



**Safety Data Sheet**

according to UK REACH Regulation

**ADDINOL Eco Gear GLS 220**

Revision date: 19.02.2025

Product code: 741134

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**Relevant ingredients**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
68937-96-2	Di-tert-butyl-Polysulfides			0.5 - < 1 %
	273-103-3		01-2119540515-43	
	Skin Sens. 1B, Aquatic Chronic 3; H317 H412			
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)			0.5 - < 1 %
	931-384-6		01-2119493620-38	
	Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H302 H319 H317 H411			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
68937-96-2	273-103-3	Di-tert-butyl-Polysulfides	0.5 - < 1 %
		Skin Sens. 1B; H317: >= 46 - 100	
	931-384-6	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	0.5 - < 1 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg Eye Irrit. 2; H319: >= 50 - 100 Skin Sens. 1; H317: >= 9,39 - 100	

**Further Information**

DMSO-Extract < 3 %; IP 346. Classification system: The classification corresponds to the current EC lists and is completed by information from specialist literature and company information.

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Self-protection of the first aider. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

**After inhalation**

Move victim to fresh air. Put victim at rest and keep warm. Seek medical attention if problems persist.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Change contaminated clothing. In case of skin irritation, seek medical treatment.

**After contact with eyes**

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

**After ingestion**

Do NOT induce vomiting.

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

**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**

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### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>). Extinguishing powder. Water spray. alcohol resistant foam.

### Unsuitable extinguishing media

High power water jet.

### 5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide Nitrogen oxides (NO<sub>x</sub>). Sulfur oxides. Nitrogen oxides (NO<sub>x</sub>). carbon black.

### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

### Additional information

Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers. In case of fire and/or explosion do not breathe fumes. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### General advice

High slip hazard because of leaking or spilled product. Remove all sources of ignition. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Prevent spread over a wide area (e.g. by containment or oil barriers).

### 6.3. Methods and material for containment and cleaning up

#### Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed containers for disposal. Clean contaminated articles and floor according to the environmental legislation.

### 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Section 12: Ecological Information (non-mandatory)

Disposal: see section 13

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Work in well-ventilated zones or use proper respiratory protection. Avoid oil mist. If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid contact with skin, eyes and clothes.

#### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Take off immediately all contaminated clothing. Wash contaminated clothing prior to re-use. Do not eat, drink, smoke or sneeze at the workplace.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Keep container tightly closed in a cool place. Keep/Store only in original container.

#### Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

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Keep away from: Oxidizing agent

**Further information on storage conditions**

Protect against: UV-radiation/sunlight. frost. heat.

Recommended storage temperature: 5 - 40°C

**7.3. Specific end use(s)**

Further information: see technical data sheet.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
68937-96-2	Di-tert-butyl-Polysulfides			
Worker DNEL, long-term		inhalation	systemic	3,29 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	4,67 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,58 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	1,67 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,167 mg/kg bw/day
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)			
Worker DNEL, long-term		inhalation	systemic	4,28 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	12,5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,09 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	6,25 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,25 mg/kg bw/day

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**PNEC values**

CAS No	Substance	
Environmental compartment		Value
68937-96-2	Di-tert-butyl-Polysulfides	
Freshwater		0,00024 mg/l
Freshwater (intermittent releases)		0,002 mg/l
Marine water		0,000024 mg/l
Freshwater sediment		0,94 mg/kg
Marine sediment		0,094 mg/kg
Secondary poisoning		6,66 mg/kg
Micro-organisms in sewage treatment plants (STP)		4,51 mg/l
Soil		0,0181 mg/kg
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)		
Freshwater		0,0024 mg/l
Freshwater (intermittent releases)		0,15 mg/l
Marine water		0,00024 mg/l
Freshwater sediment		0,0129 mg/kg
Marine sediment		0,00129 mg/kg
Secondary poisoning		10 mg/kg
Micro-organisms in sewage treatment plants (STP)		24,33 mg/l
Soil		0,00117 mg/kg

**Additional advice on limit values**

Recommended limit value for oil mist

TWA: 5 mg/m<sup>3</sup>STEL: 10 mg/m<sup>3</sup>

The product does not contain any relevant quantities of substances with legally established exposure limitation.

