

SAFETY DATA SHEET

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Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)

deffner & Johann

2308 301
2308 304

Petroleum Spirit 30 - 75 °C

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Revised edition: 04.02.2020

Version: 4

Printed: 15.04.2021

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product Identifier

Product Name: Petroleum Spirit 30 - 75 °C

Article No.: 2308 301, 2308 304

1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:

Industrial application

Uses advised against:

1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Deffner & Johann GmbH

Address: Mühlackerstraße 13, D-97520 Röhlein, Germany

Tel./Fax.: Tel. +49 9723 9350-0, Fax +49 9723 9350-25

Internet: www.deffner-johann.de

E-Mail: E-Mail: info@deffner-johann.de

Importer:

1.4. Emergency No.

Tel. +49 9723 9350-0 (Mo. - Fr.: 8:00 - 15:00 Uhr)

Emergency No.:

1.4.2 Poison Center:

2. Hazards Identification

2.1. Classification of the Substance or Mixture

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

Flammable liquids, hazard category 2

Aspiration hazard, hazard category 1

Skin irritation, hazard category 2

Specific Target Organ Toxicity (single exposure), hazard category 3

Chronic aquatic toxicity, hazard category 2

H225 Highly flammable liquid and vapour.

Cat.: 2

H304 May be fatal if swallowed and enters airways.

Cat.: 1

H315 Causes skin irritation.

Cat.: 2

H336 May cause drowsiness or dizziness.

Cat.: 3

H411 Toxic to aquatic life with long lasting effects.

Cat.: 2

Possible Environmental Effects:

2.2. Label Elements

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

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Hazard designation:



GHS02-2



GHS07



GHS08



GHS09

Signal word:

Danger

Hazard designation:

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.

Safety designation:

P210	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P301+P310	If swallowed: Immediately call a poison center or physician.
P331	Do not induce vomiting.
P370+P378	In case of fire: use water spray, foam, carbon dioxide or dry extinguishing powder for extinction.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P403+P235	Store in a well ventilated place. Keep cool.

Hazardous components for labelling:

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

2.3. Other Hazards

No information available.

3. Composition/Information on Ingredients

3.1. Substance

3.2. Mixture

Chemical Characterization:

Mixture

Information on Components / Hazardous Ingredients:

Pentane (H224-304-336-411); REACH Reg. No.

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01-2119459286-30-xxxx	40 - 60 %	CAS-Nr: 109-66-0 EINECS-Nr: 203-692-4 EC-Nr: 601-006-00-1
Hydrocarbons, C6, Isoalkane, <5% n-Hexane (H225-315-304-336); REACH Reg. No. 01-2119484651-34-xxxx	25 - 35 %	CAS-Nr: EINECS-Nr: 931-254-9 EC-Nr:
Hydrocarbons, C6-C7, Isoalkanes, Cyclics, <5% n-Hexane (H225-304-336-411); REACH Reg. No. 01-2119486291-36-0000	15 - 25 %	CAS-Nr: EINECS-Nr: 926-605-8 EC-Nr:

Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

*Take person away from hazardous area.
Remove contaminated clothes immediately.*

After inhalation:

*Take affected person to fresh air.
Consult physician immediately.
In case of unconsciousness place patient stable in side position for transportation.
Give artificial respiration in case breathing is not regular or if it has stopped.*

After skin contact:

Wash off immediately with soap and plenty of water and rinse thoroughly.

After eye contact:

Rinse open eye for several minutes under running water. Should irritation continue, seek medical advice.

After ingestion:

Do not induce vomiting. Consult physician immediately.

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

Headache, dizziness, tiredness, numbness, drowsiness, dry skin, skin redness, itching, depression of the central nervous system.

Effects:

4.3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

*Treat symptomatically.
If vomiting occurs after ingestion, aspiration into the lungs can occur which can cause a chemical pneumonia or suffocation.*

5. Fire-Fighting Measures

5.1. Extinguishing Media

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Suitable extinguishing media:

Water mist, extinguishing powder, foam, carbon dioxide.

Unsuitable extinguishing media:

Water with full jet.

5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

Flammable liquid.

Fumes can form an explosive mixture with air.

The vapor is heavier than air, spreads along the ground and distant ignition is possible.

Product floats on water surface and may reignite.

5.3. Advice for Firefighters

Protective equipment:

Wear self-contained respiratory protective device and full protective gear.

