SECTION 1: Product and company identification

Product name: Graphite Lubricant
Use of the substance/mixture: Aerosol
Dry lubricant
Product code: 8211
Company: Total Solutions
P.O. Box 240014
Milwaukee, WI 53224 - USA
T(414) 354-6417
Emergency number: Chemtrec: (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
Flam. Aerosol 1 H222
Skin Irrit. 2 H315
Muta. 1B H340
Carc. 1A H350
STOT SE 3 H336
STOT RE 2 H373
Asp. Tox. 1 H304

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US):
- GHS02
- GHS07
- GHS08
Signal word (GHS-US): Danger
Hazard statements (GHS-US):
- Extremely flammable aerosol
- May be fatal if swallowed and enters airways
- Causes skin irritation
- May cause drowsiness or dizziness
- May cause genetic defects
- May cause cancer (Inhalation)
- May cause damage to organs through prolonged or repeated exposure
Precautionary statements (GHS-US):
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, hot surfaces, open flames, sparks. - No smoking.
- Do not spray on an open flame or other ignition source.
- Pressurized container: Do not pierce or burn, even after use.
- Do not breathe fume, gas, mist, spray, vapors.
- Wash thoroughly after handling
- Use only outdoors or in a well-ventilated area.
- Wear eye protection, protective clothing, protective gloves.
- If swallowed: Immediately call a doctor, a POISON CENTER
- If on skin: Wash with plenty of water
- If inhaled: Remove person to fresh air and keep comfortable for breathing
- If exposed or concerned: Get medical advice/attention.
- Call a doctor, a POISON CENTER if you feel unwell
- Do NOT induce vomiting.
- If skin irritation occurs: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.
- Store in a well-ventilated place. Keep container tightly closed.
- Store locked up.
- Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
- Dispose of contents/container to comply with local/regional/national/international regulations

2.3. Other hazards
No additional information available
2.4. \textbf{Unknown acute toxicity (GHS US)}
Not applicable

\section*{SECTION 3: Composition/Information on ingredients}

3.1. \textbf{Substances}
Not applicable

Full text of H-phrases: see section 16

3.2. \textbf{Mixtures}

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| toluene           | (CAS-No.) 108-88-3 | 45-70 | Flam. Liq. 2, H225  
                                  Skin Irrit. 2, H315  
                                  STOT SE 3, H336  
                                  STOT RE 2, H373  
                                  Asp. Tox. 1, H304 |
| Crystalline Silica| (CAS-No.) 14808-60-7 | 0.1-1 | Carc. 1A, H350  
                                  STOT RE 1, H372 |
| benzene           | (CAS-No.) 71-43-2  | 0.1-1 | Flam. Liq. 2, H225  
                                  Skin Irrit. 2, H315  
                                  Eye Irrit. 2A, H319  
                                  Muta. 1B, H340  
                                  Carc. 1A, H350  
                                  STOT RE 1, H372  
                                  Asp. Tox. 1, H304 |
| ethylbenzene      | (CAS-No.) 100-41-4 | 0.1-1 | Flam. Liq. 2, H225  
                                  Acute Tox. 4 (Inhalation:vapour), H332  
                                  Carc. 2, H351  
                                  STOT RE 2, H373  
                                  Asp. Tox. 1, H304 |

A specific chemical identity and/or percentage of composition has been withheld as a trade secret. Any concentration shown as a range is to protect confidentiality or is due to batch variation.

\section*{SECTION 4: First aid measures}

4.1. \textbf{Description of first aid measures}

\begin{itemize}
  \item \textbf{First-aid measures general}: If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Get medical advice/attention.
  \item \textbf{First-aid measures after inhalation}: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
  \item \textbf{First-aid measures after skin contact}: Take off immediately all contaminated clothing and wash it before reuse. Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.
  \item \textbf{First-aid measures after eye contact}: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
  \item \textbf{First-aid measures after ingestion}: Do NOT induce vomiting. Rinse mouth with water. Immediately call a poison center or doctor/physician.
\end{itemize}

4.2. \textbf{Most important symptoms and effects, both acute and delayed}

\begin{itemize}
  \item \textbf{Symptoms/effects}: May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. May cause damage to organs through prolonged or repeated exposure.
  \item \textbf{Symptoms/effects after inhalation}: May cause respiratory irritation. Central nervous system depression. Prolonged exposure: danger of damage to health through inhalation.
  \item \textbf{Symptoms/effects after skin contact}: Causes skin irritation.
  \item \textbf{Symptoms/effects after eye contact}: Direct contact with the eyes is likely to be irritating.
  \item \textbf{Symptoms/effects after ingestion}: May be fatal if swallowed and enters airways.
\end{itemize}

4.3. \textbf{Indication of any immediate medical attention and special treatment needed}

Treat symptomatically.

