/L

PNEC aquatic, intermittent release: 0,073 mg/L

PNEC sediment, freshwater: 0,0577 mg/kg

PNEC sediment, marine water: 0,0057 mg/kg

PNEC, soil: 0,016 mg/kg

PNEC sewage treatment plant (STP): 58 mg/L

Formaldehyde, polymer with 1,3-benzenedimethaneamine and phenol

EC No. 500-137-0 / CAS No. 57214-10-5

PNEC aquatic, freshwater: 20 µg/L

PNEC aquatic, marine water: 2 µg/L

PNEC sediment, freshwater: 0,1001 mg/kg dw

PNEC sediment, marine water: 0,01 mg/kg dw

PNEC, soil: 0,0236 mg/kg dw

PNEC sewage treatment plant (STP): 30 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

Recommendation: full mask / half mask / filtering half mask. Type A / B class 1/2 Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). 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
Appearance:	Liquid
Colour:	white
Odour:	characteristic
Odour threshold:	not applicable
Melting point/freezing point:	-15 °C Source: benzyl alcohol
Initial boiling point and boiling range:	206 °C Source: benzyl alcohol
Flammability:	not applicable
Lower and upper explosion limit:	
Lower explosion limit:	1,22 Vol-% Source: benzyl alcohol
Upper explosion limit:	13 Vol-% Source: benzyl alcohol
Flash point:	not determined
Auto-ignition temperature:	435 °C Source: benzyl alcohol
Decomposition temperature:	not applicable
pH at 20 °C:	not relevant
Cinematic viscosity (40°C):	10000 mm²/s
Viscosity at 20 °C:	8 - 15 Pa*s
Solubility(ies):	
Water solubility at 20 °C:	partially miscible
Partition coefficient: n-octanol/water:	see section 12
Vapour pressure at 20 °C:	0,027 mbar Source: benzyl alcohol
Density and/or relative density:	
Density at 20 °C:	1,15 g/cm³
Relative vapour density:	not applicable

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particle characteristics: not applicable
9.2. **Other information**
Solvent separation test: < 3 weight-% (ADR/RID)

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

Harmful if swallowed.

benzyl alcohol

oral, LD50, Rat: 1230 mg/kg
dermal, LD50, Rabbit: 2000 mg/kg
inhalative (Gases), LC50, Rat: > 4,178 ppmV (4 h)

Phenol

oral, LD50, Rat: 340 mg/kg
dermal, LD50, Rabbit: 850 - 1400 mg/kg
inhalative (dust and mist), LC50, Rat: 0,316 mg/L (4 h)
inhalative (vapours), LC50, Rat: 0,9 mg/L (8 h)

Titanium dioxide

oral, LD50, Rat: > 5000 mg/kg
Method: OECD 420
inhalative (dust and mist), LC50, Rat: > 6,82 mg/L (4 h)

m-phenylenebis(methylamine)

oral, LD50, Rat: 930 mg/kg
dermal, LD50, Rat: > 2000 mg/kg
dermal, LD50, Rabbit: 2000 mg/kg
inhalative (vapours), LC50, Rat: 2,4 mg/L (4 h)
inhalative (vapours), LC50, Rat: 3,89 mg/L (1 h)

salicylic acid

oral, LD50, Rat: 891 mg/kg

Toluene-4-sulfonic acid

oral, LD50, Rat: > 1104 mg/kg
inhalative (vapours), LC50, Rat: 50 - 100 mg/kg (8 h)

Formaldehyde, polymer with 1,3-benzenedimethaneamine and phenol

oral, LD50, Rat: > 2000 mg/kg
Method: OECD 425
dermal, LD50, Rat: > 2020 mg/kg
Method: OECD 402

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes severe skin burns and eye damage.

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benzyl alcohol
eyes, Rabbit: Evaluation Irritating to eyes.
Method: OECD 405
Skin, Rabbit: Evaluation no skin irritation
Method: OECD 404

Titanium dioxide
Skin., Rabbit: Evaluation non-irritant.
Method: OECD 404
Eyes., Rabbit.: Evaluation non-irritant.
Method: OECD 405

m-phenylenebis(methylamine)
Skin, Rabbit (24 h): Evaluation strongly irritant.

