

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2015/830



Article No.: 248777
Print date: 27.07.2021
Version: 3.0

King Cleaning Solution
Revision date: 27.07.2021
Issue date: 27.07.2021

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

1.1. **product identifiers**

Article No. (manufacturer/supplier) 248777
Trade name/designation King Cleaning Solution

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

Relevant identified uses:
Cleaning agent.

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

Manufacturer/supplier

Heinrich König GmbH & Co.KG
An der Rosenhelle 5
D-61138 Niederdorfelden

Telephone: +49 6101 5360 0
Telefax: +49 6101 5360 11
E-mail: Info@heinrich-koenig.de
Website: www.heinrich-koenig.de

Department responsible for information:

Laboratory Telephone: +49 6101 5360 71
Only available during office hours: Mon - Thurs 08:00 to 16:00
Friday 08:00 - 12:30

E-mail (competent person) SDB@heinrich-koenig.de

1.4. **Emergency telephone number**

Emergency telephone number
Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

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. 3 / H226 Flammable liquids Flammable liquid and vapour.
STOT SE 3 / H336 STOT-single exposure May cause drowsiness or dizziness.

2.2. **Label elements**

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

Hazard pictograms



Warning

Hazard statements

H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P370 + P378 In case of fire: Use foam to extinguish.
P403 + P235 Store in a well-ventilated place. Keep cool.

Hazard components for labelling

n-butyl acetate

Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. **Other hazards**

No information available.

SECTION 3: Composition / information on ingredients

3.2. **Mixtures**

Description Solvent / thinner

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

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EC No. CAS No. Index No.	REACH No. Designation classification // Remark	weight-%
204-658-1 123-86-4 607-025-00-1	01-2119485493-29-xxxx n-butyl acetate Flam. Liq. 3 H226 / STOT SE 3 H336	50 < 100

Additional information

Full text of classification: see section 16

Labelling for contents according to regulation (EC) No. 648/2004:

weight-%	Ingredient
> 30 %	organic solvents

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

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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:

n-butyl acetate

Index No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4

TWA: 724 mg/m³; 150 ppm

STEL: 966 mg/m³; 200 ppm

Additional information

TWA : Long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

DNEL:

n-butyl acetate

Index No. 607-025-00-1 / EC No. 204-658-1 / CAS No. 123-86-4

DNEL acute dermal, short-term (systemic), Workers: 11 mg/kg

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

DNEL acute inhalative (local), Workers: 600 mg/m³

DNEL acute inhalative (systemic), Workers: 600 mg/m³

DNEL long-term inhalative (local), Workers: 300 mg/m³

DNEL long-term inhalative (systemic), Workers: 48 mg/m³

DNEL short-term oral (acute), Consumer: 2 mg/kg

DNEL long-term oral (repeated), Consumer: 2 mg/kg

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DNEL acute dermal, short-term (systemic), Consumer: 6 mg/kg
DNEL long-term dermal (systemic), Consumer: 3,4 mg/kg
DNEL acute inhalative (local), Consumer: 300 mg/m³
DNEL acute inhalative (systemic), Consumer: 300 mg/m³
DNEL long-term inhalative (local), Consumer: 35,7 mg/m³
DNEL long-term inhalative (systemic), Consumer: 12 mg/m³

PNEC:

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
PNEC sediment, marine water: 0,0981 mg/kg
PNEC, soil: 0,0903 mg/kg

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

Appearance:

Physical state: Liquid
Colour: colourless

Odour: Preparations containing solvent

Odour threshold: not determined

pH at 20 °C: N.A.

Melting point/freezing point: < -90 °C

Initial boiling point and boiling range: 126 °C
Method: calculated.

Flash point: 27 °C
Method: EN ISO 2719

Evaporation rate: not determined

flammability

Burning time: not determined

Upper/lower flammability or explosive limits:

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Lower explosion limit:	1,2 Vol-% Method: calculated.
Upper explosion limit:	7,5 Vol-% Method: calculated.
Vapour pressure at 20 °C:	11,2 mbar Method: calculated.
Vapour density:	not determined
Relative density:	
Density at 20 °C:	0,88 g/cm³ Method: calculated.
Solubility(ies):	
Water solubility at 20 °C:	insoluble
Partition coefficient: n-octanol/water:	see section 12
Auto-ignition temperature:	415 °C Method: calculated.
Decomposition temperature:	not determined
Viscosity at 20 °C:	8 s 4 mm Method: DIN 53211
Explosive properties:	not determined
Oxidising properties:	not determined
9.2. Other information	
Solid content:	0,00 weight-%
solvent content:	
Organic solvents:	100 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

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

11.1. Information on toxicological effects

Acute toxicity

n-butyl acetate

oral, LD50, Rat: 10760 mg/kg

Method: OECD 423

dermal, LD50, Rabbit: > 14112 mg/kg

Method: OECD 402

inhalative (vapours), LC50, Rat: 23,4 mg/L (4 h)

Method: OECD 403

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

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Skin corrosion/irritation; Serious eye damage/eye irritation

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

Respiratory or skin sensitisation

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

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

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

STOT-single exposure; STOT-repeated exposure

May cause drowsiness or dizziness.

n-butyl acetate

Specific target organ toxicity (single exposure), drowsiness

May cause drowsiness or dizziness.

Aspiration hazard

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

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.

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

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)

Method: OECD 202

Algae toxicity, EC50, Desmodesmus subspicatus.: 397 mg/L (72 h)

Method: OECD 201

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

12.2. Persistence and degradability

n-butyl acetate

Biodegradation, aerobic: 83 % (28 D)

Method: OECD 301D

Readily biodegradable (according to OECD criteria).

12.3. Bioaccumulative potential

n-butyl acetate

Partition coefficient: n-octanol/water: 2,3

Method: OECD 117

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. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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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

140603* other solvents and solvent mixtures

*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

UN 1123

14.2. UN proper shipping name

Land transport (ADR/RID): Butyl acetates
Sea transport (IMDG): BUTYL ACETATES
Air transport (ICAO-TI / IATA-DGR): Butyl acetates

14.3. Transport hazard class(es)

3

14.4. Packing group

III

14.5. Environmental hazards

Land transport (ADR/RID) No further relevant information available.
Marine pollutant No further relevant information available.

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-D

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

EU legislation

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]

Maximum VOC content (g/L) of the product in a ready to use condition: 882

National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Substance/product listed in the following inventories:

DSL listed
TSCA listed

REACH candidate list of substances of very high concern (SVHC) for the approval process.

According to the available data and / or according to the information provided by the suppliers, the product does not contain any substance that is eligible for inclusion in Annex XIV (list of substances subject to authorization) in accordance with Article 57 in conjunction with Article 59 of REACH.

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Regulation (EC) 1907/2006. material in question applies. Regulation (EC) 1907/2006 (REACH) Annex XIV (list of substances subject to authorization)

According to the available data and / or according to the information provided by the suppliers, the product does not contain any substance that is considered to be a substance that requires authorization according to REACH Regulation (EC) 1907/2006 Annex XIV.

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.
204-658-1 123-86-4	n-butyl acetate	01-2119485493-29-xxxx

SECTION 16: Other information

Full text of classification in section 3

Flam. Liq. 3 / H226 Flammable liquids Flammable liquid and vapour.
STOT SE 3 / H336 STOT-single exposure May cause drowsiness or dizziness.

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.

You can also find current SDSs for our standard products online on our homepage under **Downloads** in the relevant product area.