Further information:

Cool exposed containers with water mist.

Collect contaminated extinguishing water and debris separately; avoid contamination of sewage system.

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

Wear appropriate protective equipment. Keep spectators away.

Keep away from sources of ignition. No smoking.

Close leaks without taking any risk.

Ensure adequate ventilation.

6.2. Environmental Precautions

Environmental precautions:

Prevent contamination of soils, drains and surface water.

Contact local authorities if product pollutes soil or vegetation.

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

Contain with absorbent material (sand, diatomaceous earth, universal absorbent, Oil Dri) and dispose accordingly.

Larger amounts should be contained by means of an explosion-proof pump.

6.4. Reference to other Sections

Protective clothing, see Section 8.

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

Provide adequate ventilation.

Avoid the formation of aerosol.

Avoid contact with eyes and skin.

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Do not breathe vapors, spray or gas.

Hygienic measures:

Take off contaminated clothing immediately.

Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a cool and well ventilated location.

Protect against heat and direct sunlight.

Requirements for storage areas and containers:

Store in a room with a solvent-proof floor.

Suitable container material: stainless steel, carbon steel, polyethylene, polypropylene, polyester, Teflon.

Unsuitable container material: natural rubber, butyl rubber, polystyrol, EDPM.

Information on fire and explosion protection:

Do not store together with: oxidants.

Combustible liquid.

Vapors may form an explosive mixture with air.

Keep away from sources of ignition - do not smoke. Take measures to prevent electrostatic discharge.

Use only in explosion protective area. Extinguish any naked flames. No not smoke. Remove ignition sources. Avoid sparks.

Ensure electrical continuity by bonding and grounding (earthing) all equipment.

Storage class:

3; Flammable liquids (TRGS 510)

Further Information:

The product is slightly hazardous to water. Consider national regulations regarding handling and storage.

7.3. Specific End Use(s)

Further information:

No information available.

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

TRGS 900

Pentane (CAS 109-66-0): ELV (TRGS 900): 3000 mg/m³; 1000 ml/m³ (2)

Parameters to be controlled:

Pentane (CAS 109-66-0): TWA 3000 mg/m³; 1000 ppm (EC ELV)

Pentane (CAS 109-66-0): MAK (AT; CH): 1800 mg/m³; 600 ppm (8h Average Value)

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Derived No-Effect Level (DNEL):

Pentane (CAS 109-66-0):

3000 mg/m³ (worker, inhalation, chronic exposure - systemic effects)

432 mg/kg bw/d (worker, skin contact, chronic exposure - systemic effects)

Hydrocarbons, C6, Isoalkanes, <5 % n-Hexane:

5306 mg/m³ (worker, inhalation, chronic exposure - systemic effects)

13964 mg/kg/day (worker, skin contact, chronic exposure - systemic effects)

Hydrocarbons, C6-C7, Isoalkanes, Cyclics, <5 % n-Hexane:

5306 mg/m³ (worker, inhalation, chronic exposure - systemic effects)

13964 mg/kg/day (worker, skin contact, chronic exposure - systemic effects)

Predicted No-Effect Concentration (PNEC):

Pentane:

Fresh water / Sea water: 230 µg/l

Fresh water sediment / Sea water sediment: 1.2 mg/kg

Intermittent release: 880 µg/l

Sewage treatment system (STP): 3600 µg/l

Soil: 0.55 mg/kg

Additional Information:

8.2. Exposure Controls

Technical protective measures:

Adequate ventilation to control airborne concentrations below the exposure limits.

No further measures, see Section 7 and 8.

Personal Protection

General protective measures:

Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

Do not inhale gas/fumes/vapor/aerosol.

Avoid contact with eyes and skin.

Respiratory protection:

Respirator mask required if ventilation is insufficient. Wear filter respirator in case of short-term or low exposure, and wear a self-contained breathing apparatus in case of long-term or higher exposure.

Recommended: filter AX.

Hand protection:

Each work area must have adequate protective gloves.

The manufacturer's directions for use should be observed because of the great diversity of types.

Protective gloves should be changed regularly, especially after intensive contact with the product.

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Protective gloves

Protective glove material:

Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers.

Nitrile rubber (> 120 min, 0,40 mm)

Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time.

Eye protection:

Tightly fitting safety goggles (EN 166).

