# SAFETY DATA SHEET

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

## AEROTEC GUN IN

| | | | |
|---|---|---|---|
| Creation date | 16. November 2017 | | |
| Revision date | | Version | 1.0 |

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

**1.1. Product identifier** — AEROTEC GUN IN

| | |
|---|---|
| Substance / mixture | substance |
| Chemical name | naphthenic acids, zinc salts |
| CAS number | 12001-85-3 |
| EC (EINECS) number | 234-409-2 |

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

| | |
|---|---|
| Substance's intended use | Synthetic polymerized blend for maintenance and protection of internal parts of weapons and weapon systems |
| Substance uses advised against | The product should not be used in ways other then those referred in Section 1. |
| Chemical safety report | |

**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<br>Czech Republic |
| Identification number (CRN) | 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**

National Health Service (NHS) 111
National poisoning information centre Scotland, NHS 24: 111

**SECTION 2: Hazards identification**

**2.1. Substance or mixture classification**

**Classification of the substance in accordance with Regulation (EC) No 1272/2008**

The substance 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

**Dangerous substance**

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (EC: 224-235-5; CAS: 4259-15-8)
phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (EC: 272-028-3; CAS: 68649-42-3)

**Hazard statements**

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

**Precautionary statements**

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| 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. |

### 2.3. Other hazards

Mixture does not contain any substance 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

### 3.1. Substances

**Chemical characterization**

Mixture of substances and additives specified below.

| Identification numbers | Substance name | Content in % weight | Classification according to Regulation (EC) No 1272/2008 | Note. |
|---|---|---|---|---|
| | **substance main component** | | | |
| CAS: 12001-85-3<br>EC: 234-409-2 | naphthenic acids, zinc salts | <5 | | |
| CAS: 90480-91-4<br>EC: 291-829-9 | phenol, 2,2'-polythiobis[4-C8-30-alkyl derivs., calcium salts, overbased | 1-<2,5 | Aquatic Chronic 4, H413 | |
| CAS: 4259-15-8<br>EC: 224-235-5 | zinc bis[O,O-bis(2-ethylhexyl)] bis (dithiophosphate) | 1-<2,5 | Eye Dam. 1, H318<br>Aquatic Chronic 2, H411 | |
| CAS: 68649-42-3<br>EC: 272-028-3 | phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts | 0,5-<2 | Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Aquatic Chronic 2, H411 | |

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.

**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 eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized 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**

not available

**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 the Sections 7 and 8.

**6.2. Environmental precautions**

Prevent contamination of the soil and entering surface or ground water.

**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 the Section 13. Dispose of the collected material according to the instructions in the section 13. Upon an escape of large quantities of the product, inform the Fire Department and the Environmental Department of the Municipal Authority with the extended scope of competencies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

**6.4. Reference to other sections**

See the Section 7, 8 and 13.

## 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 the areas where it is not in contact with open fire and other ignition sources. No smoking. 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.

| | |
|---|---|
| Storage temperature | <50 °C |

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

not available

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

none

**8.2. Exposure controls**

Follow the usual measures intended 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 to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Other protection: Protective antistatic clothing made of natural fibres (cotton) or synthetic fibres resistant to elevated temperatures. Contaminated skin should be washed thoroughly.

**Respiratory protection**

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of 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.

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**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| Appearance | thick, viscous liquid |
| Physical state | solid at 20°C |
| color | green |
| Odour | characteristic |
| Odour threshold | data not available |
| pH | data not available |
| Melting point/freezing point | -42 °C |
| Initial boiling point and boiling range | 275 °C |
| Flash point | 210 °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 | data not available |
| Vapour density | data not available |
| Relative density | data not available |
| Solubility(ies) | |
| solubility in water | <1% |
| solubility in fats | data not available |
| Partition coefficient: n-octanol/water | data not available |
| Auto-ignition temperature | data not available |
| Decomposition temperature | data not available |
| Viscosity | data not available |
| Kinematic viscosity | 39.03 $mm^2/s$ at 40°C |
| Explosive properties | data not available |
| Oxidising properties | data not available |

**9.2. Other information**

| | |
|---|---|
| Density | 1.142 $g/cm^3$ |
| ignition temperature | 399 °C |
| combustion temperature | 235 °C |

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

not available

**10.2. Chemical stability**

The product is stable under normal conditions.

**10.3. Possibility of hazardous reactions**

The product is stable under normal conditions.

**10.4. Conditions to avoid**

not available

**10.5. Incompatible materials**

not available

**10.6. Hazardous decomposition products**

Not developed under normal uses.
At high temperatures and fire, hazardous products, such as carbon monoxide and carbon dioxide, chlorine compounds, hydrochloric acid, are formed.

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**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.

naphthenic acids, zinc salts

| Route of exposure | Parameter | 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.

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**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**

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

**12.6. Other adverse effects**

not available

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**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 a person authorised for waste removal (a specialized company) that is entitled 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; dispose of the waste in accordance with the local and/or national regulations.

**Waste management legislation**

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**

12 01 12 spent waxes and fats

**Packaging waste type code**

15 01 10 packaging containing residues of or contaminated by dangerous substances

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**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 the Sections 4 to 8.

**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). The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended. The Act No. 258/2000 Coll., on Protection of Public Health as amended. Decree No. 361/2007 Coll., determining conditions of occupational health protection as amended. Decree No. 415/2012 Coll., on the permissible level of pollution and its determination and implementation of certain other provisions of the Air Protection Act as amended. The Act No. 185/2001 Coll., on Waste and the Amendment of Some Other Acts as amended. The Act No. 201/2012 Coll., on the Protection of Atmosphere – Clean Air Act as amended. 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**

| | |
|---|---|
| H315 | Causes skin irritation. |
| 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. |
| 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. |

**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 the 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 |
| 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 Kow | 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 |

| | |
|---|---|
| Aquatic Chronic | Hazardous to the aquatic environment |
| Eye Dam. | Serious eye damage |
| Skin Irrit. | Skin irritation |

**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)**

Version 4.0 replaces the BL version of 16.11.2017. Changes were made in Sections 2 and 16.

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**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.