

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

1.1. Product identifier

Mabanol Therm M 46

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

Use of the substance/mixture

Use in agrochemicals, Use in Laboratories, Use in Oil and Gas field drilling and production operations, Use in Cleaning Agents, Uses in Coatings, Use in mining operations, Formulation & (re)packing of substances and mixtures, Rubber production and processing, Distribution of substance, Water treatment chemicals, Explosives, Metal working fluids, Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers, Lubricants, greases, release products, Using material as fuel sources, limited exposure to unburned product to be expected, Liquid fuels, Use as a functional fluids

Uses advised against

none

1.3. Details of the supplier of the safety data sheet

Company name: Mabanol GmbH & Co. KG
Street: Admiralitätstraße 55
Place: D-20459 Hamburg
Responsible Department:
Telephone: +49 (0) 40 36809988

1.4. Emergency telephone: Giftinformationszentrale Göttingen
Telephone: 0551/1 92 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

This substance is not classified as hazardous according to Regulation (EC) No. 1272/2008.

2.2. Label elements

Additional advice on labelling

none

2.3. Other hazards

Do not allow uncontrolled discharge of product into the environment.
This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.
For this product a Safety Data Sheet under REACH Regulation 1907/2006 Article 31 is not required.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

The mineral oil can be described by one or more EINECS numbers.

Further Information

Note L : The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London. This note applies only to certain complex oil-derived substances in Part 3.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.
Spillages make surfaces slippery.

After inhalation

In case of symptoms arising from inhalation of product fumes, mists or vapour: Remove casualty to a quiet and well ventilated place if safe to do so.

Obtain medical assistance if breathing remains difficult.

If casualty is unconscious and not breathing: Ensure that there is no obstruction to breathing and give artificial respiration by trained personnel. If necessary, give external cardiac massage and obtain medical advice.

If casualty is unconscious and breathing, place in the recovery position. Administer oxygen if necessary.

Inhalation is unlikely because of the low vapour pressure of the substance at ambient temperature.

Symptoms: irritation of the respiratory tract due to excess fume, mists or vapour exposure.

After contact with skin

Remove contaminated clothing, contaminated footwear and dispose of safely.

Seek medical attention if skin irritation, swelling or redness develops and persists.

When using high-pressure equipment, injection of product can occur. If high-pressure injuries occur, immediately seek professional medical attention. Do not wait for symptoms to develop.

For minor thermal burns, cool the burn. Hold the burned area under cold running water for at least five minutes, or until the pain subsides. Body hypothermia must be avoided.

Seek medical attention in all cases of serious burns.

Wash affected area with soap and water.

May cause burn in case of contact with product at high temperature.

Symptoms: dry skin, irritation in case of repeated or prolonged exposure.

After contact with eyes

If hot product is splashed into the eye, it should be cooled down immediately to dissipate heat, under cold running water for at least 5 minutes. Immediately obtain specialist medical assessment and treatment for the casualty.

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.

Symptoms: slight irritation. May cause burn in case of contact with product at high temperature.

After ingestion

Do not give anything by mouth to an unconscious person.

If vomiting occurs, the head should be kept low so that the vomit does not enter the lungs (aspiration). Once vomiting ceases, place the person in the recovery position with the legs slightly raised.

Always assume that aspiration has occurred. Seek professional medical attention or send the casualty to a hospital. Do not wait for symptoms to develop.

Symptoms: few or no symptoms expected. If any, nausea and diarrhoea might occur.

Do NOT induce vomiting.

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

Individuals with pre-existing lung disorders may have increased susceptibility of the effects of exposure.

Observe risk of aspiration if vomiting occurs. IF SWALLOWED: Aspiration hazard.

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

Treatment should be in general symptomatic to relieve any effects.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam (trained personnel only). Water fog (trained personnel only). Dry chemical powder. Carbon dioxide.
Other inert gases (subject to regulations). Sand or earth.

Unsuitable extinguishing media

Do not use direct water jets on the burning product; they could cause splattering and spread the fire.

Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2. Special hazards arising from the substance or mixture

Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, unidentified organic and inorganic compounds.

5.3. Advice for firefighters

Special protective equipment for firefighters:

In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Work helmet. Antistatic non-skid safety shoes or boots.

Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material.

Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Gloves made of PVA are not water-resistant, and are not suitable for emergency use.

Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated.

If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

Respiratory protection will be necessary only in special cases (e.g. formation of mists).

Respiratory protection: A half or full-face respirator with combined dust/organic vapour filter(s), or a Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure.

6.2. Environmental precautions

Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials.

6.3. Methods and material for containment and cleaning up

Stop or contain leak at the source, if this possible without risk. Avoid direct contact with released material. Stay upwind.

Large spillages may be cautiously covered with foam, if available, to limit fire risk. Do not use direct jets.

Collect free product with suitable means. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.

In case of soil contamination, remove contaminated soil and treat in accordance with local regulations.

When inside buildings or confined spaces, ensure adequate ventilation.

Keep non-involved personnel away from the area of spillage. Alert emergency personnel.

Except in case of small spillages: The feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.

Absorb spilled product with suitable non-combustible materials.

In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment.

Collect spilled product by absorbing with specific floating absorbents.

If possible, large spillages in open waters should be contained with floating barriers or other mechanical means.

If this not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means.

The use of dispersants should be advised by an expert, and, if required, approved by local authorities.

Collect recovered product and other materials in suitable tanks or containers for recovery or safe disposal.

Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares).

If required, notify relevant authorities according to all applicable regulations.

Additional information:

Recommended measures are based on the most likely spillage scenarios for this material.

Local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the

choice of appropriate actions.

For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.

6.4. Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Obtain special instructions before use.

Ensure that all relevant regulations regarding handling and storage facilities of flammable products are followed.

Avoid contact with skin. Avoid breathing fume/mist. Do not ingest.

Avoid splash filling of bulk volumes when handling hot liquid product.

Special danger of slipping by leaking/spilling product.

Use and store only outdoors or in a well-ventilated area.

Avoid contact with the product. Avoid release to the environment.

Take precautionary measures against static electricity.

Use adequate personal protective equipment as required. For more information regarding protective equipment and operational conditions see Exposure scenarios. These risk management measures represent a worst case. For a non-classified substance proportionate information may be found in the Safety Data Sheet.

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills.

Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

Recommended materials for containers, or container linings use mild steel, stainless steel.

Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer. Keep only in the original container. Keep containers tightly closed and properly labelled.

Advice on storage compatibility

Store separately from oxidising agents.

Further information on storage conditions

Empty containers may contain combustible product residues. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned.

Fire class: B

7.3. Specific end use(s)

Relevant identified uses; Recommendation:

Ensure that proper housekeeping measures are in place. Do not eat, drink or smoke when using this product.

Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets. Keep away from food and beverages. Wash the hands thoroughly after handling. Change contaminated clothes at the end of working shift.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

DNEL worker:
DNEL long-term inhalative (systemic): 5,4 mg/m³

air limit values:

Possibility of exposure to Aerosol

Limit value TWA: 5 mg/m³, 8h- Source: ACGIH

Monitoring procedures should be chosen according to the indications set by national authorities or labour contracts. In absence of such indications, direct exposure to fumes/dust can be assessed through active air sampling of personal breathing zone (e.g. NIOSH method 5042, UK HSE MDHS 14/3).

8.2. Exposure controls



Appropriate engineering controls

In case of warming: Devices with local exhaust

Material handled at elevated temperature may cause thermal burns by contact with molten product.

Although these are unlikely to present a significant health hazard, to avoid respiratory tract irritation inhalation exposure should be kept to a minimum by observing good work practice and ensuring good ventilation around work areas.

Storage and handling temperatures should be kept as low as feasible to minimize fume production.

Minimise exposure to fumes. Where hot product is handled in confined spaces, effective local ventilation must be provided. Do not enter empty storage tanks until measurements of available oxygen have been carried out.

