SAFETY DATA SHEET

1. Identification

Product identifier: AFG GREASE

Other means of identification

- SDS number: 1030-T21997-1-USA
- Product code: AFG+70, AFG+400

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

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: Sensitization, skin Category 1

OSHA defined hazards: Not classified.

Label elements

Signal word: Warning

Hazard statement: May cause an allergic skin reaction.

Precautionary statement

Prevention: Avoid breathing vapor. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves.

Response: If on skin: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

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.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic compound</td>
<td>Proprietary</td>
<td>1-15</td>
</tr>
<tr>
<td>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene</td>
<td>Proprietary</td>
<td>1-5</td>
</tr>
<tr>
<td>Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts</td>
<td>Proprietary</td>
<td>1-2</td>
</tr>
<tr>
<td>Sodium nitrite</td>
<td>Proprietary</td>
<td>0.1-&lt;1.0</td>
</tr>
</tbody>
</table>

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**
Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

**Eye contact**
Flush thoroughly with water. If irritation occurs, get medical assistance. Make sure to remove any contact lenses from the eyes before rinsing.

**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**
May cause an allergic skin reaction.

**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.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Avoid contact with skin and eyes. Avoid contact with skin. Wear suitable protective clothing, gloves and eye/face protection. In case of spills, beware of slippery floors and surfaces.

**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. Avoid contact with skin. 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**
No exposure limits noted for ingredient(s).

**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.

**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      Butterty.
Physical state   Solid.
Form            Butterty.
Color           Brown.
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     393.8 °F (201.0 °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.

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
Prolonged or frequent contact may cause redness, itching, irritation, eczema/chaps and oil acne.

Eye contact
May cause eye irritation on direct contact.

Symptoms related to the physical, chemical and toxicological characteristics
May cause eczema-like skin disorders (dermatitis).

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium nitrite (CAS Proprietary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Inhalation</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>5.5 mg/l, 4 Hours</td>
</tr>
<tr>
<td><em>Oral</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>158 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged skin contact may cause temporary irritation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May cause eye irritation on direct contact.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>May cause an allergic skin reaction.</td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - repeated exposure</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Chronic effects</td>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

12. Ecological information

Ecotoxicity
The product contains a substance which is very toxic to aquatic organisms.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium nitrite (CAS Proprietary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>16.14 - 26.61 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>0.15 - 0.25 mg/l, 96 hours</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>Not known.</td>
<td></td>
</tr>
<tr>
<td>Mobility in general</td>
<td>The product contains substances, which are insoluble in water and which may spread on water surfaces.</td>
<td></td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>Not available.</td>
<td></td>
</tr>
</tbody>
</table>

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.

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

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)  
Sodium nitrite (CAS Proprietary)  
1.0 % One-Time Export Notification only.

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  
Sodium nitrite (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)  
Chemical name  
CAS number  
% by wt.

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS Proprietary)  
Proprietary  
1-2

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  
Sodium nitrite (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  
Sodium nitrite (CAS Proprietary)  
500 lbs

US. Pennsylvania RTK - Hazardous Substances  
Sodium nitrite (CAS Proprietary)

US. Rhode Island RTK  
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS Proprietary)  
Sodium nitrite (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

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*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**: 01-October-2013
- **Revision date**: 28-September-2016
- **Version #**: 02
- **Further information**: C - Safety Glasses, Gloves, Apron
- **NFPA Ratings**

![NFPA Ratings Diagram](Image)

### 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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