

Safety Data Sheet

according to UK REACH Regulation

Flux Remover FR 100

Revision date: 12.03.2021

Product code: 091602-RM

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

1.1. Product identifier

Flux Remover FR 100

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

Use of the substance/mixture

Professional cleaners for industrial use

Uses advised against

No further information is available at the moment.

1.3. Details of the supplier of the safety data sheet

| | | |
|-------------------------|-------------------------------|---------------------------|
| Company name: | kolb Cleaning Technology GmbH | |
| Street: | Karl-Arnold-Str. 12 | |
| Place: | D-47877 Willich | |
| Telephone: | +49-2154-947938 | Telefax: +49-2154-947947 |
| e-mail: | info@kolb-ct.com | |
| Contact person: | Herr Linker | Telephone: +49-2324-97980 |
| e-mail: | christian.linker@kolb-ct.com | |
| Internet: | www.kolb-ct.com | |
| Responsible Department: | Labor/ QS | |

1.4. Emergency telephone number:

+49/ (0) 23 24/ 979817 (EU)
+61 4 19 809 805 (Australia)
+1 970 443 9233 (USA)
Schweiz: 145

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Aerosol 3; H229
STOT SE 3; H336
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Hydrocarbons C7-C9, n- alkanes, iso-alkanes, cyclenes

Signal word: Warning

Pictograms:



Hazard statements

| | |
|------|--|
| H222 | Extremely flammable aerosol. |
| H229 | Pressurised container: May burst if heated. |
| H336 | May cause drowsiness or dizziness. |
| H411 | Toxic to aquatic life with long lasting effects. |

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

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| | |
|-----------|--|
| P251 | smoking. |
| P261 | Do not pierce or burn, even after use. |
| P273 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P312 | Avoid release to the environment. |
| P391 | Call a POISON CENTER/doctor if you feel unwell. |
| P403+P233 | Collect spillage. |
| P410+P412 | Store in a well-ventilated place. Keep container tightly closed. |
| P501 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |
| | Dispose of contents/container to in accordance with local/regional/national/international regulations. |

Special labelling of certain mixtures

100 % by mass of the contents are flammable.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

| CAS No | Chemical name | Quantity |
|----------|--|------------------|
| | EC No | |
| | Index No | |
| | REACH No | |
| | Classification (GB CLP Regulation) | |
| | Hydrocarbons C7-C9, n- alkanes, iso-alkanes, cyclenes | 50 - < 75 % |
| | 920-750-0 | 01-2119473851-33 |
| | Flam. Liq. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H336 H304 H411 | |
| 106-97-8 | butane | 30 - < 50 % |
| | 203-448-7 | 601-004-00-0 |
| | Flam. Gas 1; H220 | |
| 74-98-6 | propane | 15 - < 30 % |
| | 200-827-9 | 601-003-00-5 |
| | Flam. Gas 1; H220 | |
| 75-28-5 | isobutane | 1 - < 5 % |
| | 200-857-2 | 601-004-00-0 |
| | Flam. Gas 1; H220 | |

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity |
|--------|-----------|---|-------------|
| | | Specific Conc. Limits, M-factors and ATE | |
| | 920-750-0 | Hydrocarbons C7-C9, n- alkanes, iso-alkanes, cyclenes | 50 - < 75 % |
| | | inhalation: LC50 = >23,3 mg/l (vapours); dermal: LD50 = >2800 mg/kg; oral: LD50 = >5000 mg/kg | |

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink 1 glass of water.

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

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Extinguishing powder.

Unsuitable extinguishing media

Water.

5.2. Special hazards arising from the substance or mixture

Highly flammable. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe

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gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

7.3. Specific end use(s)

Professional cleaners for industrial use

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|----------|-----------|-----|-------------------|-----------|---------------|--------|
| 106-97-8 | Butane | 600 | 1450 | | TWA (8 h) | WEL |
| | | 750 | 1810 | | STEL (15 min) | WEL |

DNEL/DMEL values

| CAS No | Substance | Exposure route | Effect | Value |
|--------------------------|---|----------------|----------|------------------------|
| | Hydrocarbons C7-C9, n- alkanes, iso-alkanes, cyclenes | | | |
| Worker DNEL, long-term | | dermal | systemic | 773 mg/kg bw/day |
| Worker DNEL, long-term | | inhalation | systemic | 2035 mg/m ³ |
| Consumer DNEL, long-term | | dermal | systemic | 699 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 608 mg/m ³ |
| Consumer DNEL, long-term | | oral | systemic | 699 mg/kg bw/day |

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the

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supplier of these gloves.

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing . .

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-----------------|----------------|
| Physical state: | liquid: |
| Colour: | colourless |
| Odour: | characteristic |

Test method

Changes in the physical state

| | |
|---|----------------|
| Melting point/freezing point: | not determined |
| Boiling point or initial boiling point and boiling range: | 60 °C |
| Flash point: | -25 °C |

Flammability

| | | |
|---------------|----------------|-----------|
| Solid/liquid: | not applicable | ISO 10156 |
| Gas: | not applicable | |

Explosive properties

The product is not: Explosive.

| | |
|-------------------------|------------|
| Lower explosion limits: | 0,8 vol. % |
| Upper explosion limits: | 8 vol. % |

Self-ignition temperature

| | |
|--------|----------------|
| Solid: | not applicable |
| Gas: | not applicable |

| | |
|----------------------------|----------------|
| Decomposition temperature: | not determined |
|----------------------------|----------------|

| | |
|-----------|----------------|
| pH-Value: | not determined |
|-----------|----------------|

| | |
|-------------------|--|
| Water solubility: | The study does not need to be conducted because the substance is known to be insoluble in water. |
|-------------------|--|

Solubility in other solvents

not determined

| | |
|--|----------------|
| Partition coefficient n-octanol/water: | not determined |
|--|----------------|

| | |
|------------------|---------|
| Vapour pressure: | 150 hPa |
|------------------|---------|

| | |
|----------|------------------------|
| Density: | 0,69 g/cm ³ |
|----------|------------------------|

| | |
|--------------------------|----------------|
| Relative vapour density: | not determined |
|--------------------------|----------------|

9.2. Other information

Information with regard to physical hazard classes

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

| | |
|----------------|----------------|
| Solid content: | not determined |
|----------------|----------------|

| | |
|-------------------|----------------|
| Evaporation rate: | not determined |
|-------------------|----------------|

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SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

| CAS No | Chemical name | | | | |
|--------|---|---------------|---------|-----------|----------|
| | Exposure route | Dose | Species | Source | Method |
| | Hydrocarbons C7-C9, n- alkanes, iso-alkanes, cyclenes | | | | |
| | oral | LD50 mg/kg | >5000 | Ratte | OECD 401 |
| | dermal | LD50 mg/kg | >2800 | Kaninchen | OECD 402 |
| | inhalation (4 h) vapour | LC50 mg/l | >23,3 | Ratte | OECD 403 |

Additional information on tests

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

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|---------|---------------|---------|
| 75-28-5 | isobutane | 2,8 |

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
The product has not been tested.

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12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

| | |
|---|-----------------|
| <u>14.1. UN number or ID number:</u> | UN 1950 |
| <u>14.2. UN proper shipping name:</u> | AEROSOLS |
| <u>14.3. Transport hazard class(es):</u> | 2 |
| <u>14.4. Packing group:</u> | - |
| Hazard label: | 2.1 |
| Classification code: | 5F |
| Special Provisions: | 190 327 344 625 |
| Limited quantity: | 1 L |
| Excepted quantity: | E0 |
| Transport category: | 2 |
| Tunnel restriction code: | D |

Inland waterways transport (ADN)

| | |
|---|-----------------|
| <u>14.1. UN number or ID number:</u> | UN 1950 |
| <u>14.2. UN proper shipping name:</u> | AEROSOLS |
| <u>14.3. Transport hazard class(es):</u> | 2 |
| <u>14.4. Packing group:</u> | - |
| Hazard label: | 2.1 |
| Classification code: | 5F |
| Special Provisions: | 190 327 344 625 |
| Limited quantity: | 1 L |
| Excepted quantity: | E0 |

Marine transport (IMDG)

| | |
|---|----------------------------------|
| <u>14.1. UN number or ID number:</u> | UN 1950 |
| <u>14.2. UN proper shipping name:</u> | AEROSOLS |
| <u>14.3. Transport hazard class(es):</u> | 2.1 |
| <u>14.4. Packing group:</u> | - |
| Hazard label: | 2.1 |
| Special Provisions: | 63, 190, 277, 327, 344, 381, 959 |

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Limited quantity: 1000 mL
 Excepted quantity: E0
 EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1
 Special Provisions: A145 A167 A802
 Limited quantity Passenger: 30 kg G
 Passenger LQ: Y203
 Excepted quantity: E0
 IATA-packing instructions - Passenger: 203
 IATA-max. quantity - Passenger: 75 kg
 IATA-packing instructions - Cargo: 203
 IATA-max. quantity - Cargo: 150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Flammable gases.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 28, Entry 29, Entry 40

2010/75/EU (VOC): 99 % (683,1 g/l)
 2004/42/EC (VOC): 100 % (690 g/l)
 Information according to 2012/18/EU (SEVESO III): E2 Hazardous to the Aquatic Environment
 Additional information: P5c

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
 Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 VOC: Volatile Organic Compounds
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to GB CLP Regulation

| Classification | Classification procedure |
|-------------------------|-------------------------------|
| Aerosol 3; H229 | On basis of test data |
| STOT SE 3; H336 | Bridging principle "Aerosols" |
| Aquatic Chronic 2; H411 | Calculation method |

Relevant H and EUH statements (number and full text)

| | |
|------|--|
| H220 | Extremely flammable gas. |
| H222 | Extremely flammable aerosol. |
| H225 | Highly flammable liquid and vapour. |
| H229 | Pressurised container: May burst if heated. |
| H304 | May be fatal if swallowed and enters airways. |
| H336 | May cause drowsiness or dizziness. |
| H411 | Toxic to aquatic life with long lasting effects. |

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)