1. IDENTIFICATION OF THE HAZARDOUS CHEMICALS AND OF THE SUPPLIER

Product name : Shell GTL Sarawax SX105

Product code : 002D6192

CAS-No. : 8002-74-2

Manufacturer or supplier’s details
Supplier : Shell MDS (Malaysia) Sdn Bhd (152396-W)
          Tanjong Kidurong
          P.O. Box 1084
          97008 Bintulu
          Sarawak
          Malaysia

Telephone : +6 086 292 222
Telefax : +6 086 292 211

Emergency telephone number : +6 086 292 222

Recommended use of the chemical and restrictions on use
Recommended use : Wax.

2. HAZARDS IDENTIFICATION

GHS Classification
Based on available data this substance / mixture does not meet the classification criteria.

GHS label elements
Hazard pictograms : No Hazard Symbol required
Signal word : No signal word

Hazard statements : PHYSICAL HAZARDS:
Not classified as a physical hazard under GHS criteria.
HEALTH HAZARDS:
Not classified as a health hazard under GHS criteria.
ENVIRONMENTAL HAZARDS:
Not classified as an environmental hazard under GHS criteria.

Precautionary statements
Prevention: No precautionary phrases.
Response: No precautionary phrases.
Storage: No precautionary phrases.
Other hazards which do not result in classification
Contact with hot material can cause thermal burns which may result in permanent skin damage. Hot product may cause severe eye and skin burns. Accumulation of dust can create an explosion hazard. If fine particles are present, then there is a potential for a weak to moderate explosion (severity ST1). Not classified as flammable but will burn.

3. COMPOSITION AND INFORMATION OF THE INGREDIENTS OF THE HAZARDOUS CHEMICAL

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical nature</td>
<td>Fischer-Tropsch derived wax consisting largely of straight chain alkanes.</td>
</tr>
</tbody>
</table>

Hazardous components

4. FIRST-AID MEASURES

If inhaled : No treatment necessary under normal conditions of use.
If symptoms persist, obtain medical advice.

In case of skin contact : Remove contaminated clothing.
If contact with hot product, immediately cool the burn area by flushing or immersing the affected area with water for at least 15 to 20 minutes. Do not attempt to remove anything from the burn area or apply burn creams or ointments. During transport do not cover the wound with dressing or sheet since these may adhere to the product.
It should be noted this product contracts on cooling.
Where a limb is encased, care should be taken to avoid the development of a tourniquet effect. In the event of this occurring, the adhering product must be softened and/or split to prevent restriction of blood flow.
All burns should receive medical attention.

In case of eye contact : Flush eye with copious quantities of water.
Remove contact lenses, if present and easy to do. Continue rinsing.
If persistent irritation occurs, obtain medical advice.

If swallowed : In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

Most important symptoms and effects, both acute and delayed : Ingestion may result in nausea, vomiting and/or diarrhoea.

Protection of first-aiders : When administering first aid, ensure that you are wearing the
5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

Do not use water in a jet.

Specific hazards during firefighting

Hazardous combustion products may include:
A complex mixture of airborne solid and liquid particulates and gases (smoke).
Carbon monoxide may be evolved if incomplete combustion occurs.
Unidentified organic and inorganic compounds.
Accumulation of dust can create an explosion hazard.

Specific extinguishing methods

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for firefighters

Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self- Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter’s clothing approved to relevant Standards (e.g. Europe: EN469).

Hazchem Code

NONE/TIADA

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.

Environmental precautions

Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. For solids, shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.
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Additional advice: For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

7. HANDLING AND STORAGE

Handling
General Precautions: Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Take precautionary measures against static discharges.

Advice on safe handling: Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. Avoid generation or accumulation of dusts. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

Avoidance of contact: Strong oxidising agents.

Storage
Other data: Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers. If wax is molten, store at a temperature not more than 10 deg. above melting point and with a nitrogen blanket. If wax is solid store at least 20°C below the melting point. Store separately from oxidising agents.

Packaging material: Suitable material: For containers or container linings, use mild steel or high density polyethylene. Unsuitable material: PVC.

Container Advice: Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters
SAFETY DATA SHEET

Shell GTL Sarawax SX105

Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis
--- | --- | --- | --- | ---
Paraffin waxes and Hydrocarbon waxes | 8002-74-2 | TWA (Fumes) | 2 mg/m³ | MY PEL
Paraffin waxes and Hydrocarbon waxes | 8002-74-2 | TWA (Fumes) | 2 mg/m³ | ACGIH

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

L'Institut National de Recherche et de Sécurité, (INRS), France http://www.inrs.fr/accueil


Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA) , Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Sécurité, (INRS), France http://www.inrs.fr/accueil

Engineering measures

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:

Adequate ventilation to control airborne concentrations.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

General Information:
Define procedures for safe handling and maintenance of controls.
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
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Drain down system prior to equipment break-in or maintenance.
Retain drain downs in sealed storage pending disposal or subsequent recycle.
Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Personal protective equipment

Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection

No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours [Type A/Type P boiling point >65°C (149°F)].

Hand protection

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 maybe acceptable so long as appropriate maintenance and replacement regimes 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 make and model.

Eye protection: If material is handled such that it could be splashed into eyes, protective eyewear is recommended.

Skin and body protection: Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.

Thermal hazards: When handling heated product, wear heat resistant gloves, safety hat with chin strap, face shield (preferably with a chin guard), safety glasses, heat resistant coveralls (with cuffs over gloves and legs over boots), neck protection and heavy duty boots, e.g. leather for heat resistance.

Environmental exposure controls

General advice: Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Waxy solid at room temperature. Liquid at high temperatures.

Colour: white

Odour: odourless

Odour Threshold: Data not available

pH: Not applicable

pour point: Data not available

Boiling point/boiling range: 470 °C / 878 °F

Method: Unspecified

Flash point: >= 250 °C / >= 482 °F

Method: Unspecified

Evaporation rate: Data not available

Flammability (solid, gas): Data not available

Upper explosion limit: no data available

Lower explosion limit: no data available
## 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>The product does not pose any further reactivity hazards in addition to those list in the following sub-paragraph.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable. Accumulation of dust can create an explosion hazard. Dust can be ignited by static electricity, sparks and heat.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Reacts with strong oxidising agents.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Extremes of temperature and direct sunlight.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Strong oxidising agents.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No decomposition if stored and applied as directed.</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

Shell GTL Sarawax SX105

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11. TOXICOLOGICAL INFORMATION

Basis for assessment: Information given is based on data on the components and the toxicology of similar products.

Symptoms of Overexposure: Ingestion may result in nausea, vomiting and/or diarrhoea.
Information on likely routes of exposure: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity: LD50 rat: > 5,000 mg/kg
Remarks: Low toxicity: Based on available data, the classification criteria are not met.

Acute inhalation toxicity: LC 50 Rat: > 5 mg/l
Exposure time: 4 h
Remarks: Low toxicity by inhalation.

Acute dermal toxicity: Rabbit
Remarks: Low toxicity: LD50 > 5000 mg/kg

Skin corrosion/irritation

Product:
Remarks: Not irritating to skin.

Serious eye damage/eye irritation

Product:
Remarks: Not irritating to eye.

Respiratory or skin sensitisation

Product:
Remarks: Not a skin sensitizer. Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Product:
Remarks: Non mutagenic, Based on available data, the classification criteria are not met.

Carcinogenicity

Product:
Remarks: Not a carcinogen. Based on available data, the classification criteria are not met.

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant. Does not impair fertility. Based on available data, the classification criteria are not met.

STOT - single exposure

Product:
Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:
Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:
Not an aspiration hazard.

Further information

Product:
Remarks: Slightly irritating to respiratory system.

12. ECOLOGICAL INFORMATION

Basis for assessment: Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products (LL/EL/IL50 expressed as the nominal amount of product required to prepare aqueous test extract).

Ecotoxicity

Product:
Toxicity to fish (Acute):
## SAFETY DATA SHEET

### Shell GTL Sarawax SX105

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>11 / 14</td>
<td>800010031041</td>
<td>MY</td>
</tr>
</tbody>
</table>

**Toxicity**

- **Remarks:** LL/EL/IL50 > 100 mg/l
- Practically non toxic:
- Based on available data, the classification criteria are not met.

### Toxicity to crustacean (Acute toxicity)

- **Remarks:** LL/EL/IL50 > 100 mg/l
- Practically non toxic:
- Based on available data, the classification criteria are not met.

### Toxicity to algae/aquatic plants (Acute toxicity)

- **Remarks:** LL/EL/IL50 > 100 mg/l
- Practically non toxic:
- Based on available data, the classification criteria are not met.

### Toxicity to fish (Chronic toxicity)

- **Remarks:** NOEC/NOEL expected to be > 100 mg/l (based on modeled data)

### Toxicity to crustacean (Chronic toxicity)

- **Remarks:** NOEC/NOEL expected to be > 100 mg/l (based on modeled data)

### Toxicity to microorganisms (Acute toxicity)

- **Remarks:** LL/EL/IL50 > 100 mg/l
- Practically non toxic:
- Based on available data, the classification criteria are not met.

### Persistence and degradability

**Product:**

- Biodegradability: Remarks: Expected to be inherently biodegradable.

### Bioaccumulative potential

**Product:**

- Bioaccumulation: Remarks: Has the potential to bioaccumulate.
- Partition coefficient: n-octanol/water: Pow: > 6Remarks: (based on information on similar products)

### Mobility in soil

**Product:**

- Mobility: Remarks: Semi-solid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile.
- Remarks: Floats on water.

### Other adverse effects

**Product:**

- Additional ecological information: Films formed on water may affect oxygen transfer and damage organisms., Causes physical fouling of aquatic organisms.
13 DISPOSAL INFORMATION

Disposal methods
Waste from residues: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Waste, spills or used product is dangerous waste.

Contaminated packaging: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Local legislation
Remarks: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORTATION INFORMATION

National Regulations
Hazchem Code: NONE/TIADA

International Regulations
ADR
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

| Pollution category | Y |
| Ship type          | 2 |
| Product name       | Paraffin wax, highly-refined |
| Special precautions | Not applicable |

Special precautions for user
Remarks: Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.
15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

OSHA 1994 and relevant regulations.
Factories and Machinery Act 1967 and relevant regulations.
Environmental Quality Act 1974 and regulation.

Other international regulations

The components of this product are reported in the following inventories:
EINECS/ELINCS/EC : All components listed or polymer exempt.
TSCA : All components listed.

16. OTHER INFORMATION

AIICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECl - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations
Further information

Other information : A vertical bar (|) in the left margin indicates an amendment from the previous version.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

MY / EN