

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



HHS 2000 - 500 ML

| | | | |
|---------|----------------|----------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 09.03.2023 |
| 13.1 | 03.07.2023 | 10665496-00016 | Date of first issue: 11.06.2010 |

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

1.1 Product identifier

Trade name : HHS 2000 - 500 ML

Product code : 0893106

Unique Formula Identifier (UFI) : A9RC-Q0DF-S00S-HXY0

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

Use of the Sub-stance/Mixture : Professional use product
Lubricant

Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : Adolf Wuerth GmbH & Co. KG
Reinhold-Würth-Str. 12-17
74653 Künzelsau

Telephone : +49 794015 0

Telefax : +49 794015 10 00

E-mail address of person responsible for the SDS : isi@wuerth.com

1.4 Emergency telephone number

+49 (0)6132 – 84463

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

| | |
|--|---|
| Aerosols, Category 1 | H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated. |
| Skin irritation, Category 2 | H315: Causes skin irritation. |
| Specific target organ toxicity - single exposure, Category 3 | H336: May cause drowsiness or dizziness. |
| Long-term (chronic) aquatic hazard, Cat- | H412: Harmful to aquatic life with long lasting ef- |

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Category 3

Effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P261 Avoid breathing spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.

Storage:

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Hazardous components which must be listed on the label:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

| Chemical name | CAS-No. EC-No. Index-No. Registration number | Classification | Concentration (% w/w) |
|---|---|---|--------------------------|
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane | Not Assigned 01-2119475514-35 | Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411 | >= 2,5 - < 10 |
| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | 64742-49-0 01-2119475515-33 | Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411 | >= 2,5 - < 10 |

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- If inhaled : If inhaled, remove to fresh air.
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.

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4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes skin irritation.
May cause drowsiness or dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

Hazardous combustion products : Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

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6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapours/mists with a water spray jet.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.
Avoid breathing spray.
Do not swallow.
Avoid contact with eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment

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Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.
Do not spray on an open flame or other ignition source.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Do not pierce or burn, even after use. Keep cool. Protect from sunlight.

Advice on common storage : Do not store with the following product types:
Self-reactive substances and mixtures
Organic peroxides
Oxidizing agents
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures, which in contact with water, emit flammable gases
Explosives
Gases

Storage class (TRGS 510) : 2B

Storage period : 24 Months

Recommended storage temperature : > 0 - < 40 °C

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

| Components | CAS-No. | Value type (Form | Control parameters | Basis |
|------------|---------|------------------|--------------------|-------|
|------------|---------|------------------|--------------------|-------|

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| | | | | |
|---|--|---------------------------|--------------------------------------|----------------|
| | | of exposure) | | |
| Isobutane | 75-28-5 | AGW | 1.000 ppm 2.400 mg/m ³ | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 4;(II) | | | |
| Residual oils (petroleum), hydrotreated | 64742-57-0 | AGW (Vapour and aerosols) | 5 mg/m ³ | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 4;(II) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| Propane | 74-98-6 | AGW | 1.000 ppm 1.800 mg/m ³ | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 4;(II) | | | |
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane | Not Assigned | AGW | 700 mg/m ³ | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(II) | | | |
| | Further information: Group exposure limit for hydrocarbon solvent mixtures | | | |
| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | 64742-49-0 | TWA | 500 ppm 2.085 mg/m ³ | 2000/39/EC |
| | Further information: Indicative | | | |
| | | AGW | 500 ppm 2.100 mg/m ³ | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 1;(I) | | | |
| Butane | 106-97-8 | AGW | 1.000 ppm 2.400 mg/m ³ | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 4;(II) | | | |

Biological occupational exposure limits

| Substance name | CAS-No. | Control parameters | Sampling time | Basis |
|--|------------|--|---|----------|
| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | 64742-49-0 | heptan-2,5-dione: 250 µg/l (Urine) | Immediately after exposure or after working hours | TRGS 903 |

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|-----------|-----------------|----------------------------|------------------------|
| Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane | Workers | Inhalation | Long-term systemic effects | 2035 mg/m ³ |
| | Workers | Skin contact | Long-term systemic effects | 773 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 608 mg/m ³ |
| | Consumers | Skin contact | Long-term systemic effects | 699 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 699 mg/kg bw/day |

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|--|-----------|--------------|----------------------------|------------------------|
| Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics | Workers | Inhalation | Long-term systemic effects | 2085 mg/m ³ |
| | Workers | Skin contact | Long-term systemic effects | 300 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 447 mg/m ³ |
| | Consumers | Skin contact | Long-term systemic effects | 149 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 149 mg/kg bw/day |

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

| Substance name | Environmental Compartment | Value |
|---|----------------------------|-----------------|
| Residual oils (petroleum), hydrotreated | Oral (Secondary Poisoning) | 9,33 mg/kg food |

8.2 Exposure controls

Engineering measures

Minimize workplace exposure concentrations.

