

Spezialbenzin 100/140 vergällt (Isobutanol)

Version number: 1.0

Date of compilation: 01.06.2021

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

1.1 Product identifier

Trade name **Spezialbenzin 100/140 vergällt (Isobutanol)**
Registration number (REACH) Not relevant (mixture)

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

Relevant identified uses Industrial use

1.3 Details of the supplier of the safety data sheet

FRIEDRICH SCHARR KG
Liebknechtstraße 50
70565 Stuttgart
Germany

Telephone: +49 711 7868-0
Telefax: +49 711 7868-489
e-mail: info@scharr.de
Website: www.scharr.de

e-mail (competent person) produktsicherheit@scharr.de (Produktsicherheit)

1.4 Emergency telephone number

Emergency information service +49 711 7868-237
This number is only available during the following office hours: Mon-Fri 07:00 - 17:00

| Poison centre | | | |
|---------------|--------------------------|----------------------------|------------------|
| Country | Name | Postal code/city | Telephone |
| Germany | Giftinformation Freiburg | 79106 Freiburg im Breisgau | +49 (0)761 19240 |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

| Hazard class | Category | Hazard class and category | Hazard statement |
|---|----------|---------------------------|------------------|
| flammable liquid | 2 | Flam. Liq. 2 | H225 |
| serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |
| specific target organ toxicity - single exposure (narcotic effects, drowsiness) | 3 | STOT SE 3 | H336 |
| aspiration hazard | 1 | Asp. Tox. 1 | H304 |
| hazardous to the aquatic environment - chronic hazard | 2 | Aquatic Chronic 2 | H411 |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.

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2.2 Label elements

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

- signal word danger

- pictograms

GHS02, GHS05,
GHS07, GHS08, GHS09



- hazard statements

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H318 Causes serious eye damage.
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 smoking.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 Do NOT induce vomiting.
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.

- supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

- hazardous ingredients for labelling

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics, isobutanol

2.3 Other hazards

of no significance

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures


Description of the mixture

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms |
|---|--|------|---|------------|
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | CAS No 64742-49-0 EC No 920-750-0 REACH Reg. No 01-2119473851-33-xxxx | ≥ 90 | Flam. Liq. 2 / H225 STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411 | |

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| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms |
|-------------------|---|----------|--|---|
| isobutanol | CAS No 78-83-1 EC No 201-148-0 REACH Reg. No 01-2119484609-23- xxxx | 5 – < 10 | Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335 STOT SE 3 / H336 |  |

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Self-protection of the first aider.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Narcotic effects. Breathing difficulties. Headache. Vertigo.

4.3 Indication of any immediate medical attention and special treatment needed

Subsequent observance for pneumonia and pulmonary oedema. Supervise the blood circulation.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂), Sand

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Danger of bursting container.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂)

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5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Provision of sufficient ventilation.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

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7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- specific designs for storage rooms or vessels

- Lagerklasse (storage class according to TRGS 510, 3 (flammable and desensitizing explosive liquids) Germany)

- packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Occupational exposure limit values (Workplace Exposure Limits) | | | | | | | | |
|--|---|---------|------------|-----------|-------------|------------|--------------|--------|
| Country | Name of substance | CAS No | Identifier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Source |
| AT | Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | | MAK | 300 | 1.400 | 1.200 | 5.600 | GKV |
| AT | isobutanol | 78-83-1 | MAK | 50 | 150 | 200 | 600 | GKV |
| CH | Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | | MAK | 300 | 1.400 | 600 | 2.800 | SUVA |
| CH | isobutanol | 78-83-1 | MAK | 50 | 150 | 50 | 150 | SUVA |
| DE | | | AGW | | 0 | | 1.100 | |
| DE | Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | | MAK | 500 | 2.400 | 1.000 | 4.800 | DFG |

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Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of substance | CAS No | Identifier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Source |
|---------|---|---------|------------|-----------|-------------|------------|--------------|----------|
| DE | Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | | AGW | 500 | 2.400 | 1.000 | 4.800 | TRGS 900 |
| DE | isobutanol | 78-83-1 | AGW | 100 | 310 | 100 | 310 | TRGS 900 |

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours

time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture

| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|---|------------|-----------|------------------|------------------------------------|-------------------|----------------------------|
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | DNEL | 2.035 mg/m³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | DNEL | 773 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| isobutanol | 78-83-1 | DNEL | 310 mg/m³ | human, inhalatory | worker (industry) | chronic - local effects |

