

Mabanol Radon Gear Syn LD GL 4 75W-80

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

1.1. Product identifier

Mabanol Radon Gear Syn LD GL 4 75W-80

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

Use of the substance/mixture

gear oil

Uses advised against

none

1.3. Details of the supplier of the safety data sheet

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

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC

R phrases:

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

Hazard categories:

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful to aquatic life with long lasting effects.

Hazard Overview

Physical hazards: No risks worthy of mention.

health hazards: No risks worthy of mention.

Environmental hazards: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of waste according to applicable legislation.

2.3. Other hazards

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.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Mabanol Radon Gear Syn LD GL 4 75W-80

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
265-859-8 65652-41-7	Bis(t-butylphenyl)phenyl phosphate N - Dangerous for the environment R50-53 Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H400 H410	>0,2 - <0,5 %
260-391-0 56803-37-3	tert-butylphenyl diphenyl phosphate N - Dangerous for the environment R50-53 Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H400 H410	>0,2 - <0,5 %
204-112-2 115-86-6	Triphenyl phosphate N - Dangerous for the environment R50-53 Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H400 H410	0,1 - 0,2 %
204-539-4 122-39-4 612-026-00-5	diphenylamine T - Toxic, N - Dangerous for the environment R23/24/25-33-50-53 Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT RE 2, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H301 H311 H331 H373 H400 H410	0,1 - 0,2 %

Full text of R-, 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).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. In case of skin irritation, consult a physician.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

After 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

If swallowed or in the event of vomiting, risk of entering the lungs.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Mabanol Radon Gear Syn LD GL 4 75W-80

Suitable extinguishing media

Sand. Foam. Carbon dioxide (CO₂). Extinguishing powder. 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.
Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO₂) Sulphur dioxide (SO₂)
Nitrogen oxides (NO_x)

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Wear a self-contained breathing apparatus and chemical protective clothing.

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

Wear personal protection equipment (refer to section 8).
Ventilate affected area.
Special danger of slipping by leaking/spilling product.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter into soil/subsoil. If required, notify relevant authorities according to all applicable regulations.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear suitable protective clothing. (See section 8.)
Avoid formation of oil dust.

Advice on protection against fire and explosion

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

Further information on handling

Do not breathe vapour/aerosol.
Avoid contact with skin and eyes.
Advices on general occupational hygiene: See section 8.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

Advice on storage compatibility

Do not store together with: Gas. Explosives. Radioactive substances. Infectious substances

Mabanol Radon Gear Syn LD GL 4 75W-80

Further information on storage conditions

Temperature control required. Protect from light. Keep container tightly closed. Do not allow contact with air.

7.3. Specific end use(s)

refer to chapter 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
122-39-4	Diphenylamine	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL
115-86-6	Triphenyl phosphate	-	3		TWA (8 h)	WEL
		-	6		STEL (15 min)	WEL

Additional advice on limit values

air limit values:
Possibility of exposure to Aerosol
Limit value = 5 mg/ m³ - Source: ACGIH

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation.

Protective and hygiene measures

Clean skin thoroughly after working.
Do not put any product-impregnated cleaning rags into your trouser pockets.

Eye/face protection

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

Hand protection

Use safety gloves of following materials: NBR (nitrile) / neopren / viton (permeationslevel 5 - 6), Cat. II according to norm EN 388.

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.

Skin protection

Oil-resistant and hardly inflammable protective clothing.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

- aerosol or mist formation
- exceeding exposure limit values

Suitable respiratory protection apparatus: Respiratory equipment in case of nebulosity or aerosol: Use a mask with a filter type A2, A2/P2 or ABEK.

The filter class must be suitable for the maximum contaminant concentration

Mabanol Radon Gear Syn LD GL 4 75W-80

(gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Environmental exposure controls

No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid
 Colour: clear, red
 Odour: characteristic

Test method

pH-Value: No information available.

Changes in the physical state

Melting point: No information available.
 Initial boiling point and boiling range: No information available.
 Sublimation point: No information available.
 Softening point: No information available.
 Pour point: -55 °C ASTM D 5985
 Flash point: 234 °C DIN ISO 2592
 Sustaining combustion: No data available

Flammability

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

Explosive properties

none

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

Auto-ignition temperature

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

Decomposition temperature: No information available.

Oxidizing properties

none

Vapour pressure: (at 20 °C) No information available.

Vapour pressure: (at 50 °C) No information available.

Density (at 15 °C): 0,862 g/cm³ DIN 51757

Bulk density: No information available.

Water solubility: No information available.

Solubility in other solvents

No information available.

Partition coefficient: No information available.

Viscosity / dynamic: No information available.