Protective and hygiene measures

Do not breathe vapour. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with the hot product.

Wash hands and face before breaks and after work and take a shower if necessary. Apply skin care products after work. Do not put any product-impregnated cleaning rags into your trouser pockets. When using do not eat, drink, smoke, sniff. Keep away from food and beverages. Use of personal protective equipment must be consistent with good occupational hygiene practices.

Eye/face protection

Closed goggles.

If splashing is likely, full head and face protection (protective shield and/or safety goggles) should be used.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: NBR (Nitrile rubber), CR (polychloroprene, chloroprene rubber), FKM (fluoro rubber) INDEX No.: 5-6, Category 2 (EN 388)

Hot/molten product: Heat resistant gloves with long cuffs, or gauntlets. Product at ambient temperature (dust): Wear suitable gloves tested to EN374.

Gloves must be periodically inspected and changed in case of wear, perforations or contaminations.

Skin protection

Protective clothing: Not readily flammable.

Hot/molten product: Wear protective clothing for operations with hot material: heat resistant coveralls (with trousers legs over boots and sleeves over cuffs of gloves), heat resistant heavy duty antiskid boots (e. g. leather).

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Product at ambient temperature (dust): Long-sleeved coveralls, work boots. Coveralls should be changed at the end of the work shift and cleaned as necessary to avoid transfer of product to clothes or underwear. For loading/unloading operations: wear safety helmet, if necessary integrated full face visor. In case of hot/molten product: with integrated full face visor.

Respiratory protection

aerosol or mist formation: Filtering device (full mask or mouthpiece) with filter: A2, A2/P2, ABEK

If necessary, approved respiratory protection equipment shall be used when handling hot product in confined spaces: enclosed face mask with cartridge/filter type "A" or self-contained breathing apparatus (SCBA). If exposure levels cannot be determined or estimated with adequate confidence, or an oxygen deficiency is possible, only SCBA's should be used.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	light yellow
Odour:	characteristic

Test method

pH-Value:	not determined
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Changes in the physical state

Melting point:	No information available.
Initial boiling point and boiling range:	No information available.
Sublimation point:	No information available.
Softening point:	No information available.
Pour point:	<-12 °C ISO 3016
Flash point:	>210 °C DIN ISO 2592
Sustaining combustion:	No data available

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits:	No information available.
Upper explosion limits:	No information available.
Ignition temperature:	No information available.

Auto-ignition temperature

Solid:	No information available.
Gas:	No information available.

Decomposition temperature:	No information available.
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Oxidizing properties

Not oxidizing.

Vapour pressure: (at 20 °C)	<0,1 hPa calculated.
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Vapour pressure:	No information available.
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Density (at 15 °C):	0,87 g/cm ³ DIN 51757
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Bulk density:	not relevant
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Water solubility:	practically insoluble
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Solubility in other solvents

not determined

Partition coefficient:

The product has not been tested.

Viscosity / dynamic:

No information available.

Viscosity / kinematic:
(at 40 °C)

43,7 mm²/s DIN EN ISO 3104

Flow time: Vapour

No information available.

density: Evaporation

No information available

rate: Solvent separation

No information available

test: Solvent content:

No information available.

9.2. Other information

No information available.

Solid content:

No information available.

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

No information available.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Excessive heating above the maximum recommended handling and storage temperature may cause degradation of the substance and evolution of irritant vapours and fumes.

10.5. Incompatible materials

Materials to avoid:

Contact with strong oxidizers (peroxides, chromates, etc.) may cause a fire hazard.

A mixture with nitrates or other strong oxidisers (e.g. chlorates, perchlorates, liquid oxygen) may create an explosive mass. Sensitivity to heat, friction or shock cannot be assessed in advance.

10.6. Hazardous decomposition products

Combustion (incomplete) will likely generate oxides of carbon, sulphur and nitrogen, as well as additional undetermined organic compounds of the same elements. None under normal conditions at ambient temperatures.