Toluene-4-sulfonic acid
Skin, Rabbit: Evaluation corrosive
Method: OECD 404
eyes, Rabbit: Evaluation Irritating to eyes, reversible within 7 days

Respiratory or skin sensitisation

May cause an allergic skin reaction.

benzyl alcohol
Skin, Guinea pig: ; Evaluation not sensitising.
Method: OECD 406

Titanium dioxide
Skin, Mouse: ; Evaluation not sensitising.
Method: OECD 429

m-phenylenebis(methylamine)
Skin, Mouse: ; Evaluation Sensitising
Method: OECD 429

Toluene-4-sulfonic acid
Skin, Guinea pig: ; Evaluation not sensitising.
Method: Directive 67/548/EEC, Annex V, B.6.

Formaldehyde, polymer with 1,3-benzenedimethanamine and phenol
Skin, Mouse: ; Evaluation sensitising
Method: OECD 429

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Suspected of causing genetic defects.

m-phenylenebis(methylamine)
Germ cell mutagenicity; Evaluation No mutagenic effect
genotoxicity; Evaluation negative
Method: OECD 471 (Ames test)
Ames test; Salmonella typhimurium
genotoxicity; Evaluation negative
Method: OECD 473
in-vitro; Chromosomal aberrations in mammalian cells.; Hamster
genotoxicity; Evaluation negative
Method: OECD 476
in-vitro; Mouse-lymphoma-cells
genotoxicity; Evaluation negative
Method: OECD 474
in-vivo; Mouse; oral

Toluene-4-sulfonic acid
Carcinogenicity; Evaluation negative
Method: OECD 453
Rat; oral
Reproductive toxicity; Evaluation No mutagenic effect
rat, female; oral
genotoxicity; Evaluation negative
Method: OECD 471 (Ames test).

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in-vitro
genotoxicity; Evaluation negative
Method: OECD 473
in-vitro
genotoxicity; Evaluation negative
Method: OECD 474
in-vivo; oral

Formaldehyde, polymer with 1,3-benzenedimethaneamine and phenol
Germ cell mutagenicity; Evaluation negative
Method: OECD 471 (Ames test)
Germ cell mutagenicity; Evaluation negative
Method: OECD 473
Germ cell mutagenicity; Evaluation positive
Method: OECD 476

STOT-single exposure; STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience/human evidence

Causes burns. The preparation may be a skin sensitiser. It may also be a skin irritant and repeated contact may increase this effect. Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc.

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.

Remark

There is no information available on the preparation itself .

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**

benzyl alcohol

Fish toxicity, LC50, Pimephales promelas (fathead minnow): 460 mg/L (96 h)
Method: EPA 600/3-76/097
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 230 mg/L (48 h)
Method: OECD 202
Daphnia toxicity, LC50, Daphnia magna (Big water flea): 360 mg/L (48 h)
Algae toxicity, EC0, Scenedesmus quadricauda: 640 mg/L (96 h)
Algae toxicity, EC50, Pseudokirchneriella subcapitata: 770 mg/L (72 h)
Method: OECD 201
Bacteria toxicity, EC10, Pseudomonas putida: 658 mg/L (16 h)

Phenol

Fish toxicity, LC50, Danio rerio (zebrafish): 27,8 mg/L (96 h)
Daphnia toxicity, EC50, Daphnia pulex (water flea) 18 - 36 mg/L (48 h)
Algae toxicity, EC50, Pseudokirchneriella subcapitata: 46,42 mg/L (96 h)
Algae toxicity, EC50, Desmodesmus subspicatus 187 - 279 mg/L (72 h)
Fish toxicity, LC50, Salmo gairdneri 9,1 - 12,2 mg/L (96 h)
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 6,6 mg/L (48 h)
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 8,9 mg/L (96 h)

Titanium dioxide

Algae toxicity, EC50, Pseudokirchneriella subcapitata: 61 mg/L (72 h)
Method: EPA-600/9-78-018
Bacterial toxicity:, EC50:, Activated sludge: > 1000 (3 h)

