

Plastic lubricant AEROTEC LC

Creation date	18. October 2016	Version	2.0
Revision date	08. January 2018		

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

- 1.1. Product identifier**
Substance / mixture Plastic lubricant AEROTEC LC mixture
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
mixture's intended use Plastic lubricant.
Disapproved uses of mixture The product should not be used in ways other than those referred in Section 1.
- 1.3. Details of the supplier of the safety data sheet**
- Manufacturer**
- | | |
|----------------------------|--|
| Name or trade name | AEROTEC GROUP a.s. |
| Address | U Kříže 632/24, Praha 5 Jinonice, 158 00
Czech Republic |
| Identification number (ID) | 05121311 |
| Phone | +420 605 050 050 |
| E-mail | info@aerotec.cz |
- Competent person responsible for the safety data sheet**
- | | |
|--------|--------------------|
| Name | AEROTEC GROUP a.s. |
| E-mail | info@aerotec.cz |
- 1.4. Emergency telephone number**
Poisoning information centre, Na Bojišti 1, Praha, Czech Republic, Tel.: non-stop +420 224 919 293 or +420 224 915 402, Information on health risks only - acute poisoning of humans and animals

SECTION 2: Hazards identification**2.1. Substance or mixture classification****Classification of the mixture in accordance with Regulation (EC) No 1272/2008**

The mixture is classified as dangerous.

Eye Dam. 1, H318
Aquatic Chronic 3, H412

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse physico-chemical effects

Unknown

Most serious adverse effects on human health and the environment

Causes serious eye damage. Harmful to aquatic life with long lasting effects.

2.2. Label elements**Hazard pictogram****Signal word**

Danger

Hazardous substances

phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts
reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 branched
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)
phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts

Hazard statements

H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Plastic lubricant AEROTEC LC

Creation date	18. October 2016	Version	2.0
Revision date	08. January 2018		

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P273	Avoid release to the environment.
P280	Wear eye protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a doctor.
P501	Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.

Supplemental information

EUH 208 Contains reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 branched. May produce an allergic reaction.

2.3. Other hazards

Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Chemical characterization

Mixture of substances specified below and additives.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note.
CAS: 68037-01-4 EC: 500-183-1	dec-1-ene, homopolymer, hydrogenated	<10		
CAS: 68457-79-4 EC: 270-608-0 Registration number: 01-2119493628-22	phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts	<2,5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	1
EC: 931-384-6 Registration number: 01-2119493620-38	reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 branched	<1	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Sens. 1, H317 Eye Dam. 1, H318 Aquatic Chronic 2, H411	1
CAS: 12001-85-3 EC: 234-409-2	naphthenic acids, zinc salts	<1		
CAS: 90480-91-4 EC: 291-829-9	phenol, 2,2'-polythiobis[4-C8-30-alkyl derivs., calcium salts, overbased	<1	Aquatic Chronic 4, H413	
CAS: 4259-15-8 EC: 224-235-5	zinc bis[O,O-bis(2-ethylhexyl)] bis (dithiophosphate)	<1	Eye Dam. 1, H318 Aquatic Chronic 2, H411	
CAS: 68649-42-3 EC: 272-028-3	phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	<1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	

Notes

1 Substance of unknown or variable composition, complex reaction products or biological materials - UVCB.

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures
4.1. Description of first aid measures

If any health problems are manifested or if in doubt, inform a doctor and show him information from this Safety Data Sheet.

Plastic lubricant AEROTEC LC

Creation date	18. October 2016	Version	2.0
Revision date	08. January 2018		

Inhalation

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

Skin contact

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists.

Eye contact

Rinse the eyes immediately with a flow of running water, open the eyelids wide (also using force if needed); remove contact lenses immediately if worn by the person. Rinsing should continue at least for 10 minutes. In case of problems seek for medical, professional treatment if possible.

Ingestion

DO NOT INDUCE VOMITING. Provide medical treatment.

4.2. Most important symptoms and effects, both acute and delayed**Inhalation**

not available

Skin contact

not available

Eye contact

Causes serious eye damage.

