Mabanol Therm M 46

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

1.1. Product identifier
Trade name/designation:

Mabanol Therm M 46

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture:
Industrial uses

*
1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Mabanol GmbH & Co. KG
Am Strandkai 1
20457 Hamburg
Germany
Telephone: 0049 (0) 40 36809988
E-mail: info@mabanol.com
Website: www.mabanol.com

E-mail (competent person): giznord@giz-nord.de

*
1.4. Emergency telephone number

Giftinformationszentrale Göttingen , 24h: 0049 (0) 551 1 92 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]
The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

*
2.2. Label elements

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

Supplemental hazard information	
EUH210	Safety data sheet available on request.

Additional information:
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. This mixture contains no substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH.

2.3. Other hazards
No data available

SECTION 3: Composition/information on ingredients

* **3.2. Mixtures**

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 68411-46-1 EC No.: 270-128-1 REACH No.: 01-2119491299-23	**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene** Repr. 2 (H361f) Warning **Acute Toxicity Estimate** ATE (oral) > 5,000 mg/kg ATE (dermal) > 2,000 mg/kg ATE (inhalation, dust/mist) ≥ 5 mg/L	0.2 – < 0.3 weight-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

* **4.1. Description of first aid measures**

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:
Remove person to fresh air and keep comfortable for breathing. When in doubt or if symptoms are observed, get medical advice.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin irritation, consult a physician.

After eye contact:
Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

Following ingestion:
Do NOT induce vomiting. Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Never give anything by mouth to an unconscious person or a person with cramps. When in doubt or if symptoms are observed, get medical advice.

4.2. Most important symptoms and effects, both acute and delayed
Observe risk of aspiration if vomiting occurs.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Foam. Extinguishing powder. Carbon dioxide (CO2). Sand.
In case of major fire and large quantities: Water spray jet. Water mist.

Unsuitable extinguishing media:
Full water jet.

5.2. Special hazards arising from the substance or mixture
Burning produces heavy smoke.

Hazardous combustion products:
In case of fire may be liberated: Carbon dioxide (CO2). Carbon monoxide. Sulphur dioxide (SO2). Nitrogen oxides (NOx).

5.3. Advice for firefighters
Do not inhale explosion and combustion gases. Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Use personal protection equipment. Ventilate affected area. Special danger of slipping by leaking/spilling product.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

For cleaning up:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Wear personal protection equipment (refer to section 8). Avoid: generation/formation of aerosols. Generation/formation of mist.

Fire prevent measures:

Usual measures for fire prevention. Keep away from sources of ignition - No smoking.
Fire class: B (Fires of liquids or liquid turning substances).

Advices on general occupational hygiene

When using do not eat, drink or smoke. Avoid contact with eyes and skin. Wash hands before breaks and after work. Apply skin care products after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Used working clothes should not be worn outside the work area. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place. Only use containers specifically approved for the substance/product.

Hints on storage assembly:

Do not store together with: Gas. Explosives. P8 OXIDISING LIQUIDS AND SOLIDS. Radioactive substances. Infectious substances.

Storage class (TRGS 510, Germany): 10 – Combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:

Temperature control required. Keep container tightly closed.
Protect against: Light. UV-radiation/sunlight. Air.

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

*

8.1. Control parameters

8.1.1. Occupational exposure limit values

No data available

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.31 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.08 mg/m³	① DNEL Consumer ② Long-term – inhalation, systemic effects
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.44 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.22 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.05 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects

Substance name	PNEC Value	① PNEC type
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.034 mg/L	① PNEC aquatic, freshwater
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.003 mg/L	① PNEC aquatic, marine water
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	10 mg/L	① PNEC sewage treatment plant
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.446 mg/kg	① PNEC sediment, freshwater
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.045 mg/kg	① PNEC sediment, marine water
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	17.6 mg/kg	① PNEC soil

Substance name	PNEC Value	① PNEC type
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1	0.8333 mg/kg	① PNEC secondary poisoning

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation.