Further information

Decomposition takes place from temperatures above: > 350 °C

This substance is stable under all ordinary circumstances at ambient temperatures, and if released into the environment.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Acute oral toxicity (LD50) > 5000 mg/kg Rat

Acute dermal toxicity (LD50) > 2000 mg/kg Rabbit

Acute inhalation toxicity (dust/mist) (LC50) > 5,53 mg/l (4 h) Rat
(ECHA Dossier)

Irritation and corrosivity

Skin corrosion/irritation: Not an irritant. (Rabbit)

Eye damage/irritation: Not an irritant. (Rabbit)

Sensitising effects

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

Severe effects after repeated or prolonged exposure

Subacute inhalative toxicity:

Method: -

Exposure time: 28d

Species: Rat

Results: > 980 mg/m³

literature information: J Appl Toxicol, Vol 11(4), pp 297-302

Subacute dermal toxicity:

Method: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Exposure time: 28d

Species: Rabbit

Results: 1000 mg/kg

literature information: ECHA Dossier

Carcinogenic/mutagenic/toxic effects for reproduction

In vitro mutagenicity/genotoxicity:

-OECD Guideline 471 (Bacterial Reverse Mutation Assay)

-OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

-OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

Result: negative.

literature information: ECHA Dossier

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction): none

literature information: ECHA Dossier

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No information available.

Additional information on tests

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

Practical experience

Observations relevant to classification

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Acute (short-term) fish toxicity (LL50) > 100 mg/l (96 h) Pimephales promelas (fathead minnow)

Acute (short-term) toxicity to crustacea (EL50) > 10000 mg/l (48 h) Daphnia magna

Acute (short-term) toxicity to aquatic algae and cyanobacteria (NOEL) > 100 mg/l (3 d) Pseudokirchneriella subcapitata

Chronic (long-term) toxicity to crustacea (NOEL) > 10 mg/l (21 d) Daphnia magna
(ECHA Dossier)

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

General information:

Do not allow uncontrolled discharge of product into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Surplus (unused) or off-spec substance can be recovered or re-conditioned (according to specific characteristics and composition), or can be disposed of as waste.

Disposal can be carried out directly, or by delivery to qualified waste handlers. Contain and dispose of waste according to local regulations.

This substance can be burned or incinerated, subject to national/local authorizations, relevant contamination limits, safety regulations and air quality legislation.

The final user has the responsibility for the attribution of the most suitable code, according to the actual use(s) of the material, contaminations or alterations.

Waste disposal number of contaminated packaging

150106 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); mixed packaging

Contaminated packaging

Disposal of emptied containers: Contact the original supplier or deliver to a qualified disposal organization. Do not cut, weld, bore, burn or incinerate emptied containers, unless they have been cleaned and declared safe. Empty containers may contain combustible product residues. Do not re-use emptied, unclean containers for other purposes.

General information:

In the absence of relevant alterations to the material or presence of contaminants, disposal of this substance as surplus (unused) or off-spec material, or waste resulting from the foreseeable use(s), does not present a specific hazard, or require special handling measures other than those indicated in Sect 7.

SECTION 14: Transport information

Land transport (ADR/RID)

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| 14.1. UN number: | No dangerous good in sense of this transport regulation. |
| 14.2. UN proper shipping name: | No dangerous good in sense of this transport regulation. |
| 14.3. Transport hazard class(es): | No dangerous good in sense of this transport regulation. |
| 14.4. Packing group: | No dangerous good in sense of this transport regulation. |

Inland waterways transport (ADN)

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| 14.1. UN number: | No dangerous good in sense of this transport regulation. |
| 14.2. UN proper shipping name: | No dangerous good in sense of this transport regulation. |
| 14.3. Transport hazard class(es): | No dangerous good in sense of this transport regulation. |
| 14.4. Packing group: | No dangerous good in sense of this transport regulation. |

Marine transport (IMDG)

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14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

not applicable

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

2010/75/EU (VOC): not determined

2004/42/EC (VOC): not determined

Additional information

Not subject to 96/82/EC

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product

named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.