Ingestion

not available

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

Symptomatic treatment.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist

Unsuitable extinguishing media

water - full jet

5.2. Special hazards arising from the substance or mixture

Fire produces heavy, black smoke, with potential development of carbon monoxide and dioxide and other toxic gases. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Provide sufficient ventilation. Follow the instructions in Sections 7 and 8.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water. Do not allow to enter drains.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per Section 13. Collected material should be disposed of in accordance with locally valid regulations. Upon an escape of large quantities of the product, inform the Fire Department and the Environmental Department of the Municipal Authority with extended scope of competencies. After removal of the product, wash the contaminated site with plenty of water or another suitable cleaning material. Do not use solvents.

6.4. Reference to other sections

7, 8 and 13.

Plastic lubricant AEROTEC LC

Creation date	18. October 2016	Version	2.0
Revision date	08. January 2018		

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in areas where it is not in contact with open fire and other ignition sources. Nekuřte. Protect against direct sunlight. Do not inhale gases and vapours. Prevent contact with skin and eyes. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight.

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

none

DNEL

phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	11.87 mg/kg/24hour	Local chronic effects	
Consumers	Dermal	5.93 mg/kg/24hour	Local chronic effects	
Workers	Inhalation	8.13 mg/m ³	Local chronic effects	
Consumers	Inhalation	2.06 mg/m ³	Local chronic effects	
Consumers	Oral	0.24 mg/kg/24hour	Local chronic effects	

reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 branched

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	12.5 mg/kg	Local chronic effects	
Consumers	Dermal	6.25 mg/kg	Local chronic effects	
Workers	Inhalation	8.56 mg/m ³	Local chronic effects	
Consumers	Inhalation	2.2 mg/m ³	Local chronic effects	
Consumers	Oral	0.25 mg/kg/24hour	Local chronic effects	

PNEC

phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts

Route of exposure	Value	Determining method
Freshwater environment	0.004 mg/l	
Seawater	0.0046 mg/l	

reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 branched

Route of exposure	Value	Determining method
Freshwater environment	0.0012 mg/l	
Seawater	0.00012 mg/l	
Freshwater sediment	3.13 mg/kg	
Sea sediments	0.313 mg/kg	
Soil (agricultural)	2.54 mg/kg	

Plastic lubricant AEROTEC LC

Creation date	18. October 2016	Version	2.0
Revision date	08. January 2018		

8.2. Exposure controls

Follow usual measures for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles.

Skin protection

Hand protection: Protective gloves resistant against the product. Observe recommendations of the particular manufacturer of the gloves in the choice of their appropriate thickness, material and permeability. Other protection: Protective clothing. Contaminated skin should be washed thoroughly.

Respiratory protection

Mask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of toxic substances are exceeded or in a poorly ventilated environment.

Thermal hazard

not available

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

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

Appearance	
Physical state	liquid at 20°C
color	yellow braun
Odour	mild
Odour threshold	data not available
pH	data not available
Melting point/freezing point	250 °C
Initial boiling point and boiling range	data not available
Flash point	>275 °C
Evaporation rate	data not available
Flammability (solid, gas)	data not available
Upper/lower flammability or explosive limits	
flammability limits	data not available
explosive limits	data not available
Vapour pressure	<10 Pa at 20 °C
Vapour density	data not available
Relative density	data not available
Solubility(ies)	
solubility in water	insoluble
solubility in fats	data not available
Partition coefficient: n-octanol/water	data not available
Auto-ignition temperature	>355 °C
Decomposition temperature	data not available
Viscosity	data not available
Explosive properties	data not available
Oxidising properties	data not available
9.2. Other information	
Density	0.905 g/cm ³ at 15 °C
ignition temperature	data not available
combustion temperature	>300 °C

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

not available

10.2. Chemical stability

The product is stable under normal conditions.

Plastic lubricant AEROTEC LC

Creation date	18. October 2016	Version	2.0
Revision date	08. January 2018		

10.3. Possibility of hazardous reactions

The product is stable under normal conditions.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents. Thereby a dangerous exothermic reaction will be prevented.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous products are formed at high temperature and in fire, such as carbon monoxide and carbon dioxide, heavy smoke and nitrogen oxides.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

No toxicological data is available for the mixture.