8.2.2. Personal protection equipment

Eye/face protection:

Safety goggles with side protection. In case of increased risk add protective face shield. DIN EN 166.

Skin protection:

Tested protective gloves must be worn (EN ISO 374).
Suitable material: NBR (Nitrile rubber). FKM (fluoro rubber). CR (polychloroprene, chloroprene rubber).
Breakthrough times and swelling properties of the material must be taken into consideration. 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 protective clothing: flame-resistant.

Respiratory protection:

Usually no personal respirative protection necessary.
Respiratory protection necessary at: exceeding exposure limit values. aerosol or mist formation. Suitable respiratory protection apparatus: Filtering device (full mask or mouthpiece) with filter: A2, A2/P2, ABEK.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/ particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

8.2.3. Environmental exposure controls

No information available.

*

8.3. Additional information

air limit values:
Possibility of exposure to Aerosol (Mineral oil)
Limit value (TLV-TWA) = 5 mg/m³ (Source: ACGIH)
Limit value (TLV-STEL) = 10 mg/m³ (Source: ACGIH)

SECTION 9: Physical and chemical properties

*

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid
Colour: clear
Odour: not determined
flammability: No data available

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	*No data available*		
Melting point	*No data available*		
Freezing point	*No data available*		
Initial boiling point and boiling range	*No data available*		
Flash point	240 °C		
Evaporation rate	*No data available*		

Parameter	Value	at °C	① Method ② Remark
Auto-ignition temperature	*No data available*		
Upper/lower flammability or explosive limits	*No data available*		
Vapour pressure	*No data available*		
Vapour density	*No data available*		
Density	0.87 g/cm³	15 °C	① DIN 51757
Bulk density	*not applicable*		
Water solubility	Immiscible		
Dynamic viscosity	*No data available*		
Kinematic viscosity	45.87 mm²/s	40 °C	① EN ISO 3104
Pour point	< -12 °C		

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
No information available.

10.2. Chemical stability
The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions
No known hazardous reactions.

10.4. Conditions to avoid
No information available.

10.5. Incompatible materials
Oxidising agent, strong.

10.6. Hazardous decomposition products
No known hazardous decomposition products.

SECTION 11: Toxicological information

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

Toxicological information

Acute Toxicity Estimate for Mixtures
ATE (oral): >2,000 mg/kg
ATE (dermal): >2,000 mg/kg
ATE (inhalation, vapour): >20 mg/L
ATE (inhalation, dust/mist): >5 mg/L
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1
LD_{50} oral: >5,000 mg/kg (Rat) OECD 401
LD_{50} dermal: >2,000 mg/kg (Rat) OECD 402
LC_{50} Acute inhalation toxicity (dust/mist): ≥5 mg/L

Acute oral toxicity:
Based on available data, the classification criteria are not met.

Acute dermal toxicity:
Based on available data, the classification criteria are not met.

Acute inhalation toxicity:
Based on available data, the classification criteria are not met.

Skin corrosion/irritation:
Based on available data, the classification criteria are not met.

Serious eye damage/irritation:
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation:
Based on available data, the classification criteria are not met.

Germ cell mutagenicity:
Based on available data, the classification criteria are not met.

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

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

STOT-single exposure:
Based on available data, the classification criteria are not met.

STOT-repeated exposure:
Based on available data, the classification criteria are not met.

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

Additional information:
Frequently or prolonged contact with skin may cause dermal irritation.

11.2. Information on other hazards

Endocrine disrupting properties:
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 12: Ecological information

*

12.1. Toxicity

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1
LC_{50}: >100 mg/L 4 d (fish, Danio rerio (zebrafish)) OECD 203
EC_{50}: 51 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) OECD 202
NOEC: 1.69 mg/L 21 d (crustaceans, Daphnia magna (Big water flea)) OECD 211
ErC_{50}: >100 mg/L 3 d (Algae/water plant, Desmodesmus subspicatus) OECD 201

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

12.2. Persistence and degradability

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1
Biodegradation: —
Remark: Not readily biodegradable (according to OECD criteria).