Relevant PNECs of components of the mixture

| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
|-------------------|---------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| isobutanol | 78-83-1 | PNEC | 11 mg/l | aquatic organisms | water | intermittent release |
| isobutanol | 78-83-1 | PNEC | 0,4 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| isobutanol | 78-83-1 | PNEC | 0,04 mg/l | aquatic organisms | marine water | short-term (single instance) |
| isobutanol | 78-83-1 | PNEC | 10 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| isobutanol | 78-83-1 | PNEC | 1,56 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| isobutanol | 78-83-1 | PNEC | 0,156 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| isobutanol | 78-83-1 | PNEC | 0,076 mg/kg | terrestrial organisms | soil | short-term (single instance) |

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8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|--|
| Physical state | liquid |
| Colour | |
| Odour | characteristic |
| Melting point/freezing point | <-90 °C |
| Boiling point or initial boiling point and boiling range | 100 °C at 100 kPa |
| Evaporation rate | not determined |
| Flammability | flammable liquid in accordance with GHS criteria |
| Lower and upper explosion limit | 0,6 vol% - 7 vol% |
| Flash point | <-10 °C at 1 atm |
| Auto-ignition temperature | >200 °C |
| pH (value) | not determined |
| Solubility(ies) | not determined |

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Partition coefficient

| | |
|---|-----------------------------------|
| Partition coefficient n-octanol/water (log value) | this information is not available |
|---|-----------------------------------|

| | |
|-----------------|-----------------|
| Vapour pressure | 35 hPa at 20 °C |
|-----------------|-----------------|

Density and/or relative density

| | |
|-------------------------|---|
| Density | not determined |
| Relative vapour density | information on this property is not available |

| | |
|--------------------------|-----------------------|
| Particle characteristics | not relevant (liquid) |
|--------------------------|-----------------------|

9.2 Other information

| | |
|--|------------------------------------|
| Information with regard to physical hazard classes | there is no additional information |
|--|------------------------------------|

Other safety characteristics

| | |
|--------------------------------------|--|
| Solid content | 0 % |
| Temperature class (EU, acc. to ATEX) | T3 (maximum permissible surface temperature on the equipment: 200°C) |

SECTION 10: Stability and reactivity**10.1 Reactivity**

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture.

10.4 Conditions to avoid

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

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidisers

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10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)**Acute toxicity**

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful in contact with skin or if inhaled.

| Acute toxicity of components of the mixture | | | | | |
|---|------------|--------------------|----------|----------------------|---------|
| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | oral | LD50 | >5.840 mg/kg | rat |
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | inhalation: vapour | LC50 | >23,3 mg/l/4h | rat |
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | dermal | LD50 | >2.800 – 3.100 mg/kg | rat |
| isobutanol | 78-83-1 | inhalation: vapour | LC50 | 24,6 mg/l/4h | rat |
| isobutanol | 78-83-1 | oral | LD50 | 3.350 mg/kg | rat |
| isobutanol | 78-83-1 | dermal | LD50 | 2.460 mg/kg | rabbit |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

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Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

May be fatal if swallowed and enters airways.

Other information

Repeated exposure may cause skin dryness or cracking.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Acc. to 1272/2008/EC: Toxic to aquatic life with long lasting effects.

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV): WGK 2, obviously hazardous to water (Germany)

Aquatic toxicity (acute) of components of the mixture

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|---|------------|----------|------------|-----------------------|---------------|
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | LL50 | 10 mg/l | fish | 96 h |
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | EL50 | 22 mg/l | aquatic invertebrates | 24 h |
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | EC50 | 0,64 mg/l | aquatic invertebrates | 48 h |
| isobutanol | 78-83-1 | LC50 | 1.430 mg/l | fish | 96 h |
| isobutanol | 78-83-1 | EC50 | 1.100 mg/l | aquatic invertebrates | 48 h |
| isobutanol | 78-83-1 | ErC50 | 1.799 mg/l | algae | 72 h |

Aquatic toxicity (chronic) of components of the mixture

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|---|------------|----------|-----------|-----------------------|---------------|
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | EL50 | 1,6 mg/l | aquatic invertebrates | 21 d |
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | EC50 | 0,23 mg/l | aquatic invertebrates | 21 d |

Biodegradation

Data are not available.