Body protection:

Protective clothing, solvent resistant

Environmental precautions:

Avoid contamination of sewage system, open water ways and ground water.

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

<i>Form:</i>	<i>liquid</i>
<i>Color:</i>	<i>colorless</i>
<i>Odor:</i>	<i>characteristic</i>
<i>Odor threshold:</i>	<i>No information available.</i>
<i>pH-Value:</i>	<i>not determined</i>
<i>Melting temperature:</i>	<i>-153.6°C (101.3 kPa)</i>
<i>Boiling temperature:</i>	<i>> 36°C</i>
<i>Flash point:</i>	<i>< 0°C</i>
<i>Evaporation rate:</i>	<i>not determined</i>
<i>Flammability (solid, gas):</i>	<i>not applicable</i>
<i>Upper explosion limit:</i>	<i>8.3 Vol. %</i>
<i>Lower explosion limit:</i>	<i>1.0 Vol. %</i>
<i>Vapor pressure:</i>	<i>40 hPa (20°C)</i>
<i>Vapor density:</i>	<i>No information available.</i>
<i>Density:</i>	<i>0.65 - 0.68 g/cm³ (20°C)</i>
<i>Solubility in water:</i>	<i>not miscible</i>
<i>Coefficient of variation (n-Octanol/Water):</i>	

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no information available

Auto-ignition temperature: 200°C

Decomposition temperature: No data available.

Viscosity, dynamic: not available

Explosive properties: Product is not explosive; however, an explosive vapor/air mixture can be formed.

Oxidizing properties: none

Bulk density: not determined

9.2. Further Information

Solubility in solvents:

Viscosity, kinematic: 0.3 - 1.4 mm²/s (20°C)

Burning class:

Solvent content:

Solid content:

Particle size:

Other information:

Temperature class: T4 (maximum temperature: 135°C)

10. Stability and Reactivity

10.1. Reactivity

No decomposition if used according to specifications.

10.2. Chemical Stability

Stable if used according to specifications.

10.3. Possibility of Hazardous Reactions

*Formation of explosive vapor-air-mixtures possible.
Hazardous polymerisation will not occur.*

10.4. Conditions to Avoid

Conditions to avoid:

Avoid contact with heat, sparks and open fire.

Thermal decomposition:

10.5. Incompatible Materials

Strong oxidizing agents.

10.6. Hazardous Decomposition Products

In case of fire: formation of carbon oxides.

10.7. Further Information

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11. Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

Is not classified as acutely toxic.

LD50, oral:

> 5840 mg/kg (rat)

LD50, dermal:

> 2920 mg/kg (rabbit)

LC50, inhalation:

> 25.2 mg/l (4h, rat)

Primary effects

Irritant effect on skin:

Irritating to skin.

Irritant effect on eyes:

Causes eye ailments, however does not damage the eye tissue.

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

No sensitizing effects known.

Mutagenicity:

No mutagenic effects known.

Reproductive toxicity:

No negative effects known.

Carcinogenicity:

Not cancerogenic.

Teratogenicity:

No information available.

Specific target organ toxicity (STOT):

Single exposure: may cause drowsiness or dizziness.

Repeated exposure: no information available.

Additional toxicological information:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis.

Inhalation: Long-term overexposure may cause headache, dizziness, tiredness, nausea and vomiting.

Aspiration toxicity: may be fatal if swallowed and enters airways.

12. Ecological Information

12.1. Aquatic Toxicity

Fish toxicity:

*LC50: 4.26 mg/l (96h, *Oncorhynchus mykiss*)*

Pentane: LL50: 27.55 mg/l (96h, fish)

Hydrocarbons, C6, Isoalkanes, < 5% n-Hexane: LL50: 18.27 mg/l

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(96h, fish)

Hydrocarbons, C6-C7, Isoalkanes, Cyclics, < 5% n-Hexane: LL50: 12 mg/l (96h; *Oncorhynchus mykiss*)

Daphnia toxicity:

EC50: 2.7 mg/l (48h, *Daphnia magna*)

Pentane: EC50: 2.8 mg/l (48h, *Daphnia magna*); EL50: 48.11 mg/l (96h, *Daphnia magna*)

Hydrocarbons, C6, Isoalkanes, < 5% n-Hexane: EL50: 31.9 mg/l (48h, *Daphnia magna*)

Hydrocarbons, C6-C7, Isoalkanes, Cyclics, < 5% n-Hexane: EL50: 17.06 mg/l (48h, *Daphnia magna*)

Bacteria toxicity:

no information available

Algae toxicity:

EC50: 10.7 mg/l (72h, *Pseudokirchneriella subcapitata*)

NOEC: 7.51 mg/l (72h, *Pseudokirchneriella subcapitata*)

12.2. Persistency and Degradability

The product floats on the water surface and does not dissolve.

