SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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

1.1 Product identifier
Catalogue No. 107174
Product name Paraffin highly liquid Ph Eur,BP,NF,JP
REACH Registration Number A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
CAS-No. 8042-47-5

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses Pharmaceutical production, Reagent for development and research, Cosmetic raw material
For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).

1.3 Details of the supplier of the safety data sheet
Company Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number +44 870 1906777

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)

Aspiration hazard, Category 1, H304
For the full text of the H-Statements mentioned in this Section, see Section 16.
2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal word
Danger

Hazard statements
H304 May be fatal if swallowed and enters airways.

Precautionary statements
Response
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

CAS-No. 8042-47-5

2.3 Other hazards
None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

EC-No. 232-455-8

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical Name (Concentration)

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Registration number</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>white mineral oil (petroleum) ( \leq 100 % )</td>
<td>8042-47-5 *</td>
<td>Aspiration hazard, Category 1, H304</td>
</tr>
</tbody>
</table>

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
3.2 Mixture
Not applicable

SECTION 4. First aid measures

4.1 Description of first aid measures
After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water.


4.2 Most important symptoms and effects, both acute and delayed
Stomach/intestinal disorders, Pneumonia

4.3 Indication of any immediate medical attention and special treatment needed
No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Carbon dioxide (CO2), Foam, Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Combustible.
Vapours are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters
Special protective equipment for firefighters
In the event of fire, wear self-contained breathing apparatus.
Further information
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions
Do not empty into drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections
Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Observe label precautions.

Hygiene measures
Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
Tightly closed.

Recommended storage temperature see product label.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.
SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Threshold limits</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>white mineral oil (petroleum) (8042-47-5)</td>
<td>ELV (IE)</td>
<td>Time Weighted Average (TWA): 5 mg/m³</td>
<td>Form of exposure: Mist.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short Term Exposure Limit (STEL): 10 mg/m³</td>
<td>Form of exposure: Mist.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time Weighted Average (TWA): 5 mg/m³</td>
<td>Form of exposure: Inhalable fraction.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time Weighted Average (TWA): 0.2 mg/m³</td>
<td>Form of exposure: Inhalable fraction.</td>
<td></td>
</tr>
</tbody>
</table>

Recommended monitoring procedures

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

Glove material: Nitrile rubber
Glove thickness: 0.11 mm
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber
Glove thickness: 0.11 mm
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment
protective clothing

Respiratory protection
required when vapours/aerosols are generated.
Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls
Do not empty into drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form liquid

Colour colourless

Odour mild
Odour Threshold: No information available.

pH: No information available.

Pour point: ca. -15 °C

Boiling point/boiling range: 300 - 450 °C at 1,013 hPa

Flash point: > 180 °C

Evaporation rate: No information available.

Flammability (solid, gas): No information available.

Lower explosion limit: No information available.

Upper explosion limit: No information available.

Vapour pressure: 0.0001 hPa at 20 °C

Relative vapour density: No information available.

Density: 0.85 g/cm³ at 20 °C

Relative density: No information available.

Water solubility: Practically insoluble at 20 °C

Partition coefficient: n-octanol/water: Not applicable

Auto-ignition temperature: 325 - 355 °C

Decomposition temperature: > 350 °C
SECTION 10. Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents

Risk of explosion with:

nitrates, chlorates, perchlorates

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available
SECTION 11. Toxicological information

11.1 Information on toxicological effects

*Acute oral toxicity*

LD50 Rat: > 5,000 mg/kg

(External MSDS)

Symptoms: Stomach/intestinal disorders

*Acute inhalation toxicity*

LC50 Rat: > 5 mg/l; 4 h; dust/mist

(External MSDS)

Symptoms: Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, Pneumonia

*Acute dermal toxicity*

LD50 Rabbit: > 2,000 mg/kg

(External MSDS)

*Skin irritation*

Rabbit

Result: No skin irritation

(External MSDS)

*Eye irritation*

Rabbit

Result: No eye irritation

(External MSDS)

*Sensitisation*

Sensitisation test (Magnusson and Kligman): Guinea pig

Result: negative

Method: OECD Test Guideline 406

*Germ cell mutagenicity*
Genotoxicity in vitro
Ames test
Result: negative

(External MSDS)
Mutagenicity (mammal cell test): chromosome aberration.
Result: negative

(External MSDS)
Carcinogenicity
Did not show carcinogenic effects in animal experiments. (External MSDS)

Reproductive toxicity
This information is not available.

Teratogenicity
This information is not available.

Specific target organ toxicity - single exposure
This information is not available.

Specific target organ toxicity - repeated exposure
This information is not available.

Aspiration hazard
Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

11.2 Further information
Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

12.1 Toxicity
Toxicity to fish
LC50 Leuciscus idus (Golden orfe): > 1,000 mg/l; 96 h
OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea): > 100 mg/l; 48 h
OECD Test Guideline 202

Toxicity to algae
Pseudokirchneriella subcapitata (green algae): >= 100 mg/l; 72 h
OECD Test Guideline 201

12.2 Persistence and degradability
Biodegradability
31.3 %; 28 d
OECD Test Guideline 301F
Inherently biodegradable.

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water

Not applicable

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects
Discharge into the environment must be avoided.
SECTION 13. Disposal considerations

Waste treatment methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Notice Directive on waste 2008/98/EC.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard SEVESO III

Legislation Not applicable
Occupational restrictions  
Take note of Dir 94/33/EC on the protection of young people at work.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer  
not regulated

not regulated

Substances of very high concern (SVHC)  
This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of ≥ 0.1 % (w/w).

National legislation

Storage class  
10 - 13

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

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

H304  
May be fatal if swallowed and enters airways.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms
Signal word
Danger

Hazard statements
H304 May be fatal if swallowed and enters airways.

Precautionary statements
Response
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Key or legend to abbreviations and acronyms used in the safety data sheet
Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation
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information@merckchem.co.uk.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.