

SAFETY DATA SHEET

Vacuum Gas Oil (VGO)

Section 1: Product and Company Identification

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|-------------------------------|---|--|
| Product Identifier | Vacuum Gas Oil (VGO) | |
| Other Means of Identification | Unknown | |
| Recommended Use | Refinery feedstock and petrochemical production | |
| Recommended Restrictions | None known | |

Manufacturer/Importer/Supplier/Distributor Information


| | | |
|------------------------|--|----------------|
| Company Name | Blue Tide Environmental, LLC | |
| Address | 5841 Legacy Circle, Suite 250D Plano, TX 75024 | |
| Telephone | Technical Questions | (469) 956-3336 |
| Website | www.bluetideenv.com | |
| Emergency Phone Number | Chemtrec | (800) 424-9300 |

Section 2: Hazard Identification

Classification of the substance or mixture

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|---------------|--|
| OSHA HCS 2012 | Aspiration Toxicity – Category 1 Carcinogenicity – Category 1B Skin Sensitization – Category 1 Mutagenicity – Category 2 STOT-SE – Category 3 (Respiration) STOT-RE – Category 2 Acute Aquatic Toxicity – Category 2 |
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Label Elements

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| Hazard Symbol | DANGER |
| Signal Word |  |
| Hazard Statement | May be fatal if swallowed and enters airways May cause an allergic skin reaction May cause cancer Suspected of causing genetic defects Toxic to aquatic life |
| Precautionary Statement | |
| Prevention | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed |

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Section 3: Composition/Information on Ingredients

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Wt%</u> |
|--|-------------------|------------|
| Lubricating Oils, used, vacuum distilled | 92045-41-5 | 100 |

Section 4: First Aid Measures.

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| Inhalation | Move to fresh air and keep at rest in a position comfortable for breathing. Call for medical attention if required |
| Skin Contact | Take off contaminated clothing and wash it before reuse. Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until the product is removed. If skin irritation occurs: Get medical advice/attention. |
| Eye Contact | Rinse with Water. Get medical attention if irritation develops and persists |
| Ingestion | DO NOT induce vomiting: IMMEDIATELY call a POISON CENTER/doctor. If an individual is drowsy or unconscious, place the individual on the left side with head down. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. |
| Most Important Symptoms/Effects | Refer to Section - Toxicological Information |
| Indication of any immediate medical attention and special treatment needed | Aspiration of low viscosity petroleum hydrocarbons may cause severe pneumonitis (oil pneumonia). Vomiting should not be induced. If gastric lavage is considered for an unconscious victim, use of an endotracheal tube should be considered. If spontaneous vomiting has occurred, patient should be monitored for difficult breathing as adverse effects of aspiration into the lungs may be delayed up to 48 hours. |

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Section 5: Fire Fighting Measures

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| Suitable extinguishing media | Dry chemical, foam, carbon dioxide, water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the |
| Unsuitable extinguishing media | Do not use water jet. Heavy stream of water may spread fire. |
| Specific hazards arising from the chemical | Not considered flammable but may burn at high temperatures. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire |
| Firefighting equipment/Instructions | Move containers away from fire area if you can do so without risk |
| General Fire Hazards | Fire fighters should wear complete protective clothing (turn out gear) including self-contained breathing apparatus. Do not allow run-off from firefighting to enter drains or water courses. |

Section 6: Accidental Release Measures

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| Personal precautions, protective equipment, and emergency procedures | Avoid breathing fumes. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing. |
| Methods and materials for containment and cleaning up | Cover any spills with dikes or absorb spilled liquid with sand, earth or other inert material to prevent migration and entry into sewers or streams. Clean up spill immediately and place in appropriate containers. Dispose of in accordance with federal, state and local regulations. |
| Environmental Precautions | Do not discharge to sewers and surface waters. Notify authorities if entry occurs. |

Section 7: Handling and Storage

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| Precautions for Safe Handling | Observe good industrial hygiene practices |
| Conditions for Safe Storage, including any incompatibilities | Obtain special instructions before use. Do not handle until all safety precautions have been understood. Avoid contact with eyes and skin. Avoid breathing vapors/mists generated by this product. Use in a well ventilated area. Do not eat, drink, or smoke in the work area, wash hands after use. Use good personal hygiene practices. Remove contaminated clothing and protective equipment before entering eating areas. Eyewash stations and showers should be available in areas where this material is used and stored. |
| | Keep container(s) tightly closed and product labeled. Store in cool, dry, well-ventilated areas away from extremely high or low temperatures, direct sunlight and any incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. |

Section 8: Exposure Controls / Personal Protection

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| Occupational Exposure Limits | No exposure limits noted for ingredient(s) |
| Biological Limit Values | No biological exposure limits noted for the ingredient(s) |
| Appropriate Engineering Controls | Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use a chemical fume hood or local exhaust ventilation, and process enclosure if necessary, to control exposure. Ensure eyewash/safety shower stations are available near areas where this product is used. |

Individual Protection Measures, such as Personal Protective Equipment

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| Eye/Face Protection | Have eye washing facilities readily available where eye contact can occur. Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with face shield. |
| Hand Protection | Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile gloves. Suitability and durability of glove is dependent on usage, e.g. frequency and duration of |