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Method: OECD 209

m-phenylenebis(methylamine)

Fish toxicity, LC50, *Oryzias latipes* (Ricefish): 87,6 mg/L (96 h)

Method: OECD 203

semistatic

Daphnia toxicity, EC50, *Daphnia magna* (Big water flea): 15,2 mg/L (48 h)

Method: OECD 202

semistatic

Algae toxicity, ErC50, *Selenastrum capricornutum*: 32,1 mg/L (72 h)

Method: OECD 201

static test

Bacteria toxicity, EC50, Activated sludge: > 1000 mg/L

Method: OECD 209

static test

Toluene-4-sulfonic acid

Fish toxicity, LC50, *Leuciscus idus* (golden orfe): 325 mg/L (96 h)

Method: OECD 203

static test

Daphnia toxicity, EC50: > 103 mg/L (48 h)

Method: OECD 202

static test

Algae toxicity, ErC50: 73 mg/L (72 h)

Method: OECD 201

static test

Bacteria toxicity, EC50, Activated sludge: > 650 mg/L (3 h)

Method: OECD 209

Algae toxicity, ErC50, *Desmodesmus subspicatus*: > 40 mg/L (72 h)

Method: Directive 67/548/EWG, appendice V, C.3

static test

Formaldehyde, polymer with 1,3-benzenedimethaneamine and phenol

Fish toxicity, LC50, *Oncorhynchus mykiss* (Rainbow trout): 25,9 mg/L (96 h)

Method: OECD 203

Daphnia toxicity, EC50: 29,8 mg/L (48 h)

Method: OECD 202

Algae toxicity, EC50, *Pseudokirchneriella subcapitata*: 20,4 mg/L (72 h)

Method: OECD 201

Bacteria toxicity, EC50, Activated sludge: 491,3 mg/L (3 h)

Method: OECD 209

Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

m-phenylenebis(methylamine)

Daphnia toxicity, NOEC, *Daphnia magna* (Big water flea): 4,7 mg/L (21 d)

Method: OECD 211

Algae toxicity, NOEC, *Pseudokirchneriella subcapitata*: 10,5 mg/L (72 h)

Method: OECD 201

Daphnia toxicity, LOEC:, *Daphnia magna* (Big water flea): 15 mg/L (21 d)

Method: OECD 211

Daphnia toxicity, EC50:, *Daphnia magna* (Big water flea): 8,4 mg/L (21 d)

Method: OECD 211

Daphnia toxicity, LC50:, *Daphnia magna* (Big water flea): 6,77 mg/L (21 d)

Method: OECD 211

Bacterial toxicity:, EC50:, Activated sludge: > 1000 mg/L (30 min.)

Method: OECD 209

Toluene-4-sulfonic acid

Algae toxicity, NOEC: 44,8 mg/L (72 h)

Method: OECD 201

Bacteria toxicity, NOEC: 580 mg/L (3 h)

Method: OECD 209

12.2. Persistence and degradability

*

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benzyl alcohol

Biodegradation: 92 - 96 % (28 d); Evaluation Readily biodegradable

Method: OECD 301C

Biodegradation: 95 - 97 % (21 d); Evaluation Readily biodegradable

Method: OECD 301A

m-phenylenebis(methylamine)

Biodegradation: aerobic: 49 % (28 d); Evaluation Not readily biodegradable

Method: OECD 301B

Activated sludge

Toluene-4-sulfonic acid

Biodegradation: > 60 % (28 d); Evaluation Readily biodegradable

Formaldehyde, polymer with 1,3-benzenedimethaneamine and phenol

Biodegradation: 19,3 % (28 d)

Method: OECD 301D

12.3. Bioaccumulative potential

benzyl alcohol

Partition coefficient: n-octanol/water: 1,05

Phenol

Partition coefficient: n-octanol/water: 1,47

m-phenylenebis(methylamine)

Partition coefficient: n-octanol/water: 0,18

Toluene-4-sulfonic acid

Partition coefficient: n-octanol/water: 0,41

Bioconcentration factor (BCF)

Phenol

Bioconcentration factor (BCF), *Leuciscus idus* (golden orfe): 20

Bioconcentration factor (BCF), *Pimephales promelas* (fathead minnow): 1276×10^{49}

Bioconcentration factor (BCF), *Daphnia magna* (Big water flea): 277

m-phenylenebis(methylamine)

Bioconcentration factor (BCF), *Cyprinus carpio* (Common Carp): < 0,3

12.4. Mobility in soil

Toxicological data are not 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.

