

SAFETY DATA SHEET

1. Identification

Product identifier	AFB-LF GREASE	
Other means of identification		
SDS number	1030-T20483-1	
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 E. Commerce Drive, Schaumburg, IL 60173, U.S.A. Telephone: (847) 310-1111 (THK America) between the hours of 8 am - 5 pm Emergency telephone: (847) 310-1111 (THK America) between the hours of 8 am - 5 pm E-mail: chicago@thk.com , thk022@thk.co.jp	

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Serious eye damage/eye irritation	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger	
Hazard statement	Causes serious eye damage. Harmful to aquatic life with long lasting effects.	
Precautionary statement		
Prevention	Wear eye/face protection. Avoid release to the environment.	
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.	
Supplemental information	None.	

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

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

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.
General fire hazards	The product is not flammable.

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	PEL	5 mg/m ³	Mist.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	PEL	5 mg/m ³	Mist.
Distillates (petroleum), solvent-refined heavy naphthenic	PEL	5 mg/m ³	Mist.
Residual oils (petroleum), solvent-refined	PEL	5 mg/m ³	Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic	TWA	5 mg/m ³	Inhalable fraction.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	TWA	5 mg/m ³	Inhalable fraction.
Distillates (petroleum), solvent-refined heavy naphthenic	TWA	5 mg/m ³	Inhalable fraction.
Residual oils (petroleum), solvent-refined	TWA	5 mg/m ³	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic	Ceiling	1800 mg/m ³	
	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Ceiling	1800 mg/m ³	
	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Distillates (petroleum), solvent-refined heavy naphthenic	Ceiling	1800 mg/m ³	
	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Residual oils (petroleum), solvent-refined	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	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.
Skin protection	
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 g/cm ³
Solubility(ies)	
Solubility (water)	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	The product is stable and non-reactive under normal conditions of use, storage and transport.
-------------------	---

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

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.
Ingestion	Ingestion may cause irritation and malaise.

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 or skin sensitization	
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.

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.

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.
------------------------------	--

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 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 available.

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 Proprietary) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA)

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Serious eye damage or eye irritation

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) Contains component(s) regulated under the Safe Drinking Water Act.

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

Distillates (petroleum), hydrotreated heavy naphthenic (CAS Proprietary)
 Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS Proprietary)
 Distillates (petroleum), solvent-refined heavy naphthenic (CAS Proprietary)
 Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS Proprietary)

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

Distillates (petroleum), hydrotreated heavy naphthenic (CAS Proprietary)

Distillates (petroleum), solvent-refined heavy naphthenic (CAS Proprietary)
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS Proprietary)

US. Rhode Island RTK

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

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (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.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

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

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
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)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

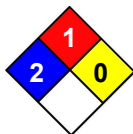
*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

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	07-May-2019
Version #	04
Further information	HMIS® is a registered trade and service mark of the NPCA.
HMIS® ratings	Health: 3 Flammability: 0 Physical hazard: 0

NFPA ratings



List of abbreviations

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 © THK CO., LTD. All rights reserved.