

Creation Date 10-Oct-2006

Revision Date 10-Feb-2024

Revision Number 4

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

| | |
|---------------------------|--------------------|
| Product Description: | 2-Heptanone |
| Cat No. : | A10200 |
| Synonyms | Methyl amyl ketone |
| Index No | 606-024-00-3 |
| CAS No | 110-43-0 |
| EC No | 203-767-1 |
| Molecular Formula | C7 H14 O |
| REACH registration number | - |

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

| | |
|----------------------|--------------------------|
| Recommended Use | Laboratory chemicals. |
| Uses advised against | No Information available |

1.3. Details of the supplier of the safety data sheet

Company

Thermo Fisher (Kandel) GmbH
Erlenbachweg 2, 76870 Kandel, Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300

Swiss distributor - Fisher Scientific AG
Neuhofstrasse 11, CH 4153 Reinach
Tel: +41 (0) 56 618 41 11
<https://www.fishersci.ch/ch/en/customer-help-support/forms/email-us.html>

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:
Tox Info Suisse Emergency Number: **145 (24hr)**
Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)
Chemtrec (24h) Toll-Free: 0800 564 402
Chemtrec Local: +41-43 508 20 11 (Zurich)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Flammable liquids

Category 3 (H226)

Health hazards

Acute oral toxicity

Category 4 (H302)

Acute Inhalation Toxicity - Vapors

Category 4 (H332)

Specific target organ toxicity - (single exposure)

Category 3 (H336)

Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

2.2. Label elements



Signal Word

Warning

Hazard Statements

H226 - Flammable liquid and vapor

H336 - May cause drowsiness or dizziness

H302 + H332 - Harmful if swallowed or if inhaled

Precautionary Statements

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P312 - Call a POISON CENTER or doctor if you feel unwell

P264 - Wash face, hands and any exposed skin thoroughly after handling

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

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

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

| Component | CAS No | EC No | Weight % | CLP Classification - Regulation (EC) No 1272/2008 |
|-----------|--------|-------|----------|---|
|-----------|--------|-------|----------|---|

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| | | | | |
|-------------|----------|-------------------|-----|---|
| 2-Heptanone | 110-43-0 | EEC No. 203-767-1 | >95 | Acute Tox. 4 (H302) Acute Tox. 4 (H332) STOT SE 3 (H336) Flam. Liq. 3 (H226) |
|-------------|----------|-------------------|-----|---|

| | |
|---------------------------|---|
| REACH registration number | - |
|---------------------------|---|

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

| | |
|------------------------------------|--|
| General Advice | If symptoms persist, call a physician. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. |
| Inhalation | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. |
| Self-Protection of the First Aider | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |

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

. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

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

| | |
|--------------------|------------------------|
| Notes to Physician | Treat symptomatically. |
|--------------------|------------------------|

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2. Environmental precautions

Should not be released into the environment.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area.

Technical Rules for Hazardous Substances (TRGS) 510
Storage Class (LGK) (Germany)

Class 3

Switzerland - Storage of hazardous substances

Storage class - SC 3
<https://www.kvu.ch/de/themen/stoffe-und-produkte>
<https://www.kvu.ch/fr/themes/substances-et-produits>
<https://www.kvu.ch/it/temi/sostanze-e-prodotti>

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund).

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| Component | European Union | The United Kingdom | France | Belgium | Spain |
|-------------|---|---|--|---|---|
| 2-Heptanone | TWA: 50 ppm (8h) TWA: 238 mg/m ³ (8h) STEL: 100 ppm (15min) STEL: 475 mg/m ³ (15min) Skin | STEL: 100 ppm 15 min STEL: 475 mg/m ³ 15 min TWA: 50 ppm 8 hr TWA: 237 mg/m ³ 8 hr Skin | TWA / VME: 50 ppm (8 heures). restrictive limit TWA / VME: 238 mg/m ³ (8 heures). restrictive limit STEL / VLCT: 100 ppm. restrictive limit STEL / VLCT: 475 mg/m ³ . restrictive limit Peau | TWA: 50 ppm 8 uren TWA: 238 mg/m ³ 8 uren STEL: 100 ppm 15 minuten STEL: 475 mg/m ³ 15 minuten Huid | STEL / VLA-EC: 100 ppm (15 minutos). STEL / VLA-EC: 474 mg/m ³ (15 minutos). TWA / VLA-ED: 50 ppm (8 horas) TWA / VLA-ED: 237 mg/m ³ (8 horas) Piel |

