

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Hightemp EK 2

Revision date: 04.12.2024

Product code: 717236

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Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
38900-29-7	Dilithiumazelat			1 – < 5 %
	254-184-4		01-2120119814-57	
	Acute Tox. 4; H302			
4259-15-8	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)			1 – < 5 %
	224-235-5		01-2119493635-27	
	Eye Dam. 1, Aquatic Chronic 2; H318 H411			
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene			0,1 – < 1 %
	270-128-1		01-2119491299-23	
	Repr. 2, Aquatic Chronic 3; H361f H412			
	Reaction products of boric acid and lithium hydroxide			0,1 – < 1 %
	701-475-3		01-2120772309-47	
	Repr. 2, Acute Tox. 4, Eye Dam. 1; H361d H302 H318			

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	
38900-29-7	254-184-4	Dilithiumazelat	1 – < 5 %
		oral: LD50 = > 300 mg/kg	
4259-15-8	224-235-5	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	1 – < 5 %
		dermal: LD50 = > 5000 mg/kg; oral: LD50 = 3100 mg/kg Eye Dam. 1; H318: >= 50 - 100 Eye Irrit. 2; H319: >= 2,5 - < 50	
68411-46-1	270-128-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	0,1 – < 1 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	
	701-475-3	Reaction products of boric acid and lithium hydroxide	0,1 – < 1 %
		oral: ATE = 500 mg/kg	

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

Provide fresh air. Seek medical attention if problems persist.

After contact with skin

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

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.

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Rinse mouth thoroughly with 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

Suitable extinguishing media

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

Unsuitable extinguishing media

Water.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Sulfur oxides. 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. Avoid contact with skin, eyes and clothes.

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

Take up mechanically. Dispose of waste according to applicable legislation. 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

Avoid contact with skin, eyes and clothes. When using do not smoke.

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

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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.
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
38900-29-7	Dilithiumazelat			
Consumer DNEL, long-term		dermal	local	0,023 mg/cm ²
4259-15-8	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)			
Worker DNEL, long-term		dermal	systemic	9,6 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,67 mg/m ³
Consumer DNEL, long-term		dermal	systemic	4,8 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,19 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	6,6 mg/m ³
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene			
Worker DNEL, long-term		inhalation	systemic	0,31 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,44 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,08 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,22 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,05 mg/kg bw/day

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PNEC values

CAS No	Substance	Value
Environmental compartment		
38900-29-7	Dilithiumazelat	
Freshwater		0,023 mg/l
Freshwater (intermittent releases)		0,23 mg/l
Marine water		0,002 mg/l
4259-15-8	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	
Freshwater		0,004 mg/l
Freshwater (intermittent releases)		0,044 mg/l
Marine water		0,0046 mg/l
Freshwater sediment		0,322 mg/kg
Marine sediment		0,032 mg/kg
Secondary poisoning		8,33 mg/kg
Micro-organisms in sewage treatment plants (STP)		3,8 mg/l
Soil		0,062 mg/kg
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	
Freshwater		0,034 mg/l
Freshwater (intermittent releases)		0,51 mg/l
Marine water		0,003 mg/l
Freshwater sediment		0,446 mg/kg
Marine sediment		0,045 mg/kg
Secondary poisoning		0,833 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		17,6 mg/kg

Additional advice on limit values

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

8.2. Exposure controls



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).

Thickness of glove material: 0.4 mm

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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

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

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

Physical state:	Paste
Colour:	brown
Odour:	characteristic
Odour threshold:	not determined

Test method

Melting point/freezing point:	> 260 °C	
Boiling point or initial boiling point and boiling range:	> 250 °C	
Flammability:	No data available	
Lower explosion limits:	No data available	
Upper explosion limits:	No data available	
Flash point:	> 200 °C	DIN EN ISO 2592
Auto-ignition temperature:	No data available	
Decomposition temperature:	No data available	
pH-Value:	not applicable	
Viscosity / kinematic: (at 40 °C)	170 mm ² /s	DIN 51562 - Base oil
Water solubility:	insoluble	
Solubility in other solvents: No data available		
Partition coefficient n-octanol/water:	No data available	
Vapour pressure:	No data available	
Density (at 20 °C):	0,94 g/cm ³	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

not Explosive.

Self-ignition temperature

Solid:

incapable of spontaneous heating.

Gas:

No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

No data available

Flow time:

No data available

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

The product is stable under storage at normal ambient temperatures.

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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

Refer to chapter 7 No further action is necessary.

Do not overheat to avoid decomposition by heat.

10.5. Incompatible materials

Reacts with: Oxidising agent, strong

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Sulfur oxides. 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
38900-29-7	Dilithiumazelat				
	oral	LD50 > 300 mg/kg	Rat	Study report (2015)	OECD Guideline 420
4259-15-8	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)				
	oral	LD50 3100 mg/kg	Rat	Study report (1975)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1975)	OECD Guideline 402
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1988)	OECD Guideline 402
	Reaction products of boric acid and lithium hydroxide				
	oral	ATE 500 mg/kg			

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

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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.

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
38900-29-7	Dilithiumazelat					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Cyprinus carpio	Study report (2015)	OECD Guideline 203
	Acute algae toxicity	ErC50 23 mg/l	72 h	Raphidocelis subcapitata	Study report (2015)	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	Study report (2015)	OECD Guideline 202
4259-15-8	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)					
	Acute fish toxicity	LL50 4,4 mg/l	96 h	Oncorhynchus mykiss	Study report (2002)	OECD Guideline 203
	Acute algae toxicity	ErC50 410 mg/l	72 h	Desmodesmus subspicatus	Study report (2004)	OECD Guideline 201
	Acute crustacea toxicity	EL50 75 mg/l	48 h	Daphnia magna	Study report (2005)	OECD Guideline 202
	Crustacea toxicity	NOEC 0,4 mg/l	21 d	Daphnia magna	Study report (2010)	OECD Guideline 211
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Danio rerio	Study report (1988)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Desmodesmus subspicatus	Study report (2006)	OECD Guideline 201
	Acute crustacea toxicity	EC50 51 mg/l	48 h	Daphnia magna	Study report (2004)	OECD Guideline 202
	Fish toxicity	NOEC 10 mg/l	34 d	Danio rerio	Study report (2020)	OECD Guideline 210
	Crustacea toxicity	NOEC 4,45 mg/l	21 d	Daphnia magna	Study report (2020)	OECD Guideline 211

12.2. Persistence and degradability

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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
38900-29-7	Dilithiumazelat	< 0,11
4259-15-8	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	3,59
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	7,11

BCF

CAS No	Chemical name	BCF	Species	Source
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	411	Cyprinus carpio	Study report (2000)

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.
Wassergefährdungsklasse 1 - schwach wassergefährdend

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

120112 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; spent waxes and fats; 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): -

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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:** -**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

Other applicable information

No dangerous good in sense of these transport regulations.

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

Directive 2010/75/EU on industrial emissions: < 3 %

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): 2,3,4,5,6,7,8,9,10,15.

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Abbreviations and acronyms

Acute Tox: Acute toxicity

Eye Dam: Eye damage

Repr: Reproductive toxicity

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.
H318	Causes serious eye damage.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
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

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

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.)