HIWIN G04 SDS
(Safety Data)

Features
1. Well wear resistance under high speed conditions
2. Low friction force under high speed conditions
3. Water-resistant

Pack sizes
- 70g Tube
- 400g Pipe
- 1kg Cans

Basic properties

<table>
<thead>
<tr>
<th>HIWIN G04</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Consistency enhancer</td>
<td>Lithium soap</td>
</tr>
<tr>
<td>Color</td>
<td>Beige</td>
</tr>
<tr>
<td>Basic oil</td>
<td>Ester/PAO</td>
</tr>
<tr>
<td>Service temperature range (°C)</td>
<td>-35 to 120</td>
</tr>
<tr>
<td>NLGI Grade</td>
<td>2</td>
</tr>
<tr>
<td>Viscosity (cst/40°C)</td>
<td>25</td>
</tr>
<tr>
<td>Drop point (°C)</td>
<td>&gt;225</td>
</tr>
<tr>
<td>4-ball test Wear scar diameter (µm) (ASTM D2266)</td>
<td>418</td>
</tr>
<tr>
<td>Origin</td>
<td>Germany</td>
</tr>
</tbody>
</table>
1. Identification of the substance/mixture and of the company/undertaking

- **Product details**
  - **Trade name:** HIWIN G04
  - **Application of the substance / the preparation:** Grease
  - **Manufacturer/Supplier:** HIWIN TECHNOLOGIES CORP.
    No.7, Jingke Road, Taichung Precision Machinery Park, Taichung 40852, Taiwan
    - **Tel.:** +886-4-23594510  
    - **Fax:** +886-4-23594420
    - **Information in case of emergency:** +886-4-23594510

2. Hazards identification

- **Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No. 1272/2008 [CLP]**
    - None.
- **Label elements**
  - **Labelling according to Regulation (EC) No. 1272/2008 [CLP]**
    - Special rules for supplemental label elements for certain mixtures.
    - EUH210 Safety data sheet available on request.
- **Other hazards**
  - None.

3. Composition/information on ingredients

- **Mixtures**
  - **Hazardous ingredients**
    - O,O,O-triphenyl phosphorothioate ;
    - REACH registration No. : 01-2119979545-21-xxxx;
    - EC No. : 209-909-9;
    - CAS No. : 597-82-0.
    - Weight fraction : $\geq 1 - < 5\%$.
    - Classification 1271/2008 [CLP] : Aquatic Chronic 4 ; H413.
  - **Further ingredients**
    - SHC (Synthetic hydrocarbon).
    - Ester oil.
    - Metallic soap.
    - Additives not to declare.
  - **Additional information**
    - Full text of H- and EUH-phrases: see section 16.

4. First-aid measures

- **Description of first aid measures**
General information:  
When in doubt or if symptoms are observed, get medical advice.

Following inhalation:  
Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

In case of skin contact:  
Remove contaminated, saturated clothing immediately. Wash immediately with: Water and soap. In case of skin irritation, consult a physician.

After eye contact:  
Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

After ingestion:  
Rinse mouth immediately and drink plenty of water. Let water be drunken in little sips (dilution effect). Get medical advice/attention if you feel unwell.

Most important symptoms and effects, both acute and delayed  
No information available.

- Indication of any immediate medical attention and special treatment needed  
None.

5. Fire-fighting measures

- Extinguishing media  
Suitable extinguishing media:  
Dry extinguishing powder.
Carbon dioxide (CO2).
ABC-powder BC-powder Foam.
Dry sand.

Unsuitable extinguishing media:  
Water.
Strong water jet.
High power water jet.

- Special hazards arising from the substance or mixture  
Hazardous combustion products:  
Carbon monoxide (CO).
Carbon dioxide (CO2).
Burning produces heavy smoke.

Hazardous combustion products:  
Sulphur dioxide (SO2).

- Advice for firefighters  
Use suitable breathing apparatus.

- Additional information  
Collect contaminated fire extinguishing water separately. Do not allow entering drains or
6. Accidental release measures

- Special danger of slipping by leaking/spilling product.

- **Personal precautions, protective equipment and emergency procedures**
  None.

- **Environmental precautions:**
  Do not allow to enter into surface water or drains.
  Do not allow to enter into soil/subsoil.
  Ensure waste is collected and contained.
  Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

- **Methods and material for containment and cleaning up:**
  Take up mechanically, placing in appropriate containers for disposal.
  Soak up inert absorbent and dispose as waste requiring special attention.
  Suitable material for taking up: Universal binder Kieselguhr.

- **Reference to other sections**
  None.

7. Handling and storage

- **Precautions for safe handling**
  **Protective measures**
  It is recommended to design all work processes always so that the following is excluded:
  Generation/formation of mist Avoid: Inhalation of vapours or spray/mists. Skin contact Eye contact Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

- **Conditions for safe storage, including any incompatibilities**
  **Hints on joint storage**
  **Storage class:** 13.
  **Storage class (TRGS 510):** 11.
  **Keep away from**
  Food and feedingstuffs.
  **Further information on storage conditions**
  Keep/Store only in original container.
  Keep container tightly closed.
  Protect against UV-radiation/sunlight Humidity. Contact with air/oxygen. Dust deposits.

