

MATERIAL SAFETY DATA SHEET

Date of issue: 16. 07. 2004
Reviewed on: 01.12.2009 – 7th Edition

NAPHTHALENE CONCENTRATE

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE (PREPARATION) AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance / mixture (preparation)

Commercial name: Naphthalene concentrate
Chemical name: Naphthalene
Registration number: not applicable.

1.2 Use of the substance / mixture (preparation)

Intermediate for the manufacture of other chemicals.

1.3 Company / undertaking identification

- UNIPETROL RPA, s.r.o., Záluží 1, 436 70 Litvínov, Czech Republic

☎: +420 476 161 111
fax: +420 476 619 553
unipetrolrpa@unipetrol.cz
www.unipetrolrpa.cz

- Trade Division Director: ☎: +420 476 164 281 fax: +420 476 163 691
jaroslava.svobodova@unipetrol.cz
- Sales administrator: ☎: +420 476 165 001 fax: +420 476 163 691
- Person responsible for the MSDS ludmila.krejcikova@unipetrol.cz

1.4 Emergency telephone numbers in case of accident

- UNIPETROL RPA, s.r.o. ☎: +420 476 163 111 (non stop)
☎: +420 476 162 111 (non stop)
- CENTRE OF THE CZECH MINISTRY OF HEALTH
Toxicological Information Centre Prague (TIS), CZ ☎: +420 224 919 293 (non stop)
Na bojišti 1, 128 08 Praha 2, Czech Republic ☎: +420 224 915 402 (non stop)
e-mail: tis@mbox.cesnet.cz
fax: +420 224 914 570

2. HAZARD IDENTIFICATION

2.1 Classification of the substance / mixture (preparation)

Product is classified as dangerous according to the Czech Act No. 356/2003 Sb. and Regulation (EC) No 1272/2008 (Directive 67/548/EEC or Directive 1999/45/EC):

CARCINOGENIC CAT.3

HARMFUL

DANGEROUS FOR THE ENVIRONMENT

Carc.Cat.3; R 40

Xn; R 22

N; R 50-53

2.2 Information pertaining to particular dangers for human

Harmful if swallowed. Dust is irritating to respiratory system. May be absorbed by skin, skin contact may develop dermatitis (skin disorder). Slightly irritating to eyes, contact with eyes may cause nubecula or conjunctivitis. Irritating to digestive system if swallowed, induces vomiting and diarrhoea. May cause trembling, convulsions, respiratory paralysis. Limited evidence of a carcinogenic effect. May cause damage of liver and kidney and a change of blood picture. Fire injuries can originate during manipulation.

2.3 Information pertaining to particular dangers for the environment

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.4 Other adverse effects

Flammable solid substance at normal temperature.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical substance (CAS No. 91-20-3, ES No 202-049-5)

4. FIRST AID MEASURES

4.1 General advice

IMMEDIATE MEDICAL ATTENTION IS REQUIRED AFTER SWALLOWING OR AFTER FIRE INJURIES.

In case of health troubles or doubts, seek medical advice immediately and show this Material Safety Data Sheet where possible. Ensure activity of vitally important functions until the arrival of the doctor (artificial respiration, inhalation of oxygen, heart massage). If patient is unconscious, or in case of danger of blackout (apsychia), transport patient in a stabilised position. In case of first degree burns (painful redness), and second degree burns (painful blisters), cool the affected area with cold running water for a long time. In case of third degree burns (redness, cracking pale skin, usually without pain), do not cool affected skin, dress the area with sterile dry gauze only.

SPECIAL MEANS TO PROVIDE IMMEDIATE TRETMENT AT THE WORKPLACE: eye shower, safety shower.

4.2 Inhalation

Remove patient to fresh air, keep him warm and in order to rest quietly. Avoid walking. Seek medical advice.

SYMPTOMS AND EFFECTS: mucous membranes irritating

4.3 Skin contact

Immediately take off all contaminated clothing and footwear. Flush effected area with copious quantities of lukewarm water and soap or with another suitable cleaning agent (if the skin is not injured). Use a mild cream to treat skin after complete washing. Seek medical advice.

After fire injuries origin contaminated parts don't chafe, only cover with sterile bandage (eventually clean tissue). Contact physician, medical treatment.

SYMPTOMS AND EFFECTS: irritating

4.4 Eye contact

Immediately flush eyes with clean lukewarm water and continue flushing for at least 15 minutes – keep the eyelids widely apart and flush thoroughly with mild water stream from the inner to the outer canthus. Seek medical advice.

