

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture	AFC GREASE
Registration number	-
Synonyms	None.
SDS number	1030-T21996-2
Product code	AFC+70, AFC+400
Issue date	17-February-2012
Version number	04
Revision date	25-December-2022
Supersedes date	29-September-2019

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

Identified uses	Industrial lubricating grease
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

THK Co.,LTD	HEAD OFFICE: 2-12-10, Shibaura, Minato-ku, Tokyo 108-8506 Japan
THK UK	Suite W6, Harbour Buildings West, The Waterfront, Brierley Hill, West Midlands, DY5 1LN, U.K.
Telephone	+44(0)1384 471550
Fax	+44(0)1384 471551
THK GmbH	Kaiserswerther Strasse 115, D-40880 Ratingen, Germany
Telephone	+49(0)2102-7425-555
E-mail	info-msds@thk.eu (THK GmbH), thk022@thk.co.jp (THK Co., LTD)

1. 4 Emergency telephone number	+44(0)1384 471550 at workday 8 am - 5 pm (THK UK office) +49(0)2102-7425-222 at local workday time 8 am- 5 pm (THK GmbH)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains:	Sodium nitrite
Hazard pictograms	None.
Signal word	None.
Hazard statements	The mixture does not meet the criteria for classification.
Precautionary statements	
Prevention	None.
Response	None.
Storage	None.
Disposal	None.

Supplemental information on the label	EUH210 - Safety data sheet available on request.
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2.3. Other hazards	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
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SECTION 3: Composition/information on ingredients

3.2. Mixtures

AFC GREASE	
3436	Version #: 04 Revision date: 25-December-2022 Issue date: 17-February-2012

SDS Great Britain

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General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
3,3'-dicyclohexyl-1,1'-methylenebis(4,1-phenylene)diurea	≤ 8	58890-25-8 406-370-3	-	616-094-00-7	
Classification: Aquatic Chronic 4;H413					
Sodium nitrite	0.5 - < 2	7632-00-0 231-555-9	-	007-010-00-4	
Classification: Ox. Sol. 3;H272, Acute Tox. 3;H301, Aquatic Acute 1;H400					
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	1 - 5	68411-46-1 270-128-1	-	-	
Classification: Aquatic Chronic 3;H412					
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	1 - 3	68649-42-3 272-028-3	-	-	
Classification: Eye Irrit. 2;H319					

Composition comments

Base oils: Contains less than 3 % DMSO extract as measured by IP 346.
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. The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

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

Direct contact with eyes may cause temporary irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards

Will burn if involved in a fire.

5.1. Extinguishing media

Suitable extinguishing media

Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing media

Do not use water or halogenated extinguishing media.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterised.

5.3. Advice for firefighters

Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures

Use water spray to cool unopened containers. Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wear appropriate protective equipment and clothing during clean-up. In case of spills, beware of slippery floors and surfaces.

For emergency responders

Keep unnecessary personnel away. Be aware of potential for surfaces to become slippery.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

The product is insoluble in water and will spread on the water surface. Stop the flow of material, if this is without risk. Following product recovery, flush area with water.

6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid prolonged and repeated contact with grease, particularly used grease. Provide adequate ventilation. When working with heated grease, mechanical ventilation may be required. Wear appropriate personal protective equipment. Avoid release to the environment. Be aware of potential for surfaces to become slippery. Always remove grease with soap and water or skin cleaning agent, never use organic solvents. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

7.3. Specific end use(s)

Industrial lubricating grease. Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Barium bis(dinonylnaphthalenesulphonate) (CAS 25619-56-1)	TWA	0.5 mg/m3
Molybdenum compounds	STEL	10 mg/m3
	TWA	5 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels (DNELs)

Not available.

Predicted no effect concentrations (PNECs)

Not available.

8.2. Exposure controls

Appropriate engineering controls

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.

Individual protection measures, such as personal protective equipment

General information

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Wear safety glasses with side shields (or goggles). Use eye protection conforming to EN 166.

Skin protection

- Hand protection

Wear protective gloves. Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time may be acceptable so long as appropriate maintenance and replacement rules are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove manufacturer and model. 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, when the product is heated, or risk of inhalation of oil mist, use suitable respiratory equipment with gas filter (type A2). Follow guidance on selection, use, care and maintenance in accordance with EN 529.

Thermal hazards

When material is heated, wear gloves to protect against thermal burns.