- **Specific end use(s)**
  None.
8. Exposure controls/personal protection

- Control parameters
  None.
- Exposure controls
  Personal protection equipment
  Eye / face protection
  Eye protection: not required. Avoid: Eye contact.
  Recommended eye protection articles
  DIN EN 166.
  Skin protection
  Hand protection
  Hand protection is not required.
  By long-term hand contact: Wear suitable gloves.
  Suitable material: NBR (Nitrile rubber) Butyl caoutchouc (butyl rubber).
  Recommended glove articles: DIN EN 374 DIN EN 420.
- Respiratory protection
  No special measures are necessary. Avoid: Inhalation of vapours or spray/mists.

9. Physical and chemical properties

- Information on basic physical and chemical properties
  Colour: beige.
  Safety relevant basis data
  Physical state: pasty.
  Initial boiling point and boiling range: (1013 hPa) > 300°C.
  Decomposition temperature: (1013 hPa) > 200°C.
  Flash point: (1013 hPa) > 200°C.
  Vapour pressure: (50°C) < 0,1hPa.
  Density: (20°C) = 0,91 g/cm³.
- Other information
  None.

10. Stability and reactivity

- Reactivity
  No information available.
- Chemical stability
  No information available.
- Possibility of hazardous reactions
Conditions to avoid
No information available.

Incompatible materials
Oxidising agent, strong.

Hazardous decomposition products
Carbon monoxide (CO).
Carbon dioxide (CO2).
Gases/vapours, harmful.

11. Toxicological information

- Information on toxicological effects
  By analogy.
  Acute effects
  Acute oral toxicity
  Parameter: LD50.
  Exposure route: Oral.
  Species: Rat.
  Effective dose: > 5000 mg/kg.
  Acute dermal toxicity
  Parameter: LD50.
  Exposure route: Dermal.
  Species: Rabbit.
  Effective dose: > 5000 mg/kg.
- Irritant and corrosive effects
  Irritation to eyes
  slightly irritant but not relevant for classification.

12. Ecological information

- Toxicity
  Aquatic toxicity
  Acute (short-term) fish toxicity
  Parameter: LC50 (O,O,O-triphenyl phosphorothioate ; CAS No. : 597-82-0).
  Species: Brachydanio rerio (zebra-fish).
  Evaluation parameter: Acute (short-term) fish toxicity.
  Effective dose: > 100 mg/l.
  Exposure time: 96 h.
  Method: OECD 203.
  Acute (short-term) daphnia toxicity
  Parameter: EC50 (O,O,O-triphenyl phosphorothioate ; CAS No. : 597-82-0).
  Species: Daphnia magna (Big water flea).
Evaluation parameter: Acute (short-term) daphnia toxicity.
Effective dose: > 100 mg/l.
Exposure time: 48 h.

Acute (short-term) algae toxicity
Parameter: EC50 (O,O,O-triphenyl phosphorothioate ; CAS No.: 597-82-0).
Species: Desmodesmus subspicatus.
Evaluation parameter: Acute (short-term) algae toxicity.
Effective dose: > 100 mg/l.
Exposure time: 72 h.
Method: OECD 201.

Bacteria toxicity
Parameter: EC50 (O,O,O-triphenyl phosphorothioate ; CAS No.: 597-82-0).
Species: Activated sludge.
Evaluation parameter: Bacteria toxicity.
Effective dose: > 100 mg/l.
Exposure time: 3 h.
Method: OECD 209.

- Persistence and degradability
  Biodegradation
  Not readily biodegradable (according to OECD criteria).
- Bioaccumulative potential
  No information available.
- Mobility in soil
  No information available.
- Results of PBT and vPvB assessment
  No information available.
- Other adverse effects
  No information available.
- Additional ecotoxicological information
  None.
- Overall evaluation
  If product enters soil, it will be mobile and may contaminate groundwater. In accordance with the required stability the product is poorly biodegradable.

13. Disposal considerations

Dispose according to legislation. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

- Waste treatment methods
  Send to a hazardous waste incinerator facility under observation of official regulations. Collect the waste separately. Evidence for disposal must be provided.
14. Transport information

- **UN number**
  No dangerous goods in sense of this transport regulation.
- **UN proper shipping name**
  No dangerous goods in sense of this transport regulation.
- **Transport hazard class(es)**
  No dangerous goods in sense of this transport regulation.
- **Packing group**
  No dangerous goods in sense of this transport regulation.
- **Environmental hazards**
  No dangerous goods in sense of this transport regulation.
- **Special precautions for user**
  None.
- **Air transport ICAO/IATA-DGR**
  No hazardous goods as defined by prescriptions.

15. Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **National regulations**
  - Technische Anleitung Luft (TA-Luft)
    Weight fraction (Number 5.2.5. I): < 1 %.
  - Water hazard class (WGK)
    Class: 1 (Slightly hazardous to water) Classification according to VwVwS.
- **Chemical Safety Assessment**
  No information available.

16. Other information

- **Indication of changes**
  02. Label elements · 03. Hazardous ingredients · 14. Air transport ICAO/IATA-DGR.
- **Abbreviations and acronyms.**
  None.
- **Key literature references and sources for data**
  None.
- **Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]**
  No information available.
- **Relevant R-, H- and EUH-phrases (Number and full text)**
  H413 May cause long lasting harmful effects to aquatic life.
Training advice
None.

Additional information
None.
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