SYMPTOMS AND EFFECTS: irritation, reddening, pain, clouded vision

4.5 Swallowing

If patient is conscious and without convulsion, flush out mouth with water, do not try to induce vomiting. Give 5-10 pulverized pills of activated carbon in a small amount of water. Never give anything by mouth to an unconscious person, just put patient into a stabilised position. If vomiting occurs spontaneously, put patient into a stabilised position to prevent aspiration of vomits. Seek medical advice.

SYMPTOMS AND EFFECTS: abdominal pain, vomiting, diarrhoea

5. FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media

Powder, foam, water spray.

Cool containers exposed to fire with water spray.

5.2 Extinguishing media to be avoided

Not applicable.

5.3 Caution about specific danger in case of fire and fire-fighting procedures

Thermal decomposition can produce toxic and irritant gases, including carbon oxides. Prevent fire-fighting water from entering surface water or groundwater.

5.4 Special protective equipment for fire-fighters

Wear full protective clothing and a self-contained breathing apparatus.

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6. ACCIDENTAL RELEASE MEASURES

6.1 Person-related safety precautions

Isolate hazard area. Evacuate all unauthorised personnel not participating in rescue operations from the area. Avoid entry into danger area. Remove all possible sources of ignition. Avoid contact with the substance. Avoid generation of dust from solid product. Apply recommended full protective personal equipment to paralyse the accident.

6.2 Precautions for protection of the environment

Prevent from further leaks of substance. Enclose area. Do not allow substance to enter surface water or groundwater. In case of substance discharge to water courses or water containers, inform water consumers immediately, stop service and exploitation of water. Do not flush spilled material into sewage systems.

6.3 Recommended methods for cleaning and disposal

Scatter material mechanically place into appropriate dry container for further processing or later disposal. Dispose according to the valid waste legislation.

7. HANDLING AND STORAGE

7.1 Information for safe handling

Observe all fire-fighting measures (no smoking, do not handle with naked flame and remove all possible sources of ignition). Minimize dustiness during handling and observe general safety and sanitary measures. Wear recommended personal protective equipment and observe instructions to prevent possible contact of substance with skin and eyes. Do not breathe. Avoid leak to environment.

7.2 Information for storage

Storerooms should meet the requirements for the fire safety of constructions and electrical facilities and should be in conformity with valid regulations. Store in cool, well-ventilated place with effective exhaust, away from heat and all sources of ignition. Store containers tightly closed. Do not store together with oxidising agents or other incompatible substances. Avoid moisture. Molten product store in containers heated above solidification point. Avoid leak to environment.

7.3 Information for specific use

During manipulation with molten material introduce safety precautions so as not to origin of fire injuries.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure limit values

Czech Republic (Order-in-Council No 361/2007 Sb.):

Name	PEL [mg.m ⁻³]	NPK-P [mg.m ⁻³]
Naphthalene	50	100

PEL Permissible exposure level of a chemical substance in the environment air

NPK-P Highest permissible concentration of a chemical substance in the environment air

European Union (Directive 2006/15/EC):

Name	8hours limit value [mg.m ⁻³]	short term limit value [mg.m ⁻³]
Naphthalene	50	

8hours limit value Measured or calculated in relation to a reference period of eight hours as a time-weighted average.

short term limit value A limit value above which exposure should not occur and which is related to a 15-minute period

8.2 Occupational exposure controls

Collective protection measures

General and local ventilation, effective exhaust, fire-fighting measures.

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Individual protection measures

Personal protective equipment (PPE) for the protection of eyes, hands and skin corresponding with the performed labour has to be kept at disposition for the employees. In cases, where the workplace exposure control limits cannot be observed with the help of technical equipment or where it is not possible to ensure that the respiratory system exposure does not represent a health hazard for the personnel, adequate respiratory protection have to be kept at disposition. In the case of continuous use of this equipment during constant work, safety breaks have to be scheduled, if the PPE-character requires this. All PPE have to be kept in disposable state and the damaged or contaminated equipment has to be replaced immediately.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE):

- *Respiratory protection:* respirator with canister against organic vapours and dust (combined canister A2B2E2K2P3), self-contained breathing apparatus
- *Eye protection:* safety goggles, full face-shield.
- *hand protection:* protective gloves

	<i>glove material</i>	<i>layer thickness</i>	<i>breakthrough time</i>
routine work (possibility of staining)	nitrile	0,4 mm	10 Min.
outflow / accident disposal	nitrile	0,4 mm	480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example 730 Camatril®Velours (splash contact). The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. The recommended time applies to the product stated in the safety data sheet as well as to the purpose specified here. Under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL CZ s.r.o., Suderova 2013, 709 00 Ostrava 9, www.klc.de.)