| Component | Italy | Germany | Portugal | The Netherlands | Finland |
|-------------|--|---|---|-----------------------------------|---|
| 2-Heptanone | TWA: 50 ppm 8 ore. Time Weighted Average TWA: 238 mg/m ³ 8 ore. Time Weighted Average STEL: 100 ppm 15 minuti. Short-term STEL: 475 mg/m ³ 15 minuti. Short-term Pelle | TWA: 238 mg/m ³ (8 Stunden). AGW - exposure factor 2 Haut | STEL: 100 ppm 15 minutos STEL: 475 mg/m ³ 15 minutos TWA: 50 ppm 8 horas TWA: 238 mg/m ³ 8 horas Pele | TWA: 233 mg/m ³ 8 uren | TWA: 50 ppm 8 tunteina TWA: 240 mg/m ³ 8 tunteina STEL: 75 ppm 15 minuutteina STEL: 360 mg/m ³ 15 minuutteina Iho |

| Component | Austria | Denmark | Switzerland | Poland | Norway |
|-------------|---|--|---|---|--|
| 2-Heptanone | Haut MAK-KZGW: 100 ppm 15 Minuten MAK-KZGW: 473 mg/m ³ 15 Minuten MAK-TMW: 50 ppm 8 Stunden MAK-TMW: 237 mg/m ³ 8 Stunden | TWA: 50 ppm 8 timer TWA: 238 mg/m ³ 8 timer STEL: 475 mg/m ³ 15 minutter STEL: 100 ppm 15 minutter Hud | TWA: 50 ppm 8 Stunden TWA: 235 mg/m ³ 8 Stunden | STEL: 475 mg/m ³ 15 minutach TWA: 238 mg/m ³ 8 godzinach | TWA: 25 ppm 8 timer TWA: 115 mg/m ³ 8 timer STEL: 37.5 ppm 15 minutter. value calculated STEL: 143.75 mg/m ³ 15 minutter. value calculated Hud |

| Component | Bulgaria | Croatia | Ireland | Cyprus | Czech Republic |
|-------------|--|---|---|--|--|
| 2-Heptanone | TWA: 50 ppm TWA: 238.0 mg/m ³ STEL : 100 ppm STEL : 475.0 mg/m ³ Skin notation | kože TWA-GVI: 50 ppm 8 satima. TWA-GVI: 238 mg/m ³ 8 satima. STEL-KGVI: 100 ppm 15 minutama. STEL-KGVI: 475 mg/m ³ 15 minutama. | TWA: 50 ppm 8 hr. TWA: 238 mg/m ³ 8 hr. STEL: 100 ppm 15 min STEL: 475 mg/m ³ 15 min Skin | Skin-potential for cutaneous absorption STEL: 100 ppm STEL: 475 mg/m ³ TWA: 50 ppm TWA: 238 mg/m ³ | TWA: 150 mg/m ³ 8 hodinách. Potential for cutaneous absorption Ceiling: 300 mg/m ³ |

| Component | Estonia | Gibraltar | Greece | Hungary | Iceland |
|-------------|---|--|--|--|--|
| 2-Heptanone | Nahk TWA: 50 ppm 8 tundides. TWA: 238 mg/m ³ 8 tundides. STEL: 100 ppm 15 minutites. STEL: 475 mg/m ³ 15 minutites. | Skin notation TWA: 50 ppm 8 hr TWA: 238 mg/m ³ 8 hr STEL: 100 ppm 15 min STEL: 475 mg/m ³ 15 min | STEL: 100 ppm STEL: 465 mg/m ³ TWA: 100 ppm TWA: 465 mg/m ³ | STEL: 476 mg/m ³ 15 percekben. CK TWA: 238 mg/m ³ 8 órában. AK lehetséges bőrön keresztüli felszívódás | STEL: 100 ppm STEL: 475 mg/m ³ TWA: 50 ppm 8 klukkustundum. TWA: 238 mg/m ³ 8 klukkustundum. Skin notation |