Mabanol Radon Gear Syn LD GL 4 75W-80

Viscosity / kinematic: (at 40 °C)	65,9 mm ² /s DIN EN ISO 3104
Flow time:	No information available.
Vapour density:	No information available.
Evaporation rate:	No information available.
Solvent separation test:	No information available.
Solvent content:	No information available.

9.2. Other information

Solid content:	No information available.
----------------	---------------------------

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

Stable at ambient temperature.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

Oxidising agent, strong

10.6. Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No information available.

Acute toxicity

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

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
115-86-6	Triphenyl phosphate				
	oral	LD50	>5000 mg/kg	Rat (OECD 401)	ECHA Dossier
	dermal	LD50	>7900 mg/kg	Rabbit (OECD 402)	ECHA Dossier
122-39-4	diphenylamine				
	oral	LD50	>800 mg/kg	Rat.	ECHA Dossier
	dermal	ATE	300 mg/kg		
	inhalative vapour	ATE	3 mg/l		
	inhalative aerosol	ATE	0,5 mg/l		

Irritation and corrosivity

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

Mabanol Radon Gear Syn LD GL 4 75W-80

Sensitising effects

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

STOT-single exposure

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

Severe effects after repeated or prolonged exposure

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

diphenylamine:

Subchronic oral toxicity:

Method: OECD Guideline 452 (Chronic Toxicity Studies), Species: Rat.

Length of test: 150d

Result: NOAEL = 3 mg/kg.

literature information: Toxicology And Applied Pharmacology 10, 362-374

Carcinogenic/mutagenic/toxic effects for reproduction

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

diphenylamine:

In vitro mutagenicity/genotoxicity:

Method: OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

Results: negative (without metabolic activation). positive (with metabolic activation).

Method: OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Results: negative.

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

Results: negative (without metabolic activation). positive (with metabolic activation).

In vivo mutagenicity/genotoxicity:

Method:

-OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)

-OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Results: negative.

literature information: ECHA Dossier

Carcinogenicity (OECD Guideline 453) = negative.

literature information: ECHA Dossier

Aspiration hazard

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

Practical experience

Other observations

Frequent contact specially if dried out may cause skin and eye irritations.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
115-86-6	Triphenyl phosphate					
	Acute fish toxicity	LC50	0,4 mg/l	96 h	Oncorhynchus mykiss	ECHA Dossier
	Acute crustacea toxicity	EC50	1 mg/l	48 h	Daphnia magna	ECHA Dossier
122-39-4	diphenylamine					
	Acute crustacea toxicity	EC50	2 mg/l	48 h	Daphnia magna	ECHA Dossier

12.2. Persistence and degradability

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

Mabanol Radon Gear Syn LD GL 4 75W-80

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
115-86-6	Triphenyl phosphate			
	OECD 301C / ISO 9408 / EEC 92/69 annex V, C.4-F	83-94 %	28	ECHA Dossier
	The product is readily biodegradable to OECD criteria.			
122-39-4	diphenylamine			
	OECD 301D / EEC 92/69 annex V, C.4-E	26%	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
56803-37-3	tert-butylphenyl diphenyl phosphate	5,12
115-86-6	Triphenyl phosphate	4,63
122-39-4	diphenylamine	3,8

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances Classified as hazardous waste.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

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

Inland waterways transport (ADN)

- 14.1. UN number:** No dangerous good in sense of this transport regulation.

Mabanol Radon Gear Syn LD GL 4 75W-80

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

Marine transport (IMDG)

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

Air transport (ICAO)

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

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Informations for safe handling see chapter 7.
Informations for personal protective equipment see chapter 8.

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

not relevant

SECTION 15: Regulatory information

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

EU regulatory information

2010/75/EU (VOC): No information available.
2004/42/EC (VOC): No information available.

Additional information

Not subject to 96/82/EC
Observe in addition any national regulations!

National regulatory information

Water contaminating class (D): 2 - water contaminating

Additional information

none

15.2 Chemical Safety Assessment

not applicable.

SECTION 16: Other information

Changes

Rev. : 1,0 - 08.05.2015

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
International Carriage of Dangerous Goods by Road)

Mabanol Radon Gear Syn LD GL 4 75W-80

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
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NTP: National Toxicology Program
N/A: not applicable
OSHA: Concerning the International Transport of Dangerous Goods by Rail)
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
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
SVHC: substance of very high concern
TRGS Technische Regeln für Gefahrstoffe
TSCA: Toxic Substances Control Act
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse

Relevant R-phrases (Number and full text)

- 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
- 33 Danger of cumulative effects.
- 50 Very toxic to aquatic organisms.
- 53 May cause long-term adverse effects in the aquatic environment.

Relevant H- and EUH-phrases (Number and full text)

- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H331 Toxic if inhaled.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)