SAFETY DATA SHEET

1. Identification

Product identifier GRAPHSEAL (AMLUBE 350)

Other means of identification

Brand Code 9381

Recommended use For Industrial Use Only

Recommended restrictions None known.

Manufacturer/Supplier information

Manufacturer HarbisonWalker International

Company name HarbisonWalker International

Address 1305 Cherrington Parkway, Suite 100

Moon Township, Pennsylvania 15108 US

Telephone General Phone: 412-375-6600

Website www.thinkHWI.com

Emergency phone number CHEMTREC 24 HOUR 1-800-424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>20 - 40</td>
<td></td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td>60 - 80</td>
<td></td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. 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.
Most important symptoms/effects, acute and delayed

Coughing.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

General information

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

5. Fire-fighting measures

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

Not available.

Specific hazards arising from the chemical

Not applicable.

Special protective equipment and precautions for firefighters

Not available.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions

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

7. Handling and storage

Precautions for safe handling

Avoid prolonged exposure. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

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

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>PEL</td>
<td>5 mg/m3</td>
<td>Respirable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m3</td>
<td>fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total dust.</td>
</tr>
<tr>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) Components</td>
<td>Type</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>TWA</td>
<td>15 mppcf</td>
<td></td>
</tr>
<tr>
<td>US. ACGIH Threshold Limit Values Components</td>
<td>Type</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>TWA</td>
<td>2 mg/m3</td>
<td>Respirable</td>
</tr>
<tr>
<td>US. NIOSH: Pocket Guide to Chemical Hazards Components</td>
<td>Type</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>Graphite (CAS 7782-42-5)</td>
<td>TWA</td>
<td>2.5 mg/m3</td>
<td>Respirable.</td>
</tr>
</tbody>
</table>

Biological limit values

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

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) 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

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear suitable protective clothing.
Respiratory protection
Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

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
- Physical state: Solid.
- Form: Solid
- Color: Not available.
- Odor: Not available.
- Odor threshold: Not available.
- pH: Not available.
- Melting point/freezing point: Not available.
- Initial boiling point and boiling range: Not available.
- Flash point: Not available.
- 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.
- Explosive limit - lower (%): Not available.
- Explosive limit - upper (%): Not available.
- Vapor pressure: Not available.
- Vapor density: Not available.
- Relative density: Not available.
- Solubility(ies)
  - Solubility (water): 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
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization does not occur.

Conditions to avoid
Contact with incompatible materials.

Incompatible materials
Chlorine.
Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure. Contact your sales representative for clarification.
11. Toxicological information

Information on likely routes of exposure

- **Inhalation**: Prolonged inhalation may be harmful.
- **Skin contact**: No adverse effects due to skin contact are expected.
- **Eye contact**: Direct contact with eyes may cause temporary irritation.
- **Ingestion**: Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics

- **Coughing**.

Information on toxicological effects

- **Acute toxicity**: Not available.
- **Skin corrosion/irritation**: Prolonged skin contact may cause temporary irritation.
- **Serious eye damage/eye irritation**: Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

- **Respiratory sensitization**: Not a respiratory sensitizer.
- **Skin sensitization**: This product is not expected to cause skin sensitization.

Germ cell mutagenicity

- **No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.**

Carcinogenicity

- **IARC Monographs. Overall Evaluation of Carcinogenicity**: Not available.
- **US. National Toxicology Program (NTP) Report on Carcinogens**: Not available.

Reproductive toxicity

- **This product is not expected to cause reproductive or developmental effects.**

Specific target organ toxicity - single exposure

- **Not classified.**

Specific target organ toxicity - repeated exposure

- **Not classified.**

Aspiration hazard

- **Not an aspiration hazard.**

Chronic effects

- **Prolonged inhalation may be harmful.**

12. Ecological information

Ecotoxicity

- The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

- **No data is available on the degradability of this product.**

Bioaccumulative potential

- **No data available.**

Mobility in soil

- **No data available.**

Other adverse effects

- **No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.**

13. Disposal considerations

Disposal instructions

- This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Hazardous waste code

- **Not applicable.**

Waste from residues / unused products

- **Not available.**

Contaminated packaging

- **Not available.**
14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

US federal regulations
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All chemical substances in this product are listed on the TSCA chemical substance inventory where required.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

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.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List
Graphite (CAS 7782-42-5)

US. New Jersey Worker and Community Right-to-Know Act
Graphite (CAS 7782-42-5)

US. Pennsylvania Worker and Community Right-to-Know Law
Graphite (CAS 7782-42-5)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.
### 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>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</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>Yes</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>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</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>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</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 that all components of this product comply 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**: 08-31-2015
- **Version #**: 01

**Disclaimer**: This information is based on our present knowledge on creation date. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Composition / Information on Ingredients: Ingredients