Hygiene measures

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.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

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

Physical state	Solid.
Form	Buttery.
Colour	Brown.
Odour	Mild.
Odour 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	201 °C (393.8 °F) Setaflash Closed Cup (ISO 3679)
Evaporation rate	Not available.
Flammability (solid, gas)	Not flammable. Will burn if involved in a fire.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)	Not applicable, material is a solid.
Explosive limit – upper (%)	Not applicable, material is a solid.

Vapour pressure	Not applicable, material is a solid.
Vapour density	Not applicable, material is a solid.
Relative density	0.9
Solubility(ies)	
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Not applicable, product is a mixture.
Auto-ignition temperature	Not applicable, material is a solid.
Decomposition temperature	Not applicable, the product is not unstable.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

9.2. Other information

Kinematic viscosity	Not applicable, material is a solid.
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SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Will not occur.
10.4. Conditions to avoid	Heat, sparks, flames, elevated temperatures. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	Carbon oxides. Nitrogen oxides. Sulphur oxides. Sodium oxides. Phosphorus oxides. Calcium oxides. Silicon oxides. Aluminium oxides. Formaldehyde. PAH (polycyclic aromatic hydrocarbons).

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure	
Inhalation	Inhalation of oil mist or vapours formed during heating of the product will irritate the respiratory system and provoke coughing.
Skin contact	Prolonged skin contact may cause irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms Direct contact with eyes may cause temporary irritation.

11.1. Information on toxicological effects

Acute toxicity The harmful effects may increase when exposed to used grease.

Components	Species	Test Results
Sodium nitrite (CAS 7632-00-0)		
Acute		
Inhalation		
LC50	Rat	5.5 mg/l, 4 Hours
Oral		
LD50	Rat	158 mg/kg
Skin corrosion/irritation	Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.	
Respiratory sensitisation	Based on available data, the classification criteria are not met.	
Skin sensitisation	Due to partial or complete lack of data the classification is not possible.	
Germ cell mutagenicity	Based on available data, the classification criteria are not met.	
Carcinogenicity	Prolonged and repeated contact with used oil may cause serious skin diseases, such as dermatitis and skin cancer.	
Reproductive toxicity	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.	
Aspiration hazard	Due to the physical form of the product it is not expected to be an aspiration hazard.	
Mixture versus substance information	No information available.	
Other information	None known.	

SECTION 12: Ecological information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Components		Species	Test Results
Sodium nitrite (CAS 7632-00-0)			
Aquatic			
Acute			
Crustacea	EC50	Greasyback shrimp (Metapenaeus ensis)	16.14 - 26.61 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.15 - 0.25 mg/l, 96 hours

12.2. Persistence and degradability None known.

12.3. Bioaccumulative potential None known.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil The product is insoluble in water and will spread on the water surface.

12.5. Results of PBT and vPvB assessment This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

12.6. Other adverse effects Greases are generally hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste 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.

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.

EU waste code

20 01 26*

The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information

Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Special precautions

Dispose in accordance with all applicable regulations.

SECTION 14: Transport information**ADR**

14.1. - 14.6.: Not regulated as dangerous goods.

RID

14.1. - 14.6.: Not regulated as dangerous goods.

ADN

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

14.7. Transport in bulk

Not applicable.

**according to Annex II of
MARPOL 73/78 and the IBC
Code**

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

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

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

Sodium nitrite (CAS 7632-00-0)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

This product is classified and labelled in accordance with the retained CLP Regulation (EC) No 1272/2008, as amended for Great Britain.

This Safety Data Sheet is compiled in accordance with REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758.

Follow the requirements of the Control of Substances Hazardous to Health Regulations 2002 [SI 2002/2677], as amended, when using this material.

**15.2. Chemical safety
assessment**

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
EC50: Effective Concentration, 50%.
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.
LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
MARPOL: International Convention for the Prevention of Pollution from Ships.
PBT: Persistent, bioaccumulative and toxic.
PEL: Permissible Exposure Limit.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
STEL: Short term exposure limit.
TWA: Time Weighted Average.
vPvB: Very persistent and very bioaccumulative.
ECHA: European Chemical Agency.
EPA: AQUIRE database
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity

References

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements, which are not written out in full under sections 2 to 15

H272 May intensify fire; oxidiser.
H301 Toxic if swallowed.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

Training information

Follow training instructions when handling this material.

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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