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12.2 Persistence and degradability

Degradability of components of the mixture

| Name of substance | CAS No | Process | Degradation rate | Time | Method | Source |
|---|------------|------------------|------------------|------|--------|--------|
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | oxygen depletion | 83 % | 16 d | | ECHA |
| isobutanol | 78-83-1 | oxygen depletion | 70 – 80 % | 28 d | | ECHA |

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

| Name of substance | CAS No | BCF | Log KOW | BOD5/COD |
|---|------------|-----|------------------------|----------|
| Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics | 64742-49-0 | | 4 – 5,7 | |
| isobutanol | 78-83-1 | | 1 (pH value: 7, 25 °C) | |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Information on this property is not available.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

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Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number

| | |
|-------------|---------|
| ADR/RID/ADN | UN 1993 |
| IMDG-Code | UN 1993 |
| ICAO-TI | UN 1993 |

14.2 UN proper shipping name

| | |
|--|---|
| ADR/RID/ADN | FLAMMABLE LIQUID, N.O.S. |
| IMDG-Code | FLAMMABLE LIQUID, N.O.S. |
| ICAO-TI | Flammable liquid, n.o.s. |
| Technical name (Hazardous ingredients) | Kohlenwasserstoffe, C7-C9, n-Alkane, Isoalkane, Cycloalkane, isobutanol |

14.3 Transport hazard class(es)

| | |
|-------------|---|
| ADR/RID/ADN | 3 |
| IMDG-Code | 3 |
| ICAO-TI | 3 |

14.4 Packing group

| | |
|-------------|----|
| ADR/RID/ADN | II |
| IMDG-Code | II |
| ICAO-TI | II |

14.5 Environmental hazards

| | |
|---|---|
| | hazardous to the aquatic environment |
| Environmentally hazardous substance (aquatic environment) | Kohlenwasserstoffe, C7-C9, n-Alkane, Isoalkane, Cycloalkane |

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - additional information

| | |
|---------------------|------------------|
| Classification code | F1 |
| Danger label(s) | 3, fish and tree |



| | |
|--------------------------|--|
| Environmental hazards | yes (hazardous to the aquatic environment) |
| Special provisions (SP) | 274, 601, 640D |
| Excepted quantities (EQ) | E2 |

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| | |
|-------------------------------|-----|
| Limited quantities (LQ) | 1 L |
| Transport category (TC) | 2 |
| Tunnel restriction code (TRC) | D/E |
| Hazard identification No | 33 |

International Maritime Dangerous Goods Code (IMDG) - additional information

| | |
|------------------|--|
| Marine pollutant | yes (hazardous to the aquatic environment) (Kohlenwasserstoffe, C7-C9, n-Alkane, Isoalkane, Cycloalkane) |
| Danger label(s) | 3, fish and tree |



| | |
|--------------------------|-----------------|
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 L |
| EmS | F-E, <u>S-E</u> |
| Stowage category | B |

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

| | |
|-----------------------|--|
| Environmental hazards | yes (hazardous to the aquatic environment) |
| Danger label(s) | 3 |



| | |
|--------------------------|-----|
| Special provisions (SP) | A3 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 L |

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

VOC Deco-Paint Directive 2004/42/EC

| | |
|-------------|-------|
| VOC content | 100 % |
|-------------|-------|

Industrial Emissions Directive (IED)

| | |
|-------------|-------|
| VOC content | 100 % |
|-------------|-------|

National regulations (Austria)

Ordinance on combustible liquids (VbF)

- VbF (group and hazard class) AI (combustible liquids of group A, hazard class I)

National regulations (Germany)

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Wassergefährdungsklasse, WGK 2 obviously hazardous to water
(water hazard class)

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National regulations Switzerland

Ordinance on the incentive tax on volatile organic compounds (VOCV)

VOC content (object of taxation): 100 %

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|-----------------|---|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road) |
| ADR/RID/ADN | European Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN) |
| AGW | Workplace exposure limit |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard |
| Asp. Tox. | Aspiration hazard |
| BCF | Bioconcentration factor |
| BOD | Biochemical Oxygen Demand |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| COD | Chemical oxygen demand |
| DFG | Deutsche Forschungsgemeinschaft MAK-und BAT-Werte-Liste, Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Wiley-VCH, Weinheim |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| EL50 | Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |

Spezialbenzin 100/140 vergällt (Isobutanol)

Version number: 1.0

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| Abbr. | Descriptions of used abbreviations |
|-------------|---|
| Flam. Liq. | Flammable liquid |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| GKV | Grenzwerteverordnung |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |
| IMDG-Code | International Maritime Dangerous Goods Code |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| LD50 | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval |
| LL50 | Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality |
| log KOW | n-Octanol/water |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| ppm | Parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| STEL | Short-term exposure limit |
| STOT SE | Specific target organ toxicity - single exposure |
| SUVA | Grenzwerte am Arbeitsplatz, Suva |
| TRGS | Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany) |
| TRGS 900 | Arbeitsplatzgrenzwerte (TRGS 900) |
| TWA | Time-weighted average |
| VbF | Ordinance on combustible liquids (Austria) |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |

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Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

| Code | Text |
|------|--|
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H411 | Toxic to aquatic life with long lasting effects. |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.