The product evaporates easily from water surface.

Readily biodegradable (> 60 %, 28d).

Pentane: Biochemical oxygen demand (BOD): 3 % (7d) (ECHA)

Hydrocarbons, C6, Isoalkanes, < 5% n-Hexane: Biochemical oxygen demand (BOD): 83 % (10d) (ECHA)

Hydrocarbons, C6-C7, Isoalkanes, Cyclics, < 5% n-Hexane: Biochemical oxygen demand (BOD): 83 % (10d) (ECHA)

12.3. Bioaccumulation

Product has the potential to bioaccumulate.

Pentane: BCF: 171; log KOW: 3.45 (pH Value: 7, 25°C)

Hydrocarbons, C6, Isoalkanes, <5% n-Hexane: BCF: 501.2; log KOW: 3.6 (pH Value: 7, 20°C)

Hydrocarbons, C6-C7, Isoalkanes, Cyclics, <5% n-Hexane: log KOW: 3.6 (pH Value: 7, 20°C)

12.4. Mobility

Product is readily volatile and spreads fast in the air.

Presumably no distribution takes place on the sediment layer and effluent.

12.5. Results of PBT- und vPvP Assessment

This product is neither a PBT or vPvB substance nor does it contain a PBT or vPvB substance.

12.6. Other Adverse Effects

Water hazard class:

Do not allow undiluted product or large quantities of it to reach ground water, waterways or sewage system.

Behaviour in sewage systems:

Further ecological effects:

Toxic to water organisms.

May cause long-term adverse effects in the aquatic environment.

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Harmful to aquatic organisms.

AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:

*Must not be disposed together with household garbage.
Product can be incinerated, when in compliance with local regulations.*

European Waste Code (EWC):

The waste code is determined according to the kind of waste and industry stated in the European Waste Catalogue.

Uncleaned packaging:

*Dispose of according to official local regulations.
Empty container completely. Residues may cause an explosion hazard.
Do not puncture, cut or weld uncleaned drums. Risk of explosion.*

Waste Code No.:

14. Transport Information

14.1. UN Number

ADR, IMDG, IATA 3295

14.2. UN Proper Shipping Name

ADR/RID: KOHLENWASSERSTOFFE, FLÜSSIG, N.A.G. (Pentane); SV 640D

IMDG/IATA: HYDROCARBONS, LIQUID, N.O.S. (Pentane); SP 640D

14.3. Transport Hazard Classes

ADR Class: 3

Hazard no.: 3

Classification code: F1

Tunnel restriction code: D/E

IMDG Class (sea): 3

Hazard no.: 3

EmS No.: F-E, S-D

IATA Class: 3

Hazard no.: 3

14.4. Packaging Group

ADR/RID: II

IMDG: II

IATA: II

14.5. Environmental Hazards

Labelling according 5.2.1.8 ADR/RID: fish and tree

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Labelling according 5.2.1.6.3 IMDG: fish and tree
Classification as environmentally hazardous according 2.9.3
IMDG: yes

14.6. Special Precautions for User

not applicable

14.7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

IMDG: not applicable

14.8. Further Information

Special Provision: 640D

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

2, hazardous for water (German Regulation)

Local regulations on chemical accidents:

Underlies the Accident Ordinance 9b

Employment restrictions:

The employment restrictions for expectant and nursing mothers in accordance with the Maternity Protection Guideline are to be observed.

The employment restrictions for young workers in accordance with the Youth Employment Protection Law are to be observed.

Restriction and prohibition of application:

Pentane:

EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles, Registered no. 40

Technical instructions on air quality:

15.2. Chemical Safety Assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

15.3. Further Information

Decopaint Directive (2004/42/EC):

VOC Content: 50 %

Directive 2010/75/EC on Industrial Emissions:

VOC Content: 100 %

*Fire hazard class (German "Flammable Liquids Ordinance" (VbF)):
A1 (flammable liquids of group A, hazardous class 1)*

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.