- *Skin protection:* protective coveralls, sealed footwear
- *Other:* Eye shower, safety shower.
- *General safety and hygienic measures:*

Observe personal hygienic regulations. Take off immediately all contaminated clothing. When using do not eat, drink or smoke! Wash thoroughly hands and uncovered body parts with soap and water after handling and before eating or drinking, and treat skin with a mild skin restoring cream.

8.3 Environmental exposure controls

Proceed in accordance with valid air and water legislative regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

- *Physical state at 20 °C:* solid
- *Colour:* white to yellowish
- *Odour:* characteristic

9.2 Important health, safety and environmental information

- *pH-value:* not applicable
- *Boiling point [°C]:* 218
- *Flash point [°C]:* 80
- *Inflammability:* flammable
- *Explosion limits* - lower [Vol. %]: 0.9
- upper [Vol. %]: 5.9
- *Oxidising properties:* none
- *Vapour pressure at 20 °C [kPa]:* 0.006
- *Density at 20 °C [g.cm⁻³]:* 1.15
- *Solubility:* not applicable

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- Solubility in water at 20 °C [g.l⁻¹]: 0.3
- Partition coefficient n-octanol / water [log Kow]: 3.2 – 3.6
- Viscosity at 20 °C [mPa.s]: not applicable
- Relative vapour density (air = 1): not applicable
- Evaporation rate: not applicable

9.3 Other information

- Ignition temperature [°C]: 540
- Melting point / solidification point [°C]: ca. 80

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid

Dust concentrations within the explosion limits, sources of ignition, high temperature, humidity.

10.2 Material to avoid

Oxidising agents.

10.3 Hazardous decomposition products

When heated to decomposition it emits carbon oxides.

11. TOXICOLOGICAL INFORMATION

11.1 Acute effects

Harmful if swallowed. Dust and vapor are irritating to respiratory system. May be absorbed by skin, skin contact may develop dermatitis (skin disorder). Slightly irritating to eyes, contact with eyes may cause nubecula or conjunctivitis. Irritating to digestive system if swallowed, induces vomiting and diarrhoea. May cause trembling, convulsions, respiratory paralysis.

Acute toxicity

LD₅₀ oral – rat > 2000 mg.kg⁻¹

LD₅₀ dermal – rat > 2500 mg.kg⁻¹

LC₅₀ inhalation - rat > 100 ppm/8 h

Acute irritation

Skin: slightly irritating

Eye: slightly irritating

11.2 Repeated dose toxicity

May cause damage of liver and kidney and cause a change of blood picture.

11.3 Sensitisation

Guinea-pig tests negative.

11.4 CMR effects (carcinogenity, mutagenicity, toxicity for reproduction)

Limited evidence of a carcinogenic effect.

Ames-test negative.

Test of reproduction toxicity: negative.

11.5 Toxicokinetics, metabolism, distribution

Not applicable.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

LC₅₀, 96 h., fish: 0.1 – 6 mg.l⁻¹

EC₅₀, 48 h., daphnia: 2 – 8 mg.l⁻¹

12.2 Mobility

Not applicable

12.3 Persistence and degradability

Hardly degradable.

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12.4 Bioaccumulative potential

The product is expected to bioaccumulate in organisms (log Kow value above 3).

12.5 Results of PBT assessment

Not applicable.

12.6 Other adverse environmental effects

According to the Water-Act No 254/2001 Sb. the product is considered to be a defective substance and a hazardous substance according to Annex No 1 to the Water-Act.

13. DISPOSAL CONSIDERATIONS

13.1 Recommended disposal methods for the substance / mixture (preparation)

Product reuse or disposal in accordance with valid legislative regulations.

Recommended method: Energetic utilization (combustion)

Recommended classification according to Waste Catalogue: 16 05 08

13.2 Recommended disposal methods for contaminated packaging

Product is transported in tank-vehicles.

13.3 Waste management measures that control exposure of humans and environment

Proceed in accordance with valid health, air and water legislative regulations.