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| | contact, chemical resistance of glove material, glove thickness, and dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. |
| Other | Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of dangerous substance at the workplace. |
| Respiratory Protection | If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Supplied air respiratory protection should be used for cleaning large spills or upon entry into tanks, vessels, or other confined spaces. |
| Thermal Hazards | Wear appropriate thermal protective clothing, when necessary |
| General Hygiene Considerations | Handle in accordance with good industrial hygiene and safety practice. When using do not smoke, eat, or drink. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. |

Section 9: Physical and Chemical Properties

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| Appearance | Liquid |
| Physical State | Liquid |
| Form | Liquid |
| Color | Dark Brown |
| Odor | Petroleum |
| Odor Threshold | Not available |
| pH | Not available |
| Melting Point/Freezing Point | Not available |
| Initial Boiling Point and Boiling Range | >260°C (500°F) |
| Flash Point (COC) | >60 (140°F) |
| Evaporation Rate | Not available |
| Flammability (solid, gas) | Not available |

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| Upper/Lower Flammability or Explosive Limits | |
| Flammability Limit – Lower (%) | Not available |

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| Flammability Limit – Upper (%) | Not available |
| Explosive Limit – Lower (%) | Not available |
| Explosive Limit – Upper (%) | Not available |

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| Vapor Pressure | Not available |
| Vapor Density | Not available |
| Relative Density @ 15°C | 0.87-0.89 |

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| Solubility (water) | Insoluble |
| Partition coefficient (n-octanol/water) | Not available |
| Auto-ignition temperature | Not available |
| Decomposition Temperature | Not available |
| Viscosity @ 40°C | 13.0-15.0 cSt |

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| Other Information | |
| Pour Point | Not Available |

Section 10: Stability and Reactivity

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| 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 | No dangerous reaction known under conditions of normal use |
| Conditions to Avoid | Direct sunlight, extremely high or low temperatures, and incompatible materials. |
| Incompatible Materials | Strong oxidizing agents, acids |
| Hazardous Decomposition Products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide, hydrogen sulfide, sulfur oxides or sulfuric acid and unidentified organic and inorganic compounds. |

Section 11: Toxicological Information

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Information on Likely Routes of Exposure:

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| Ingestion | No information on significant adverse effects |
| Inhalation | May cause respiratory irritation, symptoms include sore throat, coughing, labored breathing, sneezing, and burning sensation depending on length of exposure. |
| Skin Contact | May cause reddening, itching and inflammation. |
| Eye Contact | Contact may cause irritation and discomfort |

Product Toxicity Data

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|------------------------------------|--|
| Acute Toxicity Estimate | No information on significant adverse effects |
| Immediate Effects | No information on significant adverse effects |
| Delayed Effects | No information on significant adverse effects |
| Irritation/Corrosivity Data | OSHA HCS 2012 – Skin Irritation 3; Eye Irritation 2B |

Respiratory or Skin Sensitization

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|---|--|
| Respiratory Sensitization | No information available for the product |
| Skin Sensitization | No information available for the product |
| Germ Cell Mutagenicity | No information available for the product |
| Tumorigenic Data | No information available for the product |
| Reproductive Toxicity | No information available for the product |
| Specific Target Organ Toxicity – Single Exposure | No information available for the product |
| Specific Target Organ Toxicity – Repeated Exposure | No information available for the product |
| Aspiration Hazard | No information available for the product |

Section 12: Ecological Information

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|--------------------------------------|---|
| Ecotoxicity | No information is available for the product |
| Persistence and Degradability | No information is available for the product |
| Bioaccumulative Potential | No information is available for the product |
| Mobility in Soil | No information is available for the product |

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Section 13: Disposal Considerations

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| Disposal Instructions | Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. Avoid release into the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways. |
| Hazardous Waste Code | The waste code should be assigned in discussion between the user, the producer, and the waste disposal company |
| Waste from Residues/Unused Products | Dispose in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see Disposal Instructions) |
| Contaminated Packaging | Empty containers may contain residue which may exhibit hazards of material. Continue to observe all precautions. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. |

Section 14: Transport Information

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|---|----------------------------------|
| DOT | Not regulated as dangerous goods |
| TDG | 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 | No data available |

This product is considered as dangerous goods – IATA, IMO and ADR

Special precautions for user

- Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of accident or spillage.

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

Section 15: Regulatory Information

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

The following listing of regulations may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.

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| Clean Air Act (CAA) – 1990 Hazardous Air Pollutants | Not Listed |
| 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 304 – Hazardous Substances and their Reportable Quantities | Not Listed |
| SARA 313 -TRI Reporting | Not Listed |

United States

Labor

- U.S. - OSHA - Specifically Regulated Chemicals**
- Vacuum Gas Oil and components (unless indicated below) Not Listed

Environment

- U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**
- Vacuum Gas Oil and components (unless indicated below) Not Listed

- U.S. - CWA (Clean Waer Act) - Toxic Pollutants**
- Vacuum Gas Oil and components (unless indicated below) Not Listