HIWIN G05 SDS
(Safety Data)

Features
1. Well wear resistance under general conditions
2. Low friction resistance under general conditions
3. Long-life
4. Stable to oxidation
5. Water-resistant
6. Protects against corrosion

Basic properties

<table>
<thead>
<tr>
<th>HIWIN G05</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency enhancer</td>
<td>Lithium soap</td>
</tr>
<tr>
<td>Color</td>
<td>Brown</td>
</tr>
<tr>
<td>Basic oil</td>
<td>Mineral</td>
</tr>
<tr>
<td>Service temperature range (°C)</td>
<td>-15 to 120</td>
</tr>
<tr>
<td>NLGI Grade</td>
<td>2</td>
</tr>
<tr>
<td>Viscosity (cst/40°C)</td>
<td>200</td>
</tr>
<tr>
<td>Drop point (°C)</td>
<td>190</td>
</tr>
<tr>
<td>4-ball test</td>
<td></td>
</tr>
<tr>
<td>Wear scar diameter (μm) (ASTM D2266)</td>
<td>291</td>
</tr>
<tr>
<td>Welding load (N)</td>
<td></td>
</tr>
<tr>
<td>(DIN 51350-4)</td>
<td>2600/2800</td>
</tr>
<tr>
<td>Origin</td>
<td>Germany</td>
</tr>
</tbody>
</table>

Pack sizes

- 70g Tube
- 400g Pipe
- 1kg Cans
1. Identification of the substance/mixture and of the company/undertaking

- **Product details**
  
  **Trade name:** HIWIN G05  
  **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 67/548/EEC, 1999/45/EC**
  
  **Additional hints**
  The product does not require a hazard warning label in accordance with EC directives/German regulations on dangerous substances.

- **Label elements**
  
  **Labelling according to 1999/45/EC**
  
  **Remarks for labelling**
  The product does not require a hazard warning label in accordance with EC directives/German regulations on dangerous substances. Although this product does not require a hazard warning label, we recommend that the safety advice should be observed.

- **Other hazards**
  
  **Information pertaining to special dangers for human and environment**
  none at appropriate handling and storage

3. Composition/information on ingredients

- **Mixtures**
  
  **Description**
  Thickening system and additives in highly refined mineral oil.
  
  **Additional advice**
  No hazardous material resp. below level of consideration according to RL 67/548 EWG.

4. First-aid measures

- **Description of first aid measures**
  
  **General information**
  Remove contaminated soaked clothing immediately, don`t leave to dry.
  
  **In case of inhalation**
  Call doctor in case of indisposition. Ensure of fresh air.  
  (may be relevant for vapours of superheated product)
In case of skin contact
In case of contact with skin wash off with soap and water. Don't use organic solvents. Consult a doctor if skin irritation persists.

In case of eye contact
In case of contact with eyes rinse with plenty of water carefully. In the event of persistent symptoms seek medical treatment.

In case of ingestion
Call doctor in case of indisposition

- Most important symptoms and effects, both acute and delayed

Physician's information / possible symptoms
No symptoms known so far.

Physician's information / possible dangers
Aspiration hazard when vomiting after swallow up.

Indication of any immediate medical attention and special treatment needed
Treatment (Advice to doctor)
Treat symptoms.

5. Fire-fighting measures

- Extinguishing media
  Suitable extinguishing media
  Alcohol-resistant foam
  Dry fire-extinguishing substance
  Carbon dioxide
  Water spray jet
  Unsuitable extinguishing media
  Full water jet

- Special hazards arising from the substance or mixture
  Fire gas of organic material has to be classed invariably as respiratory poison.

- Advice for firefighters
  Special protective equipment for fire-fighters
  Use breathing apparatus with independent air supply.

Additional information
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  For non-emergency personnel
  Avoid contact with skin and eyes
  High risk of slipping due to leakage/spillage of product.

- Environmental precautions
Do not discharge into the drains/surface waters/groundwater.
Do not discharge into the subsoil/soil.

- **Methods and material for containment and cleaning up**
  Take up mechanically and send for disposal.

**Additional Information**
Informations for disposal see chapter 13.

- **Reference to other sections**
  No information available.

## 7. Handling and storage

- **Precautions for safe handling**
  
  **Advice on safe handling**
  Take the usual precautions when handling with chemicals.

  **General protective measures**
  Avoid contact with eyes and skin
  Do not inhale gases/vapours/aerosols.

  **Hygiene measures**
  Cloths contaminated with product should not be kept in trouser pockets.
  Follow general rules of industrial hygiene for safe handling of chemical products
  At work do not eat, drink and smoke.
  Use barrier skin cream.

  **Advice on protection against fire and explosion**
  The product is combustible.
  Pay attention to general rules of internal fire prevention.

