

# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>AFB-LF GREASE</b>
<b>Other means of identification</b>	
<b>SDS number</b>	1030-T20483-2
<b>Product code</b>	AFB-LF+70, AFB-LF+400
<b>Recommended use</b>	Industrial grease.
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
	THK Co.,LTD
	HEAD OFFICE: 2-12-10, Shibaura, Minato-ku, Tokyo 108-8506 Japan
	THK America, Inc.: 200 E. Commerce Drive, Schaumburg, IL 60173, U.S.A.
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## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Sensitization, skin	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Warning
<b>Hazard statement</b>	May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	Avoid breathing mist/vapor. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Avoid release to the environment.
<b>Response</b>	If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of contents/container at a disposal facility in accordance with local regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

## 3. Composition/information on ingredients

### Mixtures

<b>Chemical name</b>	<b>CAS number</b>	<b>%</b>
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	3.2 - 4
Phosphoric acid esters, amine salt	91745-46-9	< 1

Chemical name	CAS number	%
(z)-octadec-9-enylamine	1213789-63-9	< 0.05

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Components not listed are either non-hazardous or are below reportable limits. The exact concentrations of the above listed chemicals are being withheld as a trade secret.

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	May cause an allergic skin reaction. Dermatitis. Rash.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Extinguish with foam, carbon dioxide or dry powder.
<b>Unsuitable extinguishing media</b>	Do not use water or halogenated extinguishing media.
<b>Specific hazards arising from the chemical</b>	Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Use water spray to cool unopened containers. Use standard firefighting procedures and consider the hazards of other involved materials. In case of fire do not breathe fumes.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. In case of spills, beware of slippery floors and surfaces. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Prevent product from entering drains. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid breathing mist/vapor. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Be aware of potential for surfaces to become slippery. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

#### 8. Exposure controls/personal protection

##### Occupational exposure limits

##### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Mineral oil	PEL	5 mg/m <sup>3</sup>	Mist.
		2000 mg/m <sup>3</sup>	
		500 ppm	

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Mineral oil	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Mineral oil	Ceiling	1800 mg/m <sup>3</sup>	
	STEL	10 mg/m <sup>3</sup>	Mist.
	TWA	5 mg/m <sup>3</sup>	Mist.

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.
<b>Skin protection</b>	
<b>Other</b>	Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>Respiratory protection</b>	In case of inadequate ventilation or risk of inhalation of oil mist, suitable respiratory equipment with particulate filter and organic vapor cartridges can be used. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.
<b>Thermal hazards</b>	When material is heated, wear gloves to protect against thermal burns.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing must not be allowed out of the workplace.

**9. Physical and chemical properties****Appearance**

**Physical state** Solid.

**Form** Buttery.

**Color** Tan.

**Odor** Mild.

**Odor threshold** Not available.

**pH** Material is non soluble in water.

**Melting point/freezing point** Property has not been measured.

**Initial boiling point and boiling range** Property has not been measured.

**Flash point** 370.4 °F (188 °C) Setflash Closed Cup (ISO 3679)

**Evaporation rate** Not applicable, material is a solid.

**Flammability (solid, gas)** Will burn if involved in a fire.

**Upper/lower flammability or explosive limits**

**Explosive limit - lower (%)** Property has not been measured.

**Explosive limit - upper (%)** Property has not been measured.

**Vapor pressure** Not applicable, material is a solid.

**Vapor density** Not applicable, material is a solid.

**Relative density** 0.9

**Solubility(ies)**

**Solubility (water)** Insoluble.

<b>Partition coefficient (n-octanol/water)</b>	Not applicable, product is a mixture
<b>Auto-ignition temperature</b>	Not applicable, material is a solid.
<b>Decomposition temperature</b>	Not applicable as the product is not unstable.
<b>Viscosity</b>	Not applicable, material is a solid.
<b>Other information</b>	
<b>Density</b>	Property has not been measured.
<b>Explosive properties</b>	Not explosive.
<b>Kinematic viscosity</b>	Not applicable, material is a solid.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Will not occur.
<b>Conditions to avoid</b>	Heat, sparks, flames, elevated temperatures. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Inhalation of oil mist or vapors formed during heating of the product will irritate the respiratory system and provoke coughing.
<b>Skin contact</b>	May cause an allergic skin reaction.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

<b>Acute toxicity</b>	The harmful effects may increase when exposed to used grease.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	None known.
<b>Skin sensitization</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	None known.
<b>Carcinogenicity</b>	None known.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

#### NTP Report on Carcinogens

Not listed.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

<b>Reproductive toxicity</b>	None known.
<b>Specific target organ toxicity - single exposure</b>	None known.
<b>Specific target organ toxicity - repeated exposure</b>	None known.
<b>Aspiration hazard</b>	Due to the physical form of the product it is not an aspiration hazard.

**Chronic effects** The harmful effects may increase in used grease.

## 12. Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.  
**Persistence and degradability** None known.  
**Bioaccumulative potential** None known.  
**Mobility in soil** The product is insoluble in water and will spread on water surfaces.  
**Other adverse effects** Greases are generally hazardous to the environment.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.  
**Local disposal regulations** Dispose in accordance with all applicable regulations.  
**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.  
**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).  
**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

**DOT**  
Not regulated as dangerous goods.  
**IATA**  
Not regulated as dangerous goods.  
**IMDG**  
Not regulated as dangerous goods.  
**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

### **CERCLA Hazardous Substance List (40 CFR 302.4)**

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3) Listed.

### **SARA 304 Emergency release notification**

Not regulated.

### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Toxic Substances Control Act (TSCA)** All components on the TSCA 8(b) inventory are designated "active".

### **Superfund Amendments and Reauthorization Act of 1986 (SARA)**

#### **SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Respiratory or skin sensitization

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	3.2 - 4

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)

**US. Rhode Island RTK**

Not regulated.

**California Proposition 65**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

<b>Issue date</b>	04-September-2013
<b>Revision date</b>	23-August-2022
<b>Version #</b>	06
<b>Further information</b>	HMIS® is a registered trade and service mark of the ACA. D - Face Shield, Gloves, Apron
<b>HMIS® ratings</b>	Health: 2 Flammability: 0 Physical hazard: 0 Personal protection: D

**List of abbreviations**

CAS: Chemical Abstract Service.  
Ceiling: Short Term Exposure Limit Ceiling value.  
DOT: Department of Transportation (49 CFR 172.101).  
IATA: International Air Transport Association.  
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.  
IMDG: International Maritime Dangerous Goods.  
MARPOL: International Convention for the Prevention of Pollution from Ships.  
PEL: Permissible Exposure Limit.  
STEL: Short-Term Exposure Limit.  
TWA: Time Weighted Average Value.

**References**

ACGIH: American Conference of Governmental and Industrial Hygienists.  
IARC Monographs. Overall Evaluation of Carcinogenicity  
National Toxicology Program (NTP) Report on Carcinogens

**Disclaimer**

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

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