List of proposed waste codes/waste designations in accordance with EWC

080409* Waste adhesives and sealants containing organic solvents or other dangerous substances

*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package Recommendation

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 2735

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- 14.2. **UN proper shipping name**
Land transport (ADR/RID): Amines, liquid, corrosive, n.o.s.
(m-phenylenbis(methylamine))
Sea transport (IMDG): AMINES, LIQUID, CORROSIVE, N.O.S.
(m-phenylenbis(methylamine), Amine, Polyethylenpoly-,
Tetraethylenpentaminfraktion)
Air transport (ICAO-TI / IATA-DGR): Amines, liquid, corrosive, n.o.s.
(m-phenylenbis(methylamine))
- 14.3. **Transport hazard class(es)** 8
- 14.4. **Packing group** II
- 14.5. **Environmental hazards**
Land transport (ADR/RID) DANGEROUS FOR THE ENVIRONMENT
Marine pollutant p / Amine, Polyethylenpoly-, Tetraethylenpentaminfraktion
- 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 E
- Sea transport (IMDG)**
EmS-No. F-A, S-B
- 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): 152
- 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.
- Substance/product listed in the following inventories:**
AICS no information
DSL no information
EHS no information
IECSC no information
KECI no information
MITI no information
NZLoC no information
PICCS no information
TCSI no information
TSCA no information
- 15.2. **Chemical Safety Assessment**
For the following substances of this mixture a chemical safety assessment has been carried out:

EC No.	Designation	REACH No.
CAS No.		

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292-587-7 90640-66-7	Amines, polyethylenepoly-, tetraethylenepentamine fraction	01-2119487290-37
500-137-0 57214-10-5	Formaldehyde, polymer with 1,3-benzenedimethaneamine and phenol	01-2119966906-20
202-859-9 100-51-6	benzyl alcohol	01-2119492630-38
216-032-5 1477-55-0	m-phenylenebis(methylamine)	01-2119480150-50
203-180-0 104-15-4	Toluene-4-sulfonic acid	01-2119538811-39
203-632-7 108-95-2	Phenol	01-2119471329-32
236-675-5 13463-67-7	Titanium dioxide	01-2119489379-17
200-712-3 69-72-7	salicylic acid	01-2119486984-17

SECTION 16: Other information

Full text of classification in section 3:

Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Acute Tox. 4 / H312	Acute toxicity (dermal)	Harmful in contact with skin.
Skin Corr. 1B / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.
Skin Corr. 1C / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Skin Sens. 1B / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.
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.
Muta. 2 / H341	Germ cell mutagenicity	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Acute Tox. 3 / H331	Acute toxicity (inhalative)	Toxic if inhaled.
Acute Tox. 3 / H311	Acute toxicity (dermal)	Toxic in contact with skin.
Acute Tox. 3 / H301	Acute toxicity (oral)	Toxic if swallowed.
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).
Carc. 2 / H351	Carcinogenicity	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Repr. 2 / H361	Reproductive toxicity	Suspected of damaging fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

Classification procedure

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

Acute Tox. 4	Acute toxicity (oral)	Calculation method.
Skin Corr. 1B	Skin corrosion/irritation	Calculation method.
Eye Dam. 1	Serious eye damage/eye irritation	Calculation method.
Skin Sens. 1	Respiratory or skin sensitisation	Calculation method.
Muta. 2	Germ cell mutagenicity	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

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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

Abbreviations and acronyms

n.a. = not applicable

n.b. = not determined

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.

* Data changed compared with the previous version