Additional information:
The product is slightly soluble in water. It can be largely eliminated from the water by abiotic processes, e.g. mechanical separation.

*

12.3. Bioaccumulative potential

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1
Log K_{OW}: 6.66
Bioconcentration factor (BCF): 12,500

Accumulation / Evaluation:
No indication of bioaccumulation potential.

12.4. Mobility in soil
No information available.

12.5. Results of PBT and vPvB assessment

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene CAS No.: 68411-46-1 EC No.: 270-128-1
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
The above statement applies to the substances contained in the product from 0.1%.

12.6. Endocrine disrupting properties
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.
The above statement applies to the substances contained in the product from 0.1%.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

*
13.1. Waste treatment methods
Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code packaging

15 01 10 *	packaging containing residues of or contaminated by dangerous substances

**: Evidence for disposal must be provided.*

Waste treatment options

Appropriate disposal / Product:
Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:
Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
* **14.3. Transport hazard class(es)**			
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental hazards			
not relevant	not relevant	not relevant	not relevant
14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant

14.7. Maritime transport in bulk according to IMO instruments

not relevant.

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Restrictions on use:

Use restriction according to REACH annex XVII, no.: 75.

Synthetic polymer microparticles (as per entry 78 in Annex XVII of Regulation (EC) No. 1907/2006)

No synthetic microparticles are present.

Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: This product is not assigned to a hazard category.
Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]: No information available.
Directive 2004/42/EC on the limitation of emissions of volatile organic compounds: No information available.
Observe in addition any national regulations!

15.1.2. National regulations

[DE] National regulations

Störfallverordnung (12. BImschV)

for substances contained in the product:

This product is not assigned to a hazard category.

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Klasse 1:

5.2.5.: organic substances, to be indicated as total carbon at m >= 0.50 kg/h: conc. 50 mg/m³.

Anteil 1:

99 %

Water hazard class

WGK:

1 - slightly hazardous to water

Remark:

Self-classification (mixture; calculation rule).

15.2. Chemical Safety Assessment

not applicable.

15.3. Additional information

Regulation (EU) No. 649/2012 of the European parliament and of the council concerning the export and import of dangerous chemicals: not relevant.
Water hazard class (WGK): 1 (slightly hazardous to water).

SECTION 16: Other information

* **16.1. Indication of changes**

1.3.	Details of the supplier of the safety data sheet
1.4.	Emergency telephone number
2.2.	Label elements
3.2.	Mixtures
4.1.	Description of first aid measures
8.1.	Control parameters
8.3.	Additional information
9.1.	Information on basic physical and chemical properties
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
12.1.	Toxicity

12.3.	Bioaccumulative potential
13.1.	Waste treatment methods
14.3.	Transport hazard class(es)
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes

16.2. Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: Accord européen sur le transport des marchandises dangereuses par Route (International Carriage of Dangerous Goods by Road)
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC_{50}: Lethal concentration, 50 percent
LD_{50}: Lethal dose, 50 percent
NIOSH: National Institute of Occupational Safety and Health
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NTP: National Toxicology Program
N/A: not applicable
OEL: Occupational Exposure imit (Arbeitsplatzgrenzwert)
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limit (Zulässiger Expositionsgrenzwert)
PBT: persistent bioaccumulative toxic
PNEC: predicted no effect concentration
REL: Recommended exposure limit (Empfohlene Expositionsgrenze)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit (Kurzzeitgrenzwert) (15 min)
SVHC: substance of very high concern
TLV: Threshold Limit Values (Schwellwert Grenzwerte)
TRGS Technische Regeln für Gefahrstoffe
TSCA: Toxic Substances Control Act
TWA: Time Weighted Average (Zeitlich gewichteter Mittelwert) (8 h)
VOC: Volatile Organic Compounds
vPvB: very persistent and very bioaccumulative
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H361f	Suspected of damaging fertility.

16.6. Training advice

No data available

16.7. Additional information

Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:
health hazards: Calculation method.
Environmental hazards: Calculation method.
Physical hazards: On basis of test data.

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.

* Data changed compared with the previous version.