

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 27 Sept 2024

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Version: 4



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Mabanol Gamma EP 1

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

1.1. Product identifier

Trade name/designation:

Mabanol Gamma EP 1

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

Use of the substance/mixture:

Fat

* 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]

Hazard components for labelling:

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate); Naphthenic acids, zinc salts, basic

Supplemental hazard information	
EUH208	Contains Naphthenic acids, zinc salts, basic. May produce an allergic reaction.
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.

The mixture does not contain substances $\geq 0.1\%$ of substances that have endocrine disrupting properties according to Regulation (EC) No. 1907/2006, Article 59(1) or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

* 3.2. Mixtures

Additional information:

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.

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Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 4259-15-8 EC No.: 224-235-5 REACH No.: 01-2119493635-27	zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) Aquatic Chronic 2 (H411), Eye Dam. 1 (H318) Danger Specific concentration limit (SCL) Eye Dam. 1; H318: 50.1% ≤ C < 100% Acute Toxicity Estimate ATE (oral) > 3,100 mg/kg ATE (dermal) > 5,000 mg/kg	< 1.3 weight-%
CAS No.: 84418-50-8 EC No.: 282-762-6 REACH No.: 01-2119988500-34	Naphthenic acids, zinc salts, basic Aquatic Chronic 3 (H412), Eye Irrit. 2 (H319), Skin Sens. 1 (H317) Warning Acute Toxicity Estimate ATE (oral) > 2,000 mg/kg	< 1 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:

When in doubt or if symptoms are observed, get medical advice.

Following inhalation:

Provide fresh air.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap.

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Following ingestion:

Rinse mouth thoroughly with water. Do NOT induce vomiting. Get medical help if you feel unwell.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Foam. Extinguishing powder. Sand. Carbon dioxide (CO₂).

Unsuitable extinguishing media:

Full water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire and/or explosion do not breathe fumes.

Hazardous combustion products:

In case of fire: Gases/vapours, toxic.

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.

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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. 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. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

6.3. Methods and material for containment and cleaning up

For containment:

Collect spillage.

For cleaning up:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

6.4. Reference to other sections

Personal protection equipment: see section 8

Disposal: see section 13

6.5. Additional information

Use appropriate container to avoid environmental contamination.

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). Special danger of slipping by leaking/spilling product.

Fire prevent measures:

Usual measures for fire prevention. Keep away from sources of ignition - No smoking.

Advices on general occupational hygiene

When using do not eat, drink or smoke. Avoid contact with eyes and skin. Do not breathe gas/fumes/vapour/spray. Wash hands before breaks and after work. Thorough skin-cleansing after handling the product. 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. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Keep away from sources of ignition - No smoking.

Further information on storage conditions:

Temperature control required. Keep container tightly closed.

Protect against: Air. Light. UV-radiation/sunlight.

storage temperature: < 45 °C.

7.3. Specific end use(s)

No data available

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SECTION 8: Exposure controls/personal protection

* 8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
DFG (DE) from 10 Oct 2023	zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	① 0.1 mg/m ³ ② 0.4 mg/m ³ ⑤ (Verbindungen, anorganisch; alveolengängige Fraktion)
DFG (DE) from 10 Oct 2023	zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	① 2 mg/m ³ ② 4 mg/m ³ ⑤ (Verbindungen, anorganisch; einatembare Fraktion)

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
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	6.6 mg/m ³	① DNEL worker ② Long-term - inhalation, systemic effects
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	1.67 mg/m ³	① DNEL Consumer ② Long-term - inhalation, systemic effects
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	9.6 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	4.8 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects

Substance name	PNEC Value	① PNEC type
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	0.004 mg/L	① PNEC aquatic, freshwater
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	0.0046 mg/L	① PNEC aquatic, marine water
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	0.038 mg/L	① PNEC sewage treatment plant
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	0.322 mg/L	① PNEC sediment, freshwater

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Substance name	PNEC Value	① PNEC type
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	0.062 mg/kg	① PNEC soil
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	8.33 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:

Eye glasses with side protection (EN 166).

Skin protection:

Tested protective gloves must be worn (EN ISO 374).

Suitable material: NBR (Nitrile rubber). Thickness of the glove material: > 0,38 mm. Breakthrough time: > 480 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 respiratory protection necessary.

Respiratory protection necessary at: aerosol or mist formation.

8.2.3. Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

* 9.1. Information on basic physical and chemical properties

Appearance

Form: Paste

Colour: dark yellow

Odour: Petroleum

flammability: No data available

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
Initial boiling point and boiling range	No data available		
Flash point	> 150 °C		
Evaporation rate	No data available		
Vapour pressure	No data available		
Density	< 1,000 kg/m ³	25 °C	
Water solubility	practically insoluble		
Kinematic viscosity	> 20.5 mm ² /s		

9.2. Other information

No data available

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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 known hazardous reactions.

10.4. Conditions to avoid

Heat.

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):	7,554 mg/kg
ATE (dermal):	3,833 mg/kg
Naphthenic acids, zinc salts, basic CAS No.: 84418-50-8 EC No.: 282-762-6	
LD ₅₀ oral:	>2,000 mg/kg (Rat)
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5	
LD ₅₀ oral:	>3,100 mg/kg (Rat)
LD ₅₀ dermal:	>5,000 mg/kg (Rabbit)

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.

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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 humans as no components meets the criteria.

SECTION 12: Ecological information

* 12.1. Toxicity

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5
--

LC ₅₀ : 46 mg/L 4 d (fish)

Aquatic toxicity:

Harmless to aquatic organisms up to the tested concentration.

12.2. Persistence and degradability

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5
--

Biodegradation: —

Remark: Not readily biodegradable (according to OECD criteria)
--

Biodegradation:

Not readily biodegradable (according to OECD criteria).

* 12.3. Bioaccumulative potential

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5
--

Log K _{ow} : 3.59

Accumulation / Evaluation:

No information available.

12.4. Mobility in soil

After release, adsorbs onto soil.

insoluble in: Water.

12.5. Results of PBT and vPvB assessment

Naphthenic acids, zinc salts, basic CAS No.: 84418-50-8 EC No.: 282-762-6
--

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) CAS No.: 4259-15-8 EC No.: 224-235-5
--

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.

* 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.

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.

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13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

13 08 99 *	Wastes not otherwise specified
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*: 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:

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):

This product is not assigned to a hazard category.

Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

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.

Water hazard class

WGK:

1 - slightly hazardous to water

Remark:

Self-classification (mixture; calculation rule).

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15.2. Chemical Safety Assessment

No information available.

SECTION 16: Other information

* 16.1. Indication of changes

1.3.	Details of the supplier of the safety data sheet
2.2.	Label elements
3.2.	Mixtures
4.1.	Description of first aid measures
8.1.	Control parameters
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
12.1.	Toxicity
12.3.	Bioaccumulative potential
12.6.	Endocrine disrupting properties
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes
16.5.	List of relevant hazard statements and/or precautionary statements from sections 2 to 15

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

LC₅₀: Lethal concentration, 50 percent

LD₅₀: 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 limit (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)

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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	
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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.