| Component | Latvia | Lithuania | Luxembourg | Malta | Romania |
|-------------|--|---|---|---|--|
| 2-Heptanone | skin - potential for cutaneous exposure STEL: 100 ppm STEL: 475 mg/m ³ TWA: 50 ppm TWA: 238 mg/m ³ | TWA: 120 mg/m ³ IPRD TWA: 25 ppm IPRD Oda STEL: 250 mg/m ³ STEL: 50 ppm | Possibility of significant uptake through the skin TWA: 50 ppm 8 Stunden TWA: 238 mg/m ³ 8 Stunden STEL: 100 ppm 15 Minuten STEL: 475 mg/m ³ 15 Minuten | possibility of significant uptake through the skin TWA: 50 ppm TWA: 238 mg/m ³ STEL: 100 ppm 15 minuti STEL: 475 mg/m ³ 15 minuti | Skin notation TWA: 50 ppm 8 ore TWA: 238 mg/m ³ 8 ore STEL: 100 ppm 15 minute STEL: 475 mg/m ³ 15 minute |

| Component | Russia | Slovak Republic | Slovenia | Sweden | Turkey |
|-------------|--------|--------------------------------|--------------------|-----------------------|--------|
| 2-Heptanone | | Ceiling: 475 mg/m ³ | TWA: 50 ppm 8 urah | Binding STEL: 100 ppm | Deri |

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| | | | | | |
|--|--|---|---|--|---|
| | | Potential for cutaneous absorption TWA: 50 ppm TWA: 238 mg/m ³ | TWA: 238 mg/m ³ 8 urah Koža STEL: 100 ppm 15 minutah STEL: 475 mg/m ³ 15 minutah | 15 minuter Binding STEL: 475 mg/m ³ 15 minuter TLV: 25 ppm 8 timmar. NGV TLV: 120 mg/m ³ 8 timmar. NGV | TWA: 50 ppm 8 saat TWA: 238 mg/m ³ 8 saat STEL: 100 ppm 15 dakika STEL: 475 mg/m ³ 15 dakika |
|--|--|---|---|--|---|

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapours

MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography

MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|---------------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| 2-Heptanone 110-43-0 (>95) | | | | DNEL = 54.27mg/kg bw/day |

| Component | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|---------------------------------|----------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
| 2-Heptanone 110-43-0 (>95) | | DNEL = 1516mg/m ³ | | DNEL = 394.25mg/m ³ |

Predicted No Effect Concentration (PNEC)

See values below.

| Component | Fresh water | Fresh water sediment | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture) |
|---------------------------------|----------------------|---------------------------------|--------------------|------------------------------------|------------------------------|
| 2-Heptanone 110-43-0 (>95) | PNEC = 0.0982mg/L | PNEC = 1.89mg/kg sediment dw | PNEC = 0.982mg/L | PNEC = 12.5mg/L | PNEC = 0.321mg/kg soil dw |

| Component | Marine water | Marine water sediment | Marine water Intermittent | Food chain | Air |
|---------------------------------|-----------------------|-------------------------------------|---------------------------|------------|-----|
| 2-Heptanone 110-43-0 (>95) | PNEC = 0.00982mg/L | PNEC = 0.189mg/kg sediment dw | | | |

8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

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Personal protective equipment

Eye Protection

Goggles (European standard - EN 166)

Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments |
|----------------|-------------------|-----------------|-------------|-----------------------|
| Natural rubber | See manufacturers | - | EN 374 | (minimum requirement) |
| Nitrile rubber | recommendations | | | |
| Neoprene | | | | |
| PVC | | | | |

Skin and body protection

Long sleeved clothing.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387

Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141
When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | | |
|---|-------------------------------|-----------------------------------|
| Physical State | Liquid | |
| Appearance | Colorless | |
| Odor | aromatic | |
| Odor Threshold | No data available | |
| Melting Point/Range | -35 °C / -31 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | 149 - 150 °C / 300.2 - 302 °F | @ 760 mmhg |
| Flammability (liquid) | Flammable | On basis of test data |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | No data available | |
| Flash Point | 39 °C / 102.2 °F | Method - No information available |
| Autoignition Temperature | 532 °C / 989.6 °F | |
| Decomposition Temperature | No data available | |
| pH | No information available | |
| Viscosity | No data available | |
| Water Solubility | 4.3 g/L (20°C) | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Component | log Pow | |
| 2-Heptanone | 2.26 | |
| Vapor Pressure | No data available | |
| Density / Specific Gravity | 0.820 | |
| Bulk Density | Not applicable | Liquid |

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Vapor Density No data available (Air = 1.0)
Particle characteristics Not applicable (liquid)

9.2. Other information

Molecular Formula C7 H14 O
Molecular Weight 114.19
Explosive Properties explosive air/vapour mixtures possible

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity None known, based on information available

10.2. Chemical stability Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization Hazardous polymerization does not occur.
Hazardous Reactions None under normal processing.