\section*{SECTION 5: Firefighting measures}

5.1. \textbf{Extinguishing media}

Suitable extinguishing media: Foam. Carbon dioxide. Dry chemical powder.

5.2. \textbf{Special hazards arising from the substance or mixture}

\begin{itemize}
  \item \textbf{Fire hazard}: Extremely flammable aerosol.
  \item \textbf{Explosion hazard}: Pressurized container: may burst if heated. vapors may travel long distances along ground before igniting/flashign back to vapor source.
  \item \textbf{Reactivity}: Upon combustion: CO and CO2 are formed.
\end{itemize}
5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Isolate from fire, if possible, without unnecessary risk. Eliminate every possible source of ignition.

6.1.1. For non-emergency personnel


Emergency procedures: Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Stop leak if safe to do so. Stop release. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment: Contain released product, pump into suitable containers.

Methods for cleaning up: This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed: Do not puncture, incinerate or crush. Do not use if spray button is missing or defective.

Precautions for safe handling: Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Obtain special instructions before use. Do not breathe gas/vapor/aerosol. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not re-use empty containers. Handle uncleaned empty containers as full ones.

Hygiene measures: Wash thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Comply with applicable regulations.

Storage conditions: Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Incompatible materials: Sources of ignition. Direct sunlight. Heat sources.

Heat-ignition: KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.

Storage area: Meet the legal requirements. Store in a cool area. Store in a dry area.

Special rules on packaging: meet the legal requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>OSHA Remark (OSHA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (14808-60-7)</td>
<td>0.1</td>
<td>(3) See Table Z-3.</td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>20 ppm</td>
</tr>
<tr>
<td>toluene (108-88-3)</td>
<td>ACGIH TWA (ppm)</td>
<td>20 ppm</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Remark (ACGIH)</td>
<td>Visual impair; female repro; pregnancy loss; A4; BEI</td>
</tr>
<tr>
<td>OSHA</td>
<td>Remark (OSHA)</td>
<td>(2) See Table Z-2.</td>
</tr>
<tr>
<td>benzene (71-43-2)</td>
<td>ACGIH TWA (ppm)</td>
<td>0.5 ppm</td>
</tr>
<tr>
<td>ACGIH</td>
<td>ACGIH STEL (ppm)</td>
<td>2.5 ppm</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Remark (ACGIH)</td>
<td>Leukemia</td>
</tr>
</tbody>
</table>
SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- **Physical state**: Liquid
- **Appearance**: Aerosol. Gray.
- **Odor**: Hydrocarbon odor
- **Odor threshold**: No data available
- **pH**: No data available
- **Melting point**: No data available
- **Freezing point**: No data available
- **Boiling point**: No data available
- **Flash point**: No data available
- **Relative evaporation rate (butyl acetate=1)**: No data available
- **Flammability (solid, gas)**: No data available
- **Explosion limits**: No data available
- **Explosive properties**: No data available
- **Oxidizing properties**: No data available
- **Vapor pressure**: ≈ 4.4 atm @ 70°F
- **Relative density**: No data available
- **Relative vapor density at 20 °C**: No data available
- **Solubility**: Negligible.
- **Log Pow**: No data available
- **Log Kow**: No data available
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Viscosity**: No data available
- **Viscosity, kinematic**: < 20 cSt
- **Viscosity, dynamic**: No data available
- **VOC content**: < 85 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO2 are formed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available
10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

<table>
<thead>
<tr>
<th>Substance</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylbenzene (100-41-4)</td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>3500 mg/kg (Rat; Other; Experimental value)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>15415 mg/kg (Rabbit; Literature study; Other; 15432 mg/kg; Rabbit; Experimental value)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>17.8 mg/l/4h (Rat; Literature study)</td>
</tr>
<tr>
<td>LC50 inhalation rat (ppm)</td>
<td>4000 ppm/4h (Rat; Literature study)</td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>3500 mg/kg body weight</td>
</tr>
<tr>
<td>ATE CLP (dermal)</td>
<td>15415 mg/kg body weight</td>
</tr>
<tr>
<td>ATE CLP (gases)</td>
<td>4000 ppmV/4h</td>
</tr>
<tr>
<td>ATE CLP (vapors)</td>
<td>17.8 mg/l/4h</td>
</tr>
<tr>
<td>ATE CLP (dust, mist)</td>
<td>17.8 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: May cause genetic defects.

Carcinogenicity: May cause cancer (Inhalation).

Crystalline Silica (14808-60-7)

IARC group: 1 - Carcinogenic to humans

Toluene (108-88-3)

IARC group: 3 - Not classifiable

Benzene (71-43-2)

IARC group: 1 - Carcinogenic to humans

National Toxicology Program (NTP) Status: 2 - Known Human Carcinogens

Ethylbenzene (100-41-4)

IARC group: 2B - Possibly carcinogenic to humans

Reproductive toxicity: Not classified

Specific target organ toxicity – single exposure: May cause drowsiness or dizziness.

Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: May be fatal if swallowed and enters airways.

Symptoms/effects after inhalation: May cause respiratory irritation. Central nervous system depression. Prolonged exposure: danger of damage to health through inhalation.

Symptoms/effects after skin contact: Causes skin irritation.

Symptoms/effects after eye contact: Direct contact with the eyes is likely to be irritating.

Symptoms/effects after ingestion: May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylbenzene (100-41-4)</td>
<td></td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>4.2 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Salmo gairdneri; Semi-static system; Fresh water; Experimental value)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylbenzene (100-41-4)</td>
<td></td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>1.44 g O₂/g substance (20d.)</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>2.1 g O₂/g substance</td>
</tr>
<tr>
<td>ThOD</td>
<td>3.17 g O₂/g substance</td>
</tr>
</tbody>
</table>
ethylbenzene (100-41-4)

BOD (% of ThOD) 45.4 (20 days)

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>BCF or Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylbenzene (100-41-4)</td>
<td>BCF fish 1: 1 (BCF; Other; 6 weeks; Oncorhynchus kisutch; Flow-through system; Salt water; Literature study)</td>
</tr>
<tr>
<td></td>
<td>BCF fish 2: 15 - 79 (BCF)</td>
</tr>
<tr>
<td></td>
<td>BCF other aquatic organisms 1: 4.68 (BCF)</td>
</tr>
<tr>
<td></td>
<td>Log Pow: 3.15 (Experimental value; 3.6; Experimental value; EU Method A.8: Partition Coefficient; 20 °C)</td>
</tr>
<tr>
<td></td>
<td>Bioaccumulative potential: Low potential for bioaccumulation (BCF &lt; 500).</td>
</tr>
</tbody>
</table>

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

Additional information

Other information: When transported by ground, this product may be eligible to be shipped as a Limited Quantity or Consumer Commodity ORM-D utilizing the exception found at 49 CFR 173.306. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may be required.

ADR
No additional information available

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS-No.</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>108-88-3</td>
<td>45-70%</td>
</tr>
<tr>
<td>benzene</td>
<td>71-43-2</td>
<td>0.1-1%</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>100-41-4</td>
<td>0.1-1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>CERCLA RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene (108-88-3)</td>
<td>1000 lb</td>
</tr>
<tr>
<td>benzene (71-43-2)</td>
<td>10 lb</td>
</tr>
<tr>
<td>ethylbenzene (100-41-4)</td>
<td></td>
</tr>
</tbody>
</table>
WARNING
This product can expose you to toluene, which is known to the State of California to cause birth defects or other reproductive harm, Crystalline Silica, which is known to the State of California to cause cancer, ethylbenzene, which is known to the State of California to cause cancer, and benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information
Training advice: Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H225</th>
<th>Highly flammable liquid and vapour</th>
</tr>
</thead>
<tbody>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H322</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H36</td>
<td>May cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H340</td>
<td>May cause genetic defects</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
</tbody>
</table>

NFPA health hazard: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard: 4 - Materials that rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and burn readily.
NFPA reactivity: 0 - Material that in themselves are normally stable, even under fire conditions.

Prepared by: Technical Department

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.