

# SAFETY DATA SHEET

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

Revision date: 20 Jun 2024

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Version: 6



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## Mabanol Radon Unigear GL 4/GL 5 80W-90

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

#### 1.1. Product identifier

Trade name/designation:

Mabanol Radon Unigear GL 4/GL 5 80W-90

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

Use of the substance/mixture:

Gear oil

#### 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:

Polysulfides, di-tert-Bu; Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched); magnesium metaborate; mineral oil

Supplemental hazard information	
EUH208	Contains Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched); Magnesium metaborate. 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. 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

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### 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.: 68937-96-2 EC No.: 273-103-3 REACH No.: 01-2119540515-43	<b>Polysulfides, di-tert-Bu</b> Aquatic Chronic 3 (H412), Skin Sens. 1B (H317) ⚠ Warning <b>Specific concentration limit (SCL)</b> Skin Sens. 1B; H317: $46\% \leq C < 100\%$ <b>Acute Toxicity Estimate</b> ATE (oral) > 2,000 mg/kg ATE (dermal) > 2,000 mg/kg	3 - < 5 weight-%
EC No.: 931-384-6 REACH No.: 01-2119493620-38	<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> Acute Tox. 4 (H302), Aquatic Chronic 2 (H411), Eye Irrit. 2 (H319), Skin Sens. 1 (H317) ⚠ ⚠ Warning <b>Specific concentration limit (SCL)</b> Eye Irrit. 2; H319: $50\% \leq C < 100\%$ Skin Sens. 1B; H317: $9.39\% \leq C < 100\%$ <b>Acute Toxicity Estimate</b> ATE (oral) 2,000 mg/kg	1 - < 3 weight-%
	<b>mineral oil</b> Asp. Tox. 1 (H304) ⚠ Danger <b>Additional information:</b> The mineral oil contained can be described by one or more of the following numbers: CAS No.: 64742-54-7, 64742-65-0, 64742-55-8, 64742-56-9. EC No.: 265-157-1, 265-169-7, 265-158-7, 265-159-2. REACH No.: 01-2119484627-25, 01-2119471299-27, 01-2119480132-48, 01-2119487077-29.	1 - < 3 weight-%
CAS No.: 13703-82-7 EC No.: 237-235-5 REACH No.: 01-2120769073-53	<b>magnesium metaborate</b> Skin Sens. 1B (H317) ⚠ Warning <b>Acute Toxicity Estimate</b> ATE (oral) > 2,000 mg/kg ATE (dermal) > 2,000 mg/kg	0.3 - < 0.5 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 casualty to fresh air and keep warm and at rest. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately. Apply cortisone spray at early stage.

##### In case of skin contact:

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

##### 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.

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### 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 (CO<sub>2</sub>). 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 monoxide. Carbon dioxide (CO<sub>2</sub>). Sulphur dioxide (SO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>). Phosphorus oxides.

### 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. Avoid contact with skin, eyes and clothes. Avoid: aerosol or mist formation. 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 contact with skin, eyes and clothes. Avoid: Generation/formation of mist. generation/formation of aerosols. Do not breathe gas/fumes/vapour/spray.

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### 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
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	3.29 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	0.58 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	4.68 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	1.67 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	0.167 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	4.28 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects

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Substance name	DNEL value	① DNEL type ② Exposure route
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	1.09 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	12.5 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	6.25 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	0.024 mg/cm <sup>2</sup>	① DNEL Consumer ② Acute - dermal, local effects
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	0.25 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	5.49 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	0.82 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	7.78 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	0.278 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	0.28 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects

Substance name	PNEC Value	① PNEC type
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	0.00024 mg/L	① PNEC aquatic, freshwater
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	0.000024 mg/L	① PNEC aquatic, marine water
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	4.51 mg/L	① PNEC sewage treatment plant
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	0.94 mg/kg	① PNEC sediment, freshwater

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Substance name	PNEC Value	① PNEC type
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	0.094 mg/kg	① PNEC sediment, marine water
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	0.0181 mg/kg	① PNEC soil
<b>Polysulfides, di-tert-Bu</b> CAS No.: 68937-96-2 EC No.: 273-103-3	6.66 mg/kg	① PNEC secondary poisoning
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	0.0024 mg/L	① PNEC aquatic, freshwater
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	0.00024 mg/L	① PNEC aquatic, marine water
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	24.33 mg/L	① PNEC sewage treatment plant
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	0.0129 mg/kg	① PNEC sediment, freshwater
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	0.00129 mg/kg	① PNEC sediment, marine water
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	0.00117 mg/kg	① PNEC soil
<b>Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)</b> EC No.: 931-384-6	10 mg/kg	① PNEC secondary poisoning
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	0.05 mg/L	① PNEC aquatic, freshwater
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	0.05 mg/L	① PNEC aquatic, marine water
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	100 mg/L	① PNEC sewage treatment plant

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Substance name	PNEC Value	① PNEC type
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	1.38 mg/kg	① PNEC sediment, freshwater
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	1.38 mg/kg	① PNEC sediment, marine water
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	0.247 mg/kg	① PNEC soil
<b>magnesium metaborate</b> CAS No.: 13703-82-7 EC No.: 237-235-5	1.67 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/ m<sup>3</sup> - Source: ACGIH

Limit value (TLV-STEL ) = 10 mg/ m<sup>3</sup> - 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

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### 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	224 °C		① EN ISO 2592
Evaporation rate	No data available		
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	0.898 g/cm <sup>3</sup>	15 °C	① DIN 51757
Bulk density	not applicable		
Water solubility	No data available		
Dynamic viscosity	No data available		
Kinematic viscosity	139 mm <sup>2</sup> /s	40 °C	① EN ISO 3104
Pour point	-27 °C		① ASTM D 5985

### 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 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): >5,000 mg/kg
ATE (dermal): >2,000 mg/kg
ATE (inhalation, vapour): >20 mg/L
ATE (inhalation, dust/mist): >5 mg/L
Polysulfides, di-tert-Bu CAS No.: 68937-96-2 EC No.: 273-103-3
LD <sub>50</sub> oral: >2,000 mg/kg (Rat)
LD <sub>50</sub> dermal: >2,000 mg/kg (Rat)



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**Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)** EC No.: 931-384-6

**LD<sub>50</sub> oral:** 2,000 mg/kg (Rat) OECD 401

**magnesium metaborate** CAS No.: 13703-82-7 EC No.: 237-235-5

**LD<sub>50</sub> oral:** >2,000 mg/kg (Rat) OECD 420

**LD<sub>50</sub> dermal:** >2,000 mg/kg (Rat) OECD 402

### 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.

Contains Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched); magnesium metaborate. May produce an allergic reaction.

Respiratory or skin sensitisation: Specific concentration limit (SCL): Skin Sens. 1 >46%

### 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:

No information available.

## SECTION 12: Ecological information

### \* 12.1. Toxicity

**Polysulfides, di-tert-Bu** CAS No.: 68937-96-2 EC No.: 273-103-3

**EC<sub>50</sub>:** 63 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) OECD 202

**ErC<sub>50</sub>:** >100 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201

**Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)** EC No.: 931-384-6

**LC<sub>50</sub>:** ≈8.5 mg/L 4 d (fish, Oncorhynchus mykiss (Rainbow trout)) OECD 203

**EC<sub>50</sub>:** ≈91.4 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) OECD 202

**ErC<sub>50</sub>:** 6.4 mg/L 4 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201

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**magnesium metaborate** CAS No.: 13703-82-7 EC No.: 237-235-5

**LC<sub>50</sub>**: >50 mg/L 4 d (fish, *Oncorhynchus mykiss* (Rainbow trout)) OECD 203

**ErC<sub>50</sub>**: >50 mg/L 3 d (Algae/water plant, *Pseudokirchneriella subcapitata*) OECD 201

**EC<sub>50</sub>**: >50 mg/L 2 d (crustaceans, *Daphnia magna* (Big water flea)) OECD 202

### 12.2. Persistence and degradability

**Polysulfides, di-tert-Bu** CAS No.: 68937-96-2 EC No.: 273-103-3

**Biodegradation:** —

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

**Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)** EC No.: 931-384-6

**Biodegradation:** —

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

**magnesium metaborate** CAS No.: 13703-82-7 EC No.: 237-235-5

**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

**Polysulfides, di-tert-Bu** CAS No.: 68937-96-2 EC No.: 273-103-3

**Log K<sub>OW</sub>**: 5.6

**Bioconcentration factor (BCF):** 0.006 Species: *Lepomis macrochirus* (Bluegill)

**Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)** EC No.: 931-384-6

**Log K<sub>OW</sub>**: < 0.3

**Bioconcentration factor (BCF):** 436 Species: *Oncorhynchus mykiss* (Rainbow trout)

#### Accumulation / Evaluation:

No indication of bioaccumulation potential.

### 12.4. Mobility in soil

No information available.

### \* 12.5. Results of PBT and vPvB assessment

**Polysulfides, di-tert-Bu** CAS No.: 68937-96-2 EC No.: 273-103-3

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

**Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)** EC No.: 931-384-6

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

**magnesium metaborate** CAS No.: 13703-82-7 EC No.: 237-235-5

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

**mineral oil**

**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.

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## Mabanol Radon Unigear GL 4/GL 5 80W-90

### 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
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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:

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)
<b>14.1. UN number or ID number</b>			
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.
<b>14.2. UN proper shipping name</b>			
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.
<b>14.3. Transport hazard class(es)</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.4. Packing group</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.5. Environmental hazards</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.6. Special precautions for user</b>			
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.

##### Other regulations (EU):

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!

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## Mabanol Radon Unigear GL 4/GL 5 80W-90

### 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  $m \geq 0.50$  kg/h: conc.  $50 \text{ mg/m}^3$ .

###### Anteil 1:

99 %

##### Water hazard class

###### WGK:

2 - obviously 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): 2 (obviously hazardous to water).

## SECTION 16: Other information

### \* 16.1. Indication of changes

3.2.	Mixtures
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
12.5.	Results of PBT and vPvB assessment
12.6.	Endocrine disrupting properties
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
16.5.	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

LC<sub>50</sub>: Lethal concentration, 50 percent

LD<sub>50</sub>: Lethal dose, 50 percent

NIOSH: National Institute of Occupational Safety and Health

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## Mabanol Radon Unigear GL 4/GL 5 80W-90

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)

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	
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
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

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.