according to Regulation (EC) No 1907/2006

ADDINOL Hightemp EK 2

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

1.1. Product identifier

ADDINOL Hightemp EK 2

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

Use of the substance/mixture

Lubricant and additive.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name: ADDINOL Lube Oil GmbH

Gebäude 4609

Street: Am Haupttor Place: D-06237 Leuna

Telephone: +49 (0) 3461 845-0 Telefax: +49 (0) 3461 845-555

E-mail: info@addinol.de
Contact person: Application Technology

Internet: www.addinol.de

Responsible Department: ADDINOL Application Technology

Supplier

Company name: GEM OILS LIMITED

Place: IRL-H12K298 Regaskin Co. Cavan

Telephone: +353 49 4378116 Telefax: +353 49 4368329

E-mail: sales@gemoils.ie

Contact person: GEM OILS LIMITED Telephone: +353 49 4378116

E-mail: sales@gemoils.ie Internet: https://gemoils.ie/

1.4. Emergency telephone Healthcare Professionals: +353 (1) 809 2566 (24 hour service)

number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

2.2. Label elements

Regulation (EC) No 1272/2008

Special labelling of certain mixtures

EUH210 Safety data sheet available on request.

Additional advice on labelling

According to EC directives or the corresponding national regulations the product does not have to be labelled.

2.3. Other hazards

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 3: Composition/information on ingredients

3.2. Mixtures

according to Regulation (EC) No 1907/2006

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Relevant ingredients

CAS No	Chemical name				
	EC No	Index No	REACH No		
	Classification (Regulation (EC) No	1272/2008)			
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(1 – < 5 %			
	224-235-5		01-2119493635-27		
	Eye Dam. 1, Aquatic Chronic 2; H3				
68411-46-1	alkylated diphenylamine	0,1 - < 1 %			
	270-128-1		01-2119491299-23		
	Repr. 2; H361f				
	Reaction products of boric acidand	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	alkylated diphenylamine	0,1 – < 1 %	
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg			
	701-475-3	Reaction products of boric acidand 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 (NOx). 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

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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 absorbtion 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						
DNEL type		Exposure route	Effect	Value			
38900-29-7	Dilithiumazelat						
Consumer DN	IEL, 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 DN	IEL, long-term	inhalation	systemic	1,67 mg/m³			
Consumer DN	IEL, 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/m³			
68411-46-1	alkylated diphenylamine						
Worker DNEL, long-term		inhalation	systemic	0,6 mg/m³			
Worker DNEL, long-term		dermal	systemic	0,08 mg/kg bw/day			
Consumer DNEL, long-term		inhalation	systemic	0,14 mg/m³			
Consumer DNEL, long-term		dermal	systemic	0,04 mg/kg bw/day			
Consumer DNEL, long-term		oral	systemic	0,04 mg/kg bw/day			

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PNEC values

CAS No	Substance					
Environmental	Value					
38900-29-7	38900-29-7 Dilithiumazelat					
Freshwater		0,023 mg/l				
Freshwater (in	termittent 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 (in	termittent releases)	0,044 mg/l				
Marine water		0,0046 mg/l				
Freshwater se	0,322 mg/kg					
Marine sedime	0,032 mg/kg					
Secondary poi	8,33 mg/kg					
Micro-organisms in sewage treatment plants (STP)						
Soil		0,062 mg/kg				
68411-46-1	alkylated diphenylamine					
Freshwater		0,034 mg/l				
Freshwater (in	0,51 mg/l					
Marine water		0,003 mg/l				
Freshwater sediment		0,446 mg/kg				
Marine sedime	0,045 mg/kg					
Micro-organism	Micro-organisms in sewage treatment plants (STP)					
Soil	1,76 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

Protect skin by using skin protective cream.

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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: yellow
Odour: characteristic
Odour threshold: not determined

Test method

Melting point/freezing point: > 260 °C
Boiling point or initial boiling point and > 250 °C

boiling range:

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:

Decomposition temperature:

No data available

No data available

pH-Value:

not applicable

Viscosity / kinematic: 170 mm²/s DIN 51562 - Base oil

(at 40 °C)

Water solubility: insoluble

Solubility in other solvents

No data available

Partition coefficient n-octanol/water:

Vapour pressure:

No data available

No data available

Density (at 20 °C): 0,94 g/cm³ DIN 51757

Relative vapour density:

Particle characteristics:

No data available

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.

10.2. Chemical stability

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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 (NOx). Sulfur oxides, carbon black.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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 mg/kg	> 300	Rat	Study report (2015)	OECD Guideline 420		
4259-15-8	Zinc bis[O,O-bis(2-ethylhe	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)						
	oral	LD50 mg/kg	3100	Rat	Study report (1975)	OECD Guideline 401		
	dermal	LD50 mg/kg	> 5000	Rabbit	Study report (1975)	OECD Guideline 402		
68411-46-1	alkylated diphenylamine	alkylated diphenylamine						
	oral	LD50 mg/kg	> 5000	Rat	Study report (1982)	OECD Guideline 401		
	dermal	LD50 mg/kg	> 2000	Rat	Study report (1988)	OECD Guideline 402		
	Reaction products of boric acidand lithium hydroxide							
	oral	ATE mg/kg	500					

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.

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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 defattening 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	Dilithiumazelat								
	Acute fish toxicity	LC50 mg/l	> 100	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 mg/l	> 100	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	alkylated diphenylamine									
	Acute fish toxicity	LC50 mg/l	> 100	96 h	Danio rerio	Study report (1988)	OECD Guideline 203			
	Acute algae toxicity	ErC50 mg/l	> 100	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			

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

according to Regulation (EC) No 1907/2006

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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	alkylated diphenylamine	6,66

BCF

CAS No	Chemical name	BCF	Species	Source
68411-46-1	alkylated diphenylamine	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 REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No 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): 14.4. Packing group:

Marine transport (IMDG)

14.1. UN number or ID number: -

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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 < 3 %

emissions:

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. 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.)