

SAFETY DATA SHEET

1. Identification

Product identifier AFB-LF GREASE

Other means of identification

SDS number 1030-T20483-1-USA

Product code AFB-LF+70, AFB-LF+400

Recommended use Industrial lubricating grease (Package size 70gr and 400gr)

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

THK Co., LTD
HEAD OFFICE: 2-12-10, Shibaura, Minato-ku, Tokyo, 108-8506 Japan
THK America, Inc.:200 East Commerce Drive, Schaumburg, IL. 60173, USA
Telephone: (847) 310-1111 (THK America) between the hours of 8 am - 5 pm CT
Emergency telephone: (847) 310-1111 (THK America) between the hours of 8 am - 5 pm CT
E-mail: chicago@thk.com, thk022@thk.co.jp

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Serious eye damage/eye Category 1

OSHA defined hazards irritation Not classified.

Label elements



Signal word Danger

Hazard statement Causes serious eye damage.

Precautionary statement

Prevention Wear eye/face protection.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) Not classified.

Environmental hazards

Hazardous to the aquatic environment, acute hazard Category 3

Hazardous to the aquatic environment, long-term hazard Category 3

Supplemental information

Hazard statement Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Avoid release to the environment.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Proprietary	10 - 30
Distillates (petroleum), hydrotreated heavy naphthenic	Proprietary	10 - 20

Distillates (petroleum), solvent-refined heavy naphthenic	Proprietary	10 - 20
Residual oils (petroleum), solvent-refined	Proprietary	10 - 20
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	Proprietary	3.2 - 4.0
Amines, C12-14-alkyl, reaction products with hexanol, phosphorus oxide (P2O5), phosphorus sulfide (P2S5) and propylene oxide	Proprietary	0.1 - 1.0

Composition comments * All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Move affected person into fresh air and keep warm. If breathing is difficult, give oxygen. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing. Wash with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms occur after washing.
Ingestion	Immediately rinse mouth and drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention if any discomfort continues.
Most important symptoms/effects, acute and delayed	Severe eye irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. The effects might be delayed.
General information	First aid personnel must be aware of own risk during rescue.

5. Fire-fighting measures

Suitable extinguishing media	Extinguish with foam, carbon dioxide or dry powder.
Unsuitable extinguishing media	Do not use water or halogenated extinguishing media.
Specific hazards arising from the chemical	Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials. Containers close to fire should be removed or cooled with water.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. In case of spills, beware of slippery floors and surfaces. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Absorb spillage with non-combustible, absorbent material. Clean contaminated area with oil-removing material.
Environmental precautions	Do not contaminate water. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and storage

Precautions for safe handling	Avoid contact with skin and eyes. Always remove grease with soap and water or skin cleaning agent, never use organic solvents. Wear appropriate personal protective equipment. Be aware of potential for surfaces to become slippery. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep container in a well-ventilated place. Store away from incompatible materials.

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
Distillates (petroleum), hydrotreated heavy naphthenic (CAS Proprietary)	PEL	5 mg/m3	Mist.
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS Proprietary)	PEL	5 mg/m3	Mist.
Distillates (petroleum), solvent-refined heavy naphthenic (CAS Proprietary)	PEL	5 mg/m3	Mist.
Residual oils (petroleum), solvent-refined (CAS Proprietary)	PEL	5 mg/m3	Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS Proprietary)	TWA	5 mg/m3	Inhalable fraction.
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS Proprietary)	TWA	5 mg/m3	Inhalable fraction.
Distillates (petroleum), solvent-refined heavy naphthenic (CAS Proprietary)	TWA	5 mg/m3	Inhalable fraction.
Residual oils (petroleum), solvent-refined (CAS Proprietary)	TWA	5 mg/m3	Inhalable fraction.

US NIOSH Pocket Guide to Chemical Hazards: Recommended exposure limit (REL)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS Proprietary)	TWA	5 mg/m3	Mist.
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS Proprietary)	TWA	5 mg/m3	Mist.
Distillates (petroleum), solvent-refined heavy naphthenic (CAS Proprietary)	TWA	5 mg/m3	Mist.
Residual oils (petroleum), solvent-refined (CAS Proprietary)	TWA	5 mg/m3	Mist.