10.4. Conditions to avoid Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials Strong oxidizing agents.

10.6. Hazardous decomposition products Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

(a) acute toxicity;
Oral Category 4
Dermal Based on available data, the classification criteria are not met
Inhalation Category 4

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------|--|-----------------------|-----------------------------|
| 2-Heptanone | 1600 mg/kg (Rat) 1670 mg/kg (Rat) | 12.6 mL/kg (Rabbit) | 2000 - 4000 ppm (Rat) 6 h |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;
Respiratory No data available
Skin No data available

(e) germ cell mutagenicity; No data available

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(f) carcinogenicity; No data available
There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; Category 3
Results / Target organs Central nervous system (CNS).

(i) STOT-repeated exposure; No data available
Target Organs No information available.

(j) aspiration hazard; No data available

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects Do not empty into drains. .

| Component | Freshwater Fish | Water Flea | Freshwater Algae |
|-------------|--|------------|------------------|
| 2-Heptanone | LC50: 126 - 137 mg/L, 96h flow-through (Pimephales promelas) | | |

12.2. Persistence and degradability

Persistence Persistence is unlikely.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

| Component | log Pow | Bioconcentration factor (BCF) |
|-------------|---------|-------------------------------|
| 2-Heptanone | 2.26 | No data available |

12.4. Mobility in soil

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

12.5. Results of PBT and vPvB assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6. Endocrine disrupting properties

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

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12.7. Other adverse effects
Persistent Organic Pollutant
Ozone Depletion Potential

This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

European Waste Catalogue (EWC)

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.

Switzerland - Waste Ordinance

Disposal should be in accordance with applicable regional, national and local laws and regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) SR 814.600
<https://www.fedlex.admin.ch/eli/cc/2015/891/en>

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

| | |
|---|--------------------|
| 14.1. UN number | UN1110 |
| 14.2. UN proper shipping name | AMYL METHYL KETONE |
| 14.3. Transport hazard class(es) | 3 |
| 14.4. Packing group | III |

ADR

| | |
|---|----------------------|
| 14.1. UN number | UN1110 |
| 14.2. UN proper shipping name | n-AMYL METHYL KETONE |
| 14.3. Transport hazard class(es) | 3 |
| 14.4. Packing group | III |

IATA

| | |
|---|----------------------|
| 14.1. UN number | UN1110 |
| 14.2. UN proper shipping name | n-AMYL METHYL KETONE |
| 14.3. Transport hazard class(es) | 3 |
| 14.4. Packing group | III |

14.5. Environmental hazards

No hazards identified

14.6. Special precautions for user

No special precautions required.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component | CAS No | EINECS | ELINCS | NLP | IECSC | TCSI | KECL | ENCS | ISHL |
|-------------|----------|-----------|--------|-----|-------|------|----------|------|------|
| 2-Heptanone | 110-43-0 | 203-767-1 | - | - | X | X | KE-18303 | X | X |

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|-------------|----------|------|---|-----|------|------|-------|-------|
| 2-Heptanone | 110-43-0 | X | ACTIVE | X | - | X | X | X |

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

Authorisation/Restrictions according to EU REACH

Not applicable

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------|----------|---|---|---|
| 2-Heptanone | 110-43-0 | - | - | - |

Seveso III Directive (2012/18/EC)

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|-------------|----------|---|--|
| 2-Heptanone | 110-43-0 | Not applicable | Not applicable |

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification

See table for values

| Component | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|-------------|---------------------------------------|-------------------------|
| 2-Heptanone | WGK1 | |

| Component | France - INRS (Tables of occupational diseases) |
|-------------|--|
| 2-Heptanone | Tableaux des maladies professionnelles (TMP) - RG 84 |

Swiss Regulations

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

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15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H332 - Harmful if inhaled

H336 - May cause drowsiness or dizziness

H226 - Flammable liquid and vapor

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (volatile organic compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Prepared By

Health, Safety and Environmental Department

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Revision Summary

New emergency telephone response service provider.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 .

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

Disclaimer

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End of Safety Data Sheet