- **Conditions for safe storage, including any incompatibilities**
  
  **Requirements for storage rooms and vessels**
  Prevent penetration into the ground.

  **Advice on storage compatibility**
  Do not store together with food.

  **Further information on storage conditions**
  Keep container tightly closed and store at cool and aired place.
  Recommended storage temperature: room temperature.

  **Storage group:** 11
  **Fire class:** B

- **Specific end use(s)**
  No information available.

## 8. Exposure controls/personal protection

- **Control parameters**
  
  **Additional advice**
  This product as such does not contain any relevant ingredients with to be observed limited
values.
As basis for this information served the valid references.

- **Exposure controls**
  
  **Respiratory protection**
  Not required at determined application.

  **Hand protection**
  As the product is a preparation of several substances, the actual resistance of the materials used for gloves cannot be scientifically calculated; it is therefore mandatory to check this before using the product.
  
  The break through time depends on the mechanical stress imposed and must therefore be checked individually.
  
  nitrile gloves

  **Eye protection**
  safety goggles

  **Other protection measures**
  Usual working clothes for chemical industries

  **Appropriate engineering controls**
  Care for good room ventilation, exhaust system at workshop place if necessary

9. **Physical and chemical properties**

- **Information on basic physical and chemical properties**
  
  **Appearance**: pasty
  **Colour**: yellowish
  **Odour**: characteristic

  **Odour threshold**: No information available.

  **Important health, safety and environmental information**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Temp.</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH value</td>
<td>not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling range</td>
<td>not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt; 190 °C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 230 °C</td>
<td></td>
<td>DIN/ISO 2592</td>
<td></td>
</tr>
<tr>
<td>Vapourisation rate</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammable (solid)</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (gas)</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>Not determined</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self ignition temperature</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not determined</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not determined</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>ca. 0.95 g/cm³</td>
<td>25 °C</td>
<td>DIN 51757</td>
<td></td>
</tr>
</tbody>
</table>
10. Stability and reactivity

- **Reactivity**
  No information available.

- **Chemical stability**
  No information available.

- **Possibility of hazardous reactions**
  No information available.

- **Conditions to avoid**
  No information available.

- **Incompatible materials**
  Materials to avoid
  No hazardous reactions known.

- **Hazardous decomposition products**
  No hazardous decomposition products known.

**Thermal decomposition**
Remark: No decomposition if used as directed.

11. Toxicological information

- **Information on toxicological effects**
  **Acute toxicity/Irritability/Sensitization**

<table>
<thead>
<tr>
<th></th>
<th>Value/Validation</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 acute oral</td>
<td>not determined</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irritability skin</td>
<td>no irritating effects known</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irritability eye</td>
<td>no irritating effects known</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>no irritating effects known</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Experiences made from practice**
no harmful effects at appropriate handling and determined usage

**Additional information**
No toxical dates available.
The product was classified on the basis of the calculation procedure of the directive
67/548/EEC (conventional method).

12. Ecological information

- **Toxicity**
  - **Ecotoxicological effects**
    | Value | Species | Method | Validation |
    |-------|---------|--------|------------|
    | Fish  | not determined |

- **Persistence and degradability. Biological degradability**
  - Biological degradability
- **Bioaccumulative potential**
  No information available.

- **Mobility in soil**
  No information available.

- **Results of PBT and vPvB assessment**
  No information available.

- **Other adverse effects**
  - **Behaviour in sewage plant**
    Product swims on (waste-) water surface
  - **General regulation**
    Do not allow uncontrolled leakage of product into the environment.

13. Disposal considerations

- **Waste treatment methods**
  - **Recommendations for the product**
    Waste disposal in accordance with the relevant regulations.
  - **Recommendations for packaging**
    Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
  - **General information**
    Ultimately responsible for correct classification is the waste producer, as the EWC names different codes for different origins of same waste

14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA-DGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Special precautions for user
No information available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available.

Land and inland navigation transport ADR/RID
No dangerous goods as defined by these transport regulations.

Marine transport IMDG
No hazardous goods as defined by prescriptions

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
VOC standard
VOC content: 0 %
National regulations
Water hazard class: 1 Mixture-WGK according to VwVwS (GER)

Chemical Safety Assessment
No information available.

16. Other information

Training advice
Use information in this MSDS

Recommended uses and restrictions
usage only according to instructions for use and observance of warning notes
National and local regulations concerning chemicals shall be observed.

Further information
The information given in this MSDS is based on the present state of knowledge and is intended to describe our products from the point of view of safety requirements only.
Substantial changes to the former version are marked by "!" on the left margin of the paper.
All the raw materials in this product are listed in TSCA.

Version: 2.4
Printed: 2019.09.26