US NIOSH Pocket Guide to Chemical Hazards: Short Term Exposure Limit (STEL)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS Proprietary)	STEL	10 mg/m3	Mist.
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS Proprietary)	STEL	10 mg/m3	Mist.
Distillates (petroleum), solvent-refined heavy naphthenic (CAS Proprietary)	STEL	10 mg/m3	Mist.
Residual oils (petroleum), solvent-refined (CAS Proprietary)	STEL	10 mg/m3	Mist.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	No exposure standards allocated.
Appropriate engineering controls	Provide adequate ventilation and minimize the risk of inhalation of vapors and oil mist. Provide access to washing facilities including soap, skin cleanser and fatty cream.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear approved safety goggles.
Skin protection	
Hand protection	Wear protective 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.
Other	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Respiratory protection	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. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.
Thermal hazards	When material is heated, wear gloves to protect against thermal burns.
General hygiene considerations	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.

9. Physical and chemical properties

Appearance	Buttery.
Physical state	Solid.
Form	Buttery.
Color	Tan.
Odor	Mild.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	370.4 °F (188.0 °C) Setaflash Closed Cup (ISO 3679)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	0.9
Solubility(ies)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	This product may react with strong oxidizing agents.
Chemical stability	Stable at normal conditions.

Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Heat, sparks, flames, elevated temperatures.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Sulfur oxides. Phosphorus oxides. Formaldehyde. PAH (polycyclic aromatic hydrocarbons).

11. Toxicological information

Information on likely routes of exposure

Ingestion	Ingestion may cause irritation and malaise.
Inhalation	Inhalation of oil mist or vapors formed during heating of the product will irritate the respiratory system and provoke coughing.
Skin contact	May cause skin irritation.
Eye contact	Prolonged contact causes serious eye and tissue damage.

Symptoms related to the physical, chemical and toxicological characteristics Extreme irritation of eyes and mucous membranes, including burning and tearing.

Information on toxicological effects

Acute toxicity	The harmful effects may increase when exposed to used grease. Ingestion may cause irritation and malaise.
Skin corrosion/irritation	Causes mild skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory sensitization	None known.
Skin sensitization	None known.
Germ cell mutagenicity	None known.
Carcinogenicity	Prolonged and repeated contact with used grease may cause serious skin diseases, such as dermatitis and skin cancer.
Reproductive toxicity	None known.
Specific target organ toxicity - single exposure	None known.
Specific target organ toxicity - repeated exposure	None known.
Aspiration hazard	None known.
Chronic effects	None known.

12. Ecological information

Ecotoxicity	Harmful to aquatic life with long lasting effects.
Persistence and degradability	None known.
Bioaccumulative potential	None known.
Mobility in soil	Not available.
Mobility in general	The product contains substances, which are insoluble in water and which may spread on water surfaces.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Dispose of in accordance with local regulations.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose in accordance with applicable federal, state, and local regulations. Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as a dangerous good.

IMDG

Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

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.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS Proprietary) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)
Not regulated.

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.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Distillates (petroleum), hydrotreated heavy naphthenic (CAS Proprietary)
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS Proprietary)
Distillates (petroleum), solvent-refined heavy naphthenic (CAS Proprietary)

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

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS Proprietary) 500 lbs

US. Pennsylvania RTK - Hazardous Substances

Distillates (petroleum), hydrotreated heavy naphthenic (CAS Proprietary)
Distillates (petroleum), solvent-refined heavy naphthenic (CAS Proprietary)

US. Rhode Island RTK

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS Proprietary)

US. California Proposition 65

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies 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).

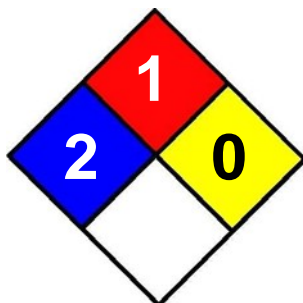
16. Other information, including date of preparation or last revision

Issue date 04-September-2013

Revision date 28-September-2016

Version # 02

NFPA Ratings



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.

Copyright © 2016 THK CO., LTD. All rights reserved.