


HCFO Plus

Revision Date June 16, 2015

1. Product and Company Identification

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| Product Information | |
| Trade Name | HCFO Plus |
| Product Description | Graphite lubricant in solvent carrier |
| Recommended Uses | Oven chain lubrication |
| Company | Southwestern Graphite, Inc. (a division of Asbury Carbons Inc.) 2564 Highway 12 DeQuincy, LA 70633 |
| Emergency Telephone | 1-800-255-3924 (contract number: MIS0001931) |
| Information Phone | 1-908-537-2155 |
| Website | www.asbury.com |

2. Hazards Identification

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| Classification | Aspiration hazard - Category 1 |
| Labeling | |
| Hazard Pictogram(s) |  |
| Signal Word | Danger |
| Hazard Statements | H227: Combustible liquid. H304: May be fatal if swallowed and enters airways. |
| Precautionary Statements | |
| Prevention: | P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P280: Wear protective gloves / eye protection / face protection. |
| Response: | P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or physician. P331: Do NOT induce vomiting. P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. |
| Storage: | P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up. |
| Disposal: | P501: Dispose of contents and container in accordance with local regulations. |

3. Composition / Information on Ingredients

| Components | CAS No. | EINECS No. | Weight % | Hazard Code(s) |
|---|------------|------------|----------|----------------|
| Distillates (petroleum), hydrotreated light | 64742-47-8 | 265-149-8 | 85% | H227, H304 |
| Graphite | 7782-42-5 | 231-955-3 | 15% | -- |

4. First Aid Measures

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| Inhalation | Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. |
| Skin Contact | Wash contact areas with soap and water. Remove contaminated clothing. Launder |

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| | contaminated clothing before reuse. |
| Eye contact | Flush thoroughly with water. If irritation occurs, get medical assistance. |
| Ingestion | Seek immediate medical attention. Do not induce vomiting. |
| Note to Physician | If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. |

5. Fire Fighting Measures

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| Appropriate extinguishing media | Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical. |
| Inappropriate extinguishing media | High volume water jet. |
| Special fire hazards | Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition. |
| Products of Combustion | Smoke, incomplete combustion products, Carbon dioxide (CO ₂), carbon monoxide (CO). |
| Advice for Fire Fighters | Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel. |
| NFP Rating | 110 |

6. Accidental Release Measures

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| Personal precautions | Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. |
| Environmental precautions | Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas. |
| Methods for cleaning up | <p>Land Spill: Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Recover by pumping or with suitable absorbent.</p> <p>Water Spill: Stop leak if you can do it without risk. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.</p> <p>Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.</p> |

7. Handling and Storage

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| Precautions for safe handling | <p>Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present. Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance.</p> <p>Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.</p> |
| Storage precautions | The container choice, for example storage vessel, may affect static accumulation and dissipation. Do not store in open or unlabelled containers. |

Suitable Materials and Coatings (Chemical Compatibility): Neoprene; Epoxies; Epoxy Phenolics; Polyamide; Polyethylene; Polypropylene; Polyester; Teflon; Carbon Steel; Stainless Steel
Unsuitable Materials and Coatings: Natural Rubber; Ethylene-propylene-diene monomer (EPDM); Polystyrene; Butyl Rubber

8. Exposure Controls/ Personal Protection

| Ingredients with control parameters / occupational exposure limits | | | |
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| Component | CAS No. | TWA | Control Reference |
| Distillates (petroleum), hydrotreated light | 64742-47-8 | 1200 mg/m ³ | Manufacturer recommendation |
| Graphite | 7782-42-5 | 2.0 mg/m ³ | Respirable dust, 2014 ACGIH |
| Engineering controls | Engineering methods to prevent or control exposure are preferred. Use explosion-proof ventilation equipment. | | |
| Respiratory Protection | If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: air purifying respirator with appropriate air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information. | | |
| Eye Protection | Chemical goggles. | | |
| Skin Protection | If prolonged or repeated contact is likely, chemical resistant gloves and clothing are recommended. | | |
| Hygiene measures | 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. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. | | |

9. Physical and Chemical Properties

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| Appearance | Gray to black liquid | Lower explosion limit | 0.6% (V) |
| Odor | Mild | Upper explosion limit | 7.0% (V) |
| pH | n/a | Vapor pressure | 0.05 mm Hg @ 20 °C, 68 °F |
| Freezing point | Not determined | Vapor density | 5.9 (air = 1) |
| Boiling point | 217 - 246 °C (423 - 475 °F) | Water solubility | negligible |
| Flash point | > 79.4 °C (> 174.9 °F) Method: Tag closed cup | Partition coefficient: n-octanol/water | No data available |
| Evaporation rate | 0.01 | Autoignition temperature | 215°C (419°F) |
| Specific gravity | 0.88 g/ml | % volatile by weight | 85% |