**8.2. Exposure controls****Appropriate engineering controls**

Provide adequate ventilation as well as local exhaust at critical locations.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN ISO 16321

**Hand protection**

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): EN ISO 374

Duration of wearing with permanent contact: 480 min

Suitable material: NBR (Nitrile rubber).

Thickness of glove material: 0.7 mm.

Wearing time with occasional contact (splashes): 30 min

Suitable material: NBR (Nitrile rubber).

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Thickness of glove material: 0.4 mm

Protect skin by using skin protective cream.

**Skin protection**

Wear suitable protective clothing. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

**Respiratory protection**

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Breathing protection with filter against organic gases and vapours type A - boiling point &gt; 65°C: A1: &lt; 1000 ppm; A2: &lt; 5000 ppm; A3: &lt; 10000 ppm

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	brown-green
Odour:	characteristic
Odour threshold:	not determined

**Test method**

Melting point/freezing point:	No data available
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	> 235 °C DIN EN ISO 2592
Auto-ignition temperature:	not determined
Decomposition temperature:	No data available
pH-Value:	No data available
Viscosity / kinematic: (at 40 °C)	220 mm <sup>2</sup> /s ASTM D 7042
Water solubility:	virtually insoluble
Solubility in other solvents	
No data available	
Partition coefficient n-octanol/water:	No data available
Vapour pressure:	No data available
Density (at 15 °C):	0,890 g/cm <sup>3</sup> DIN 51757
Relative vapour density:	No data available
Particle characteristics:	No data available

**9.2. Other information****Information with regard to physical hazard classes**

Explosive properties

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

**Other safety characteristics**

Evaporation rate:

No data available

Pour point:

-45 °C ASTM D 7346

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**SECTION 10: Stability and reactivity****10.1. Reactivity**

The product is stable under storage at normal ambient temperatures.

**10.2. Chemical stability**

The mixture is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

Do not overheat to avoid decomposition by heat.

Refer to chapter 7 No further action is necessary.

**10.5. Incompatible materials**

Reacts with: Oxidising agent, strong. Acid.

**10.6. Hazardous decomposition products**

In case of fire may be liberated: Carbon monoxide Nitrogen oxides (NO<sub>x</sub>). Sulfur oxides. Nitrogen oxides (NO<sub>x</sub>). carbon black.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

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

Mixture not tested.

**ATEmix calculated**

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1995)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit		

**Irritation and corrosivity**

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

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

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

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.

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

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#### Aspiration hazard

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

#### 11.2. Information on other hazards

##### Endocrine disrupting properties

not applicable

#### Further information

If handled with proper care and at intended use, the product does not cause any harmful effects acc. to our experiences and available information.

### SECTION 12: Ecological information

#### 12.1. Toxicity

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

Mixture not tested.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
68937-96-2	Di-tert-butyl-Polysulfides					
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Raphidocelis subcapitata	Study report (2012) OECD Guideline 201
	Acute crustacea toxicity	EL50	63 mg/l	48 h	Daphnia magna	Study report (2013) OECD Guideline 202
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)					
	Acute fish toxicity	LL50 mg/l	ca. 24	96 h	Oncorhynchus mykiss	REACH Registration Dossier OECD Guideline 203
	Acute algae toxicity	ErC50	6,4 mg/l	96 h	Raphidocelis subcapitata	REACH Registration Dossier OECD Guideline 201
	Acute crustacea toxicity	EL50 mg/l	ca. 91,4	48 h	Daphnia magna	REACH Registration Dossier OECD Guideline 202
	Acute bacteria toxicity	EC50 mg/l ( )	ca. 2433	3 h	activated sludge, domestic	REACH Registration Dossier OECD Guideline 209

#### 12.2. Persistence and degradability

Not easily bio-degradable (according to OECD-criteria). Do not allow to enter into surface water or drains.

#### 12.3. Bioaccumulative potential

No data available

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
68937-96-2	Di-tert-butyl-Polysulfides	5,6
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	< 0,3

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#### BCF

CAS No	Chemical name	BCF	Species	Source
68937-96-2	Di-tert-butyl-Polysulfides	0,006	Lepomis macrochirus	Study report (2015)
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	436	Onchorhynchus mykiss	REACH Registration D

#### 12.4. Mobility in soil

Due to its low solubility in water the product is almost completely mechanically separated in biological waste water treatment plants.

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

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

#### 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 data available

#### Further information

Do not allow uncontrolled leakage of product into the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

Must not be disposed of with domestic refuse. Do not allow to enter into surface water or drains.

##### List of Wastes Code - residues/unused products

130206 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste engine, gear and lubricating oils; synthetic engine, gear and lubricating oils; hazardous waste

##### Contaminated packaging

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Dispose of waste according to applicable legislation. Packing which cannot be properly cleaned must be thrown away.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

- 14.1. UN number or ID number: -  
14.2. UN proper shipping name: -  
14.3. Transport hazard class(es): -  
14.4. Packing group: -

#### Inland waterways transport (ADN)

- 14.1. UN number or ID number: -  
14.2. UN proper shipping name: -  
14.3. Transport hazard class(es): -  
14.4. Packing group: -

#### Marine transport (IMDG)

- 14.1. UN number or ID number: -  
14.2. UN proper shipping name: -  
14.3. Transport hazard class(es): -  
14.4. Packing group: -

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**Air transport (ICAO-TI/IATA-DGR)****14.1. UN number or ID number:** -**14.2. UN proper shipping name:** -**14.3. Transport hazard class(es):** -**14.4. Packing group:** -**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Unless specified otherwise, general measures for safe transport must be followed.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 3,8.

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**Abbreviations and acronyms**

Acute Tox: Acute toxicity

Eye Irrit: Eye irritation

Skin Sens: Skin sensitisation

Aquatic Chronic: Chronic aquatic hazard

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road ; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways ; ASTM - American Society for the Testing of Materials ; ATE - Acute Toxicity Estimates ; bw - Body weight ; CAO - Cargo Aircraft Only ; CAS - Chemical Abstracts Service ; CMR - Carcinogen, Mutagen or Reproductive Toxicant ; DIN - Standard of the German Institute for Standardisation ; DNEL - Derived No-Effect Level ; DOT - Department of Transportation ; DSL - Domestic Substances List (Canada) ; EG - European Union ; EN - European standards ; GHS - Globally Harmonized System ; GLP - Good Laboratory Practice ; HMIS - Hazardous Materials Identification System ; IARC - International Agency for Research on Cancer ; IATA - International Air Transport Association ; IC50 - Half maximal inhibitory concentration ; ICAO - International Civil Aviation Organization ; IMDG - International Maritime Dangerous Goods ; IMO - International Maritime Organization ; ISO - International Organisation for Standardization ; LC50 - Lethal Concentration to 50 % of a test population ; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose) ; MARPOL - International Convention for the Prevention of Pollution from Ships ; MSHA - Mine Safety and Health Administration ; n.o.s. - Not Otherwise Specified ; NFPA - National Fire Protection Association ; NO(A)EC - No Observed (Adverse) Effect Concentration ; NO(A)EL - No Observed (Adverse) Effect Level ; NOELR - No Observable Effect Loading Rate ; NTP - National Toxicology Program ; OECD - Organization for Economic Co-operation and Development ; PBT - Persistent, Bioaccumulative and Toxic substance ; (Q)SAR - (Quantitative) Structure Activity Relationship ; RCRA - Resource Conservation and Recovery Act ; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals ; RID - Regulation concerning the International Carriage of Dangerous Goods by Rail ; RQ - Reportable Quantity ; SADT - Self- Accelerating Decomposition Temperature ; SARA - Superfund Amendments and Reauthorization Act ; SDS - Safety Data Sheet ; TSCA - Toxic Substances Control Act (United States) ; UN - United Nations ; vPvB - Very Persistent and Very Bioaccumulative

**Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
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.
EUH210	Safety data sheet available on request.

**Further Information**

This preparation is hazardous in the sense of regulation (EC) No 1272/2008 [GHS].

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 receiver of our product is singularly responsible for adhering to existing laws and regulations.

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