If sufficient ventilation is unavailable, use with local exhaust ventilation.

If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Personal protective equipment

Eye/face protection : Wear the following personal protective equipment:
Safety glasses
Equipment should conform to DIN EN 166

Hand protection

Material : Nitrile rubber
Break through time : 480 min
Glove thickness : 0,45 mm
Directive : Equipment should conform to DIN EN 374

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Wear the following personal protective equipment:
If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

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Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. Equipment should conform to DIN EN 14387

Filter type : Organic gas and low boiling vapour type (AX)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : Aerosol containing a liquefied gas

Propellant : Isobutane, Propane, Butane

Colour : brown

Odour : characteristic

Odour Threshold : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : -40 °C

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit / Upper flammability limit : 15 %(V)

Lower explosion limit / Lower flammability limit : 1,0 %(V)

Flash point : Not applicable

Auto-ignition temperature : > 200 °C

Decomposition temperature : No data available

pH : substance/mixture is non-soluble (in water)

Viscosity
Viscosity, kinematic : > 20,5 mm²/s (40 °C)

Solubility(ies)
Water solubility : insoluble

Partition coefficient: n-octanol/water : Not applicable

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| | | |
|---|---|--|
| Vapour pressure | : | Not applicable |
| Density | : | 0,829 g/cm ³ (20 °C) Method: DIN 51757 |
| Relative vapour density | : | Not applicable |
| Particle characteristics Particle size | : | Not applicable |

9.2 Other information

| | | |
|----------------------|---|--|
| Explosives | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Evaporation rate | : | Not applicable |

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

| | | |
|---------------------|---|---|
| Hazardous reactions | : | Extremely flammable aerosol. Vapours may form explosive mixture with air. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. Can react with strong oxidizing agents. |
|---------------------|---|---|

10.4 Conditions to avoid

| | | |
|---------------------|---|--------------------------|
| Conditions to avoid | : | Heat, flames and sparks. |
|---------------------|---|--------------------------|

10.5 Incompatible materials

| | | |
|--------------------|---|------------------|
| Materials to avoid | : | Oxidizing agents |
|--------------------|---|------------------|

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

| | | |
|--|---|--|
| Information on likely routes of exposure | : | Inhalation Skin contact Ingestion Eye contact |
|--|---|--|

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Acute toxicity

Not classified based on available information.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 25,2 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Acute oral toxicity : LD50 (Rat): > 5.840 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 23,3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2.800 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes skin irritation.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Species : Rabbit
Result : Skin irritation
Remarks : Based on data from similar materials

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species : Rabbit
Result : No eye irritation

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Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

| | | |
|---------|---|--------------------------------------|
| Species | : | Rabbit |
| Result | : | No eye irritation |
| Remarks | : | Based on data from similar materials |

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

| | | |
|-----------------|---|--------------|
| Test Type | : | Buehler Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Result | : | negative |

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

| | | |
|-----------------|---|--------------------------------------|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

Germ cell mutagenicity

Not classified based on available information.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

| | | |
|-----------------------|---|--|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES) Result: negative |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Rat Application Route: inhalation (vapour) Method: OPPTS 870.5395 Result: negative |

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

| | | |
|-----------------------|---|---|
| Genotoxicity in vitro | : | Test Type: Chromosome aberration test in vitro Result: negative Remarks: Based on data from similar materials |
|-----------------------|---|---|

Test Type: Bacterial reverse mutation assay (AMES)

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Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity- Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Carcinogenicity

Not classified based on available information.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species : Mouse
Application Route : Skin contact
Exposure time : 102 weeks
Result : negative

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Carcinogenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Reproductive toxicity

Not classified based on available information.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (vapour)
Result: negative

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Fertility/early embryonic development
Species: Rat

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Application Route: inhalation (vapour)
Result: negative
Remarks: Based on data from similar materials

STOT - single exposure

May cause drowsiness or dizziness.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Assessment : May cause drowsiness or dizziness.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Assessment : May cause drowsiness or dizziness.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species : Rat
NOAEL : > 20 mg/l
Application Route : inhalation (vapour)
Exposure time : 13 Weeks

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Species : Rat
NOAEL : 12,47 mg/l
Application Route : Inhalation
Exposure time : 90 Days
Remarks : Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

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11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): 8,2 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 4,5 mg/l
aquatic invertebrates : Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic : EL50 (Pseudokirchneriella subcapitata (green algae)): 3,1
plants : mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOELR (Pseudokirchneriella subcapitata (green algae)): 0,5
mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other : NOELR: 2,6 mg/l
aquatic invertebrates (Chronic toxicity) : Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 13,4 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction

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Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 3 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Selenastrum capricornutum (green algae)): > 10 - 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOELR (Selenastrum capricornutum (green algae)): 0,1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,17 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

12.2 Persistence and degradability

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 77,05 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Partition coefficient: n-octanol/water : log Pow: 4
Remarks: Based on data from similar materials

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Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Based on data from similar materials

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product. Please ensure aerosol cans are sprayed completely empty (including propellant)

Waste Code : The following Waste Codes are only suggestions:
used product

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16 05 04, gases in pressure containers (including halons)
containing hazardous substances

unused product
16 05 04, gases in pressure containers (including halons)
containing hazardous substances

uncleaned packagings
15 01 10, packaging containing residues of or contaminated
by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

ADN : UN 1950
ADR : UN 1950
RID : UN 1950
IMDG : UN 1950
IATA : UN 1950

14.2 UN proper shipping name

ADN : AEROSOLS
ADR : AEROSOLS
RID : AEROSOLS
IMDG : AEROSOLS
IATA : Aerosols, flammable

14.3 Transport hazard class(es)

| | Class | Subsidiary risks |
|------|-------|------------------|
| ADN | : 2 | 2.1 |
| ADR | : 2 | 2.1 |
| RID | : 2 | 2.1 |
| IMDG | : 2.1 | |
| IATA | : 2.1 | |

14.4 Packing group

ADN
Packing group : Not assigned by regulation
Classification Code : 5F
Labels : 2.1

ADR
Packing group : Not assigned by regulation
Classification Code : 5F

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Labels : 2.1
Tunnel restriction code : (D)

RID

Packing group : Not assigned by regulation
Classification Code : 5F
Hazard Identification Number : 23
Labels : 2.1

IMDG

Packing group : Not assigned by regulation
Labels : 2.1
EmS Code : F-D, S-U

IATA (Cargo)

Packing instruction (cargo aircraft) : 203
Packing instruction (LQ) : Y203
Packing group : Not assigned by regulation
Labels : Flammable Gas

IATA (Passenger)

Packing instruction (passenger aircraft) : 203
Packing instruction (LQ) : Y203
Packing group : Not assigned by regulation
Labels : Flammable Gas

14.5 Environmental hazards

ADN

Environmentally hazardous : no

ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on : Conditions of restriction for the fol-

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the market and use of certain dangerous substances,
mixtures and articles (Annex XVII)

lowing entries should be considered:
Number on list 75
If you intend to use this product as
tattoo ink, please contact your ven-
dor.

REACH - Candidate List of Substances of Very High
Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that de-
plete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollu-
tants (recast) : Not applicable

Regulation (EC) No 649/2012 of the European Parlia-
ment and the Council concerning the export and import
of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation
(Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of
major-accident hazards involving dangerous substances.

| | | Quantity 1 | Quantity 2 |
|-----|---|------------|------------|
| P3a | FLAMMABLE AEROSOLS | 150 t | 500 t |
| 18 | Liquefied flammable gases (including LPG) and natural gas | 50 t | 200 t |
| 34 | Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (includ- ing diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alterna- tive fuels serving the same purposes and with similar properties as regards flammability and environ- mental hazards as the products referred to in points (a) to (d) | 2.500 t | 25.000 t |

Water hazard class (Germa-
ny) : WGK 2 obviously hazardous to water
Classification according to AwSV, Annex 1 (5.2)

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial
emissions (integrated pollution prevention and control)

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Volatile organic compounds (VOC) content: 80,92 %, 505 g/l

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H225 : Highly flammable liquid and vapour.
H304 : May be fatal if swallowed and enters airways.
H315 : Causes skin irritation.
H336 : May cause drowsiness or dizziness.
H411 : Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Chronic : Long-term (chronic) aquatic hazard
Asp. Tox. : Aspiration hazard
Flam. Liq. : Flammable liquids
Skin Irrit. : Skin irritation
STOT SE : Specific target organ toxicity - single exposure
2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.
TRGS 903 : TRGS 903 - Biological limit values
2000/39/EC / TWA : Limit Value - eight hours
DE TRGS 900 / AGW : Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization;

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KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Classification of the mixture:

| | |
|-------------------|------------|
| Aerosol 1 | H222, H229 |
| Skin Irrit. 2 | H315 |
| STOT SE 3 | H336 |
| Aquatic Chronic 3 | H412 |

Classification procedure:

| |
|-------------------------------------|
| Based on product data or assessment |
| Calculation method |
| Calculation method |
| Based on product data or assessment |

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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