10. Stability and Reactivity

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| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization will not occur. |
| Conditions to avoid | Avoid heat, sparks, open flames and other ignition sources. |
| Materials to avoid | Strong oxidizers. |
| Hazardous decomposition products | Material does not decompose at ambient temperatures. |

11. Toxicological Information

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| Acute oral toxicity | LD50 (rat): > 5000 mg/kg |
| Acute inhalation toxicity | LC50 (rat, 4 hours): > 5.0 mg/l (vapor) |
| Acute dermal toxicity | LD50 (rabbit): 2000 - 4000 mg/kg |
| Skin corrosion/irritation | May dry the skin leading to discomfort and dermatitis. |
| Eye damage/irritation | May cause mild, short-lasting discomfort to eyes. |
| Respiratory or skin sensitization | Not expected to be a sensitizer. |
| Mutagenicity | Not expected to be a germ cell mutagen. |
| Carcinogenicity | Contains no ingredient listed as a carcinogen. |
| Reproductive toxicity | Not expected to be a reproductive toxicant. |

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| STOT - single exposure | Not expected to cause organ damage from a single exposure. |
| STOT - repeated exposure | Not expected to cause organ damage from prolonged or repeated exposure. |
| Aspiration toxicity | May be fatal if swallowed and enters airways. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema. |
| Other information | Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with may defat the skin resulting in possible irritation and dermatitis. |

12. Ecological Information

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| Aquatic toxicity | Non-toxic to aquatic life. |
| Acute toxicity to fish | LL50 (Oncorhynchus mykiss (rainbow trout)) 96 hours: > 1,000 mg/l |
| Acute toxicity to aquatic invertebrates | EL50 (Daphnia magna (Water flea)) 48 hours: > 1000 mg/l |
| Acute toxicity to algae | EL50 (Pseudokirchneriella subcapitata (green algae)) 72 hours: >1000 mg/l |
| Chronic toxicity to fish | NOELR (Oncorhynchus mykiss (rainbow trout)) 28 d: 0.316 mg/l |
| Chronic toxicity to aquatic invertebrates | No data available |
| Biodegradation | Distillates (petroleum), hydrotreated light - expected to be readily biodegradable. Graphite will not degrade under normal conditions. |
| Bioaccumulation | No evidence of bioaccumulation. |
| Mobility | No data available. |

13. Disposal Considerations

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| Material Disposal | Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. |
| Regulatory Information | RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated. |
| Packaging Disposal | Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. |

14. Transport Information

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| UN number | Not regulated |
| Proper shipping name | n/a |
| Transport hazard class | n/a |
| Packing group | n/a |
| Marine pollutant? | n/a |

15. Regulatory Information

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| Listed / complies with the following chemical inventories: | AICS, DSL, ENCS, IECSC, KECI, PICCS, TSCA |
| SARA (311/312) Hazard Classification(s) | Fire. Immediate (acute) health. Delayed health. |
| SARA (313) Toxic Release Inventory | This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program. |

The following ingredients are cited on the lists below:

| Chemical Name | CAS Number | List Citations |
|---|------------|----------------|
| Distillates (petroleum), hydrotreated light | 64742-47-8 | 17, 18 |

Regulatory lists searched:

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|---------------|------------------|-------------------|-------------|
| 1 = ACGIH ALL | 6 = TSCA 5a2 | 11 = CA P65 REPRO | 16 = MN RTK |
| 2 = ACGIH A1 | 7 = TSCA 5e | 12 = CA RTK | 17 = NJ RTK |
| 3 = ACGIH A2 | 8 = TSCA 6 | 13 = IL RTK | 18 = PA RTK |
| 4 = OSHA Z | 9 = TSCA 12b | 14 = LA RTK | 19 = RI RTK |
| 5 = TSCA 4 | 10 = CA P65 CARC | 15 = MI 293 | 20 = MA RTK |

16. Other Information

The information contained herein is accurate to the best of our knowledge. Asbury Carbons makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.

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| NFPA Classification | Health Hazard: 1 |
| | Fire Hazard: 1 |
| | Reactivity Hazard: 0 |