13.4 Waste regulation

Czech Republic

Act No 185/2001 Sb. on wastes and on the amendment of some additional acts, as amended.

Regulation No 381/2001 Sb. establishing the Waste Catalogue, as amended.

European Union

Directive 2006/12/ES on waste

14. TRANSPORT INFORMATION

14.1 Transport classification

- Land transport ADR / RID:
- Name: NAPHTHALENE, MOLTEN
- UN-Number: 2304
- Class: 4.1
- Classification code: F2
- Packing group: III
- Hazard identification No. 44
- Symbol / label: 4.1

14.2 Special transport precautionary measures

Product is heating during tanking (100°C).

15. REGULATORY INFORMATION

15.1 Chemical Safety Assessment



Not applicable.

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15.2 Labelling of the substance / mixture (preparation)

<i>name</i>	<p align="center">NAPHTHALENE CONCENTRATE NAPHTHALENE ES: 202-049-5 “EC label“</p>	
<i>graphic symbol of danger</i>	 Harmful	 Dangerous for the environment
<i>R-phrases</i> 22-40-50/53	<p align="center">Harmful if swallowed. Limited evidence of a carcinogenic effect Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p>	
<i>S-phrases</i> 36/37-46-60-61	<p>Wear suitable protective clothing and gloves. If swallowed, seek medical advice immediately and show this container or label This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.</p>	
Company:	<p align="center">UNIPETROL RPA, s.r.o. Záluží 1, 436 70 Litvínov Czech Republic ☎: +420 476 161 111, +420 476 162 111, +420 476 163 111</p>	

15.3 Regulatory Data relating to the substance / mixture (preparation)

European Union

Regulation (EC) No 1907/2006 REACH

Regulation (EC) No 1272/2008

Czech republic

Act No 356/2003 Sb., on chemical substances and chemical preparations and on the amendment of some additional acts, as amended

Act No 258/2000 Sb. on the Protection of Public Health and on the amendments of some related acts, as amended.

Act No 254/2001 Sb. on Waters and on the amendment of some additional acts, as amended

Order-in-Council No 361/2007 Sb., regulating Safety Occupational Health Conditions in the workplace, as amended.

16. OTHER INFORMATION

Full text of relevant R-phrases referred to under headings 2 and/or 3

R 22 Harmful if swallowed.

R 40 Limited evidence of a carcinogenic effect

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Fulfilling the obligations related to Regulation (EC) No. 1907/2006 - REACH

The stated chemical substance was pre-registered in accordance with the REACH regulation.

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Training instructions

Personnel handling the product has to be instructed about the handling risks and the health protection and environmental requirements (see the relevant Employment Law provisions)

Access to information

Employer must in accordance with Articles 35 of the Regulation (EC) No 1907/2006 enable access to the information from MSDS workers and their representatives who this product use or may be exposed to in the course of their work.

Sources of data used to compile the Material Safety Data Sheet

Record on the classification of hazardous properties of the product

Annex No. 1 to the Regulation No 232/2004 Sb., as amended.

Annex No VI to the Regulation (EC) No 1272/2008 (Table No 3.2)

Annex No 1F to the Directive No 2008/58/EC

Annex No 1A to the Directive No 2009/2/ES

First aid principles in case of exposition to chemical substances (doc. MUDr. Daniela Pelclová et al.)

Revised information

10.09.2004: Revised data under headings 3.2, 3.4, 4.3, 5.3, 6, 7, 11.1 and 14.1

26.10.2005: Revised data under headings 2, 3.1, 3.2, 11.2, 12.5, 15.1, 15.2, 16

01.12.2006: Revised data under headings 1, 2, 4, 8, 13 and 16

01.03.2007: Revised data under headings 1 and 16

01.06.2007: General update according to Regulation (EC) No 1907/2006 REACH

01.12.2009: Revised data under headings 1, 2.1, 8.1, 15, 16 and “Statement”

Statement: This Material Safety Data Sheet has been elaborated in accordance with the Regulation (EC) No 1907/2006. This MSDS contains information necessary for the protection of health and environment. The information does not substitute the quality specification of products and should not be construed as any guarantee of suitability for particular applications. The data contained are based on the present state of knowledge and current national legislation. The user is responsible for ensuring that the requirements of relevant regional legislation are complied with.

According to an authorisation form on behalf of UNIPETROL RPA s.r.o. elaborated by:
Environmental and Standardisation Department HSE&Q, UNIPETROL SERVICES, s.r.o.