Acute toxicity

Based on available data the classification criteria are not met.

dec-1-ene, homopolymer, hydrogenated

Route of exposure	Parameter	Method	Value	Time of exposure	Species	Sex
Oral	LD ₅₀	OECD 423	>5000 mg/kg		Rat	F/M
Inhalation	LC ₅₀	OECD 403	>5.2 mg/l	4 hour	Rat	F/M

naphthenic acids, zinc salts

Route of exposure	Parameter	Method	Value	Time of exposure	Species	Sex
Oral	LD ₅₀		4920 mg/kg		Rat	

Skin corrosion/irritation

Based on available data the classification criteria are not met.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

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.

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Based on available data the classification criteria are not met.

Plastic lubricant AEROTEC LC

Creation date	18. October 2016	Version	2.0
Revision date	08. January 2018		

SECTION 12: Ecological information**12.1. Toxicity****Acute toxicity**

Harmful to aquatic life with long lasting effects.

phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts

Parameter	Value	Time of exposure	Species	Environment	Determining method
LC ₅₀	1-5 mg/l	96 hour	Fishes (Pimephales promelas)		Static system
LC ₅₀	10-35 mg/l	96 hour	Fishes (Pimephales promelas)		Static system

12.2. Persistence and degradability

not available

12.3. Bioaccumulative potential

not available

12.4. Mobility in soil

not available

12.5. Results of PBT and vPvB assessment

The product is not classified as PBT or vPvB.

12.6. Other adverse effects

not available

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to an authorised person for waste removal (specialized company) authorised for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling. Hazard of environmental contamination; remove waste in accordance with local and/or national regulations.

Legislation of waste

Council Directive 75/442/EEC on waste, as amended. Decree No. 383/2001 Coll., on details regarding waste handling as amended. Decree No. 93/2016 Coll., (waste catalogue) as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

13 08 99 wastes not otherwise specified

Packaging waste type code

15 02 02 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances

SECTION 14: Transport information**14.1. UN number**

Not subject to ADR.

14.2. UN proper shipping name

not available

14.3. Transport hazard class(es)

not available

14.4. Packing group

not available

14.5. Environmental hazards

not available

14.6. Special precautions for user

Reference in Sections 4 to 8.

Plastic lubricant AEROTEC LC

Creation date	18. October 2016	Version	2.0
Revision date	08. January 2018		

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
not available

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended (the Chemical Act). Decree No. 432/2003 Coll., laying down conditions for assigning categories to individual jobs, limit values of indices from biological exposure tests, conditions for the sampling of biological materials for biological exposure and the particulars of the reports on work with asbestos and biological agents as amended.

15.2. Chemical safety assessment

not available

SECTION 16: Other information**A list of standard risk phrases used in the safety data sheet**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Guidelines for safe handling used in the safety data sheet

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P273	Avoid release to the environment.
P280	Wear eye protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a doctor.
P501	Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.

A list of additional standard phrases used in the safety data sheet

EUH 208	Contains reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 branched. May produce an allergic reaction.
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Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EC	Identification code for each substance listed in EINECS
EC ₅₀	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances

Plastic lubricant AEROTEC LC

Creation date	18. October 2016	Version	2.0
Revision date	08. January 2018		

EmS	Emergency plan
EU	European Union
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC ₅₀	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEC	Lowest observed adverse effect concentration
LOAEL	Lowest observed adverse effect level
log K _{ow}	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No observed adverse effect concentration
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
NOEL	No observed effect level
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Acute Tox.	Acute toxicity
Aquatic Chronic	Hazardous to the aquatic environment
Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquid
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended. First aid principles after the exposure to the chemicals (Zásady pro poskytování první pomoci při expozici chemickým látkám, doc. MUDr. Daniela Pelclová, CSc., MUDr. Alexandr Fuchs, CSc., MUDr. Miroslava Hornychová, CSc., MUDr. Zdeňka Trávníčková, CSc., Jiřina Fridrichovská, prom. chem.). Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

The version 2.0 replaces the SDS version from 18.10.2016. Changes were made in sections 2, 13, 15 and 16.



SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Plastic lubricant AEROTEC LC

Creation date	18. October 2016		
Revision date	08. January 2018	Version	2.0

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.