Mabanol Cut PM 45

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

* **1.1. Product identifier**

Trade name/designation:

Mabanol Cut PM 45

UFI:
C3SY-XQYH-6ARK-YHGH

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

Use of the substance/mixture:
Metalworking fluids

1.3. Details of the supplier of the safety data sheet

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

Mabanol GmbH & Co. KG
Koreastraße 7
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]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	

2.2. Label elements

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

Hazard pictograms:

GHS07
Exclamation mark

Signal word: Warning

Hazard components for labelling:
Alkyl triamines; 1,2-benzisothiazol-3(2H)-one; 2-n-Butyl-benzo[d]isothiazol-3-on; 1H-1,2,3-benzotriazole

Hazard statements for health hazards	
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

Supplemental hazard information: none

Precautionary statements Prevention	
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statements Response	
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

*

3.2. Mixtures

Description:

Mixture of substances listed below and other non-classified substances.

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 105-59-9 **EC No.:** 203-312-7 **Index No.:** 603-079-00-5 **REACH No.:** 01-2119488970-24	**2,2'-methyliminodiethanol** Eye Irrit. 2 (H319) **Warning**	10 – < 15 weight-%
CAS No.: 3855-32-1 **EC No.:** 223-362-3	**Alkyl triamines** Acute Tox. 3 (H311), Acute Tox. 4 (H302), Aquatic Chronic 3 (H412), Skin Corr. 1B (H314) **Danger**	0.5 – < 1 weight-%
CAS No.: 95-14-7 **EC No.:** 202-394-1 **REACH No.:** 01-2119979079-20	**1H-1,2,3-benzotriazole** Acute Tox. 4 (H302), Aquatic Chronic 2 (H411), Eye Irrit. 2 (H319) **Warning**	0.5 – < 1 weight-%
CAS No.: 2634-33-5 **EC No.:** 220-120-9 **Index No.:** 613-088-00-6 **REACH No.:** 01-2120761540-60	**1,2-benzisothiazol-3(2H)-one** Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Eye Dam. 1 (H318), Skin Irrit. 2 (H315), Skin Sens. 1 (H317) **Danger** **Specific concentration limit (SCL)** Skin Sens. 1; H317: C ≥ 0.05%	0.05 – < 0.25 weight-%
CAS No.: 4299-07-4 **EC No.:** 420-590-7	**2-n-Butyl-benzo[d]isothiazol-3-on** Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Eye Dam. 1 (H318), Skin Corr. 1B (H314), Skin Sens. 1 (H317) **Danger** M-factor (acute): 10 M-factor (chronic): 1	0.1 – < 0.25 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:

Remove victim out of the danger area. When in doubt or if symptoms are observed, get medical advice.

Following inhalation:

Remove casualty to fresh air and keep warm and at rest. In case of respiratory tract irritation, consult a physician.

In case of skin contact:

Change contaminated, saturated clothing. After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.

After eye contact:
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Following ingestion:
If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

* **4.2. Most important symptoms and effects, both acute and delayed**
No information available.

4.3. Indication of any immediate medical attention and special treatment needed
First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Foam. Extinguishing powder. Carbon dioxide (CO2). Water spray jet. Water mist. Sand.

Unsuitable extinguishing media:
Strong water jet.

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

Hazardous combustion products:
In case of fire: Gases/vapours, toxic. In case of fire may be liberated: Carbon dioxide (CO2). Carbon monoxide. 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. Move undamaged containers from immediate hazard area if it can be done safely. Use water spray jet to protect personnel and to cool endangered containers.

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. Avoid contact with skin, eyes and clothes. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Ventilate affected area.

6.1.2. For emergency responders

Personal protection equipment:
Personal protection equipment: see section 8.

6.2. Environmental precautions
Cover drains. Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Make sure spills can be contained, e.g. in sump pallets or kerbed areas. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment:
Cover drains. Stop and contain spill/release if it can be done safely. If this cannot be done, allow fire to burn under control. Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up:
Wipe up with absorbent material (eg. cloth, fleece). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for 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). Use only in well-ventilated areas. Handle and open container with care. Avoid contact with eyes and skin. Do not breathe gas/fumes/vapour/spray.

Fire prevent measures:
Usual measures for fire prevention.

Environmental precautions:
Do not empty into drains. Do not allow to enter into soil/subsoil. Cover drains.

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.

Packaging materials:
Only use containers specifically approved for the substance/product. Protect containers against damage.

Hints on storage assembly:
Keep away from: Oxidizing agent.
Do not store together with: Food and feedingstuffs.

Storage class (TRGS 510, Germany): 12 – non-combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:
Recommended storage temperature: 5 - 40°C.
Protect against: Frost. Heat. UV-radiation/sunlight.
storage stability: max.12 month(s).

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
2,2'-methyliminodiethanol **CAS No.:** 105-59-9 **EC No.:** 203-312-7	26 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
2,2'-methyliminodiethanol **CAS No.:** 105-59-9 **EC No.:** 203-312-7	19 mg/kg	① DNEL worker ② Long-term - dermal, systemic effects

Substance name	DNEL value	① DNEL type ② Exposure route
1H-1,2,3-benzotriazole **CAS No.:** 95-14-7 **EC No.:** 202-394-1	10 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
1H-1,2,3-benzotriazole **CAS No.:** 95-14-7 **EC No.:** 202-394-1	1.08 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects

Substance name	PNEC Value	① PNEC type
2,2'-methyliminodiethanol **CAS No.:** 105-59-9 **EC No.:** 203-312-7	0.1 mg/L	① PNEC aquatic, freshwater
2,2'-methyliminodiethanol **CAS No.:** 105-59-9 **EC No.:** 203-312-7	0.0045 mg/L	① PNEC aquatic, marine water
2,2'-methyliminodiethanol **CAS No.:** 105-59-9 **EC No.:** 203-312-7	10 mg/L	① PNEC sewage treatment plant
2,2'-methyliminodiethanol **CAS No.:** 105-59-9 **EC No.:** 203-312-7	0.78 mg/kg	① PNEC sediment, freshwater
1H-1,2,3-benzotriazole **CAS No.:** 95-14-7 **EC No.:** 202-394-1	0.0194 mg/L	① PNEC aquatic, freshwater
1H-1,2,3-benzotriazole **CAS No.:** 95-14-7 **EC No.:** 202-394-1	0.0194 mg/L	① PNEC aquatic, marine water
1H-1,2,3-benzotriazole **CAS No.:** 95-14-7 **EC No.:** 202-394-1	39.4 mg/L	① PNEC sewage treatment plant
1H-1,2,3-benzotriazole **CAS No.:** 95-14-7 **EC No.:** 202-394-1	0.00375 mg/kg	① PNEC sediment, freshwater

*
8.2. Exposure controls

8.2.1. Appropriate engineering controls

Use only in well-ventilated areas. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. Technical measures and the application of suitable work processes have priority over personal protection equipment.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection (EN 166).

Skin protection:

Tested protective gloves must be worn (EN ISO 374).
Wearing time with permanent contact:
Suitable material: NBR (Nitrile rubber). CR (polychloroprene, chloroprene rubber). Thickness of the glove material: 0,70 mm. Breakthrough time:: > 480 min.
Wearing time with occasional contact (splashes):
Suitable material: NBR (Nitrile rubber). CR (polychloroprene, chloroprene rubber). Thickness of the glove material: 0,40 mm. Breakthrough time:: > 30 min.
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.

Respiratory protection:

Usually no personal respirative protection necessary.

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Respiratory protection necessary at: exceeding exposure limit values. insufficient ventilation. aerosol or mist formation.
Suitable respiratory protection apparatus: Combination filtering device.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

*

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid **Colour:** yellow

Odour: not determined

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	9.1	20 °C	① DIN 51369 ② 10 weight-%
Melting point	*not determined*		
Freezing point	*not determined*		
Initial boiling point and boiling range	> 100 °C		② 1013 hPa
Decomposition temperature	*not determined*		
Flash point	> 100 °C		① EN ISO 2592 ② Contains: Water.
Evaporation rate	*not determined*		
Auto-ignition temperature	*not determined*		
Upper/lower flammability or explosive limits	*not determined*		
Vapour pressure	*not determined*		
Vapour density	*not determined*		
Density	1.117 g/cm³	15 °C	① DIN EN ISO 12185
Relative density	*not determined*		
Bulk density	*not determined*		
Water solubility	miscible	20 °C	
Partition coefficient: n-octanol/water	*not determined*		
Dynamic viscosity	*not determined*		
Kinematic viscosity	*not determined*		

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 stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

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
Acute oral toxicity:
No data available. The statement is derived from the properties of the single components.
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:
slightly irritant but not relevant for classification.
Serious eye damage/irritation:
Irritating to eyes.
Respiratory or skin sensitisation:
May cause sensitization by skin contact.
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. For viscosity data, see section 9.
Additional information:
Frequently or prolonged contact with skin may cause dermal irritation.

*
11.2. Information on other hazards
Endocrine disrupting properties:
No information available.

SECTION 12: Ecological information

12.1. Toxicity
Aquatic toxicity:
Harmless to aquatic organisms up to the tested concentration.
Additional ecotoxicological information:
There are no data available on the mixture itself. The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the single components (see section 3).

12.2. Persistence and degradability
Additional information:
Part of the components is biodegradable.

12.3. Bioaccumulative potential
Accumulation / Evaluation:
No indication of bioaccumulation potential.

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. Endocrine disrupting properties**
No information available.

* **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 product

12 01 10 *	synthetic machining oils

**: Evidence for disposal must be provided.*

Waste treatment options

Appropriate disposal / Product:
Consult the appropriate local waste disposal expert about waste disposal. Dispose of waste according to applicable legislation.

Appropriate disposal / Package:
Non-contaminated packages may be recycled. Packing which cannot be properly cleaned must be disposed of. Dispose of waste according to applicable legislation.

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

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.
Observe in addition any national regulations!

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds:

Volatile organic compounds (VOC) content in percent by weight: 0.993 weight-%

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.

Water hazard class

WGK:

1 - schwach wassergefährdend

Remark:

Self-classification (mixture; calculation rule).

Technische Regeln für Gefahrstoffe

The product complies with the restrictions of the Technical Rule for Hazardous Substances (TRGS 611).

Other regulations, restrictions and prohibition regulations

Betriebssicherheitsverordnung (BetrSichV): Keine brennbare Flüssigkeit gemäß BetrSichV.

15.2. Chemical Safety Assessment

No information available.

* **15.3. Additional information**

Water hazard class (WGK): 1 (slightly hazardous to water).

SECTION 16: Other information

* **16.1. Indication of changes**

1.1.	Product identifier
3.2.	Mixtures
4.1.	Description of first aid measures
4.2.	Most important symptoms and effects, both acute and delayed
7.1.	Precautions for safe handling
7.2.	Conditions for safe storage, including any incompatibilities
8.1.	Control parameters
8.2.	Exposure controls
9.1.	Information on basic physical and chemical properties
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
11.2.	Information on other hazards
12.6.	Endocrine disrupting properties
12.7.	Other adverse effects
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
15.3.	Additional information
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
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]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	
Respiratory or skin sensitisation *(Skin Sens. 1)*	H317: May cause an allergic skin reaction.	

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

Hazard statements	
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

16.6. Training advice
No data available

16.7. Additional 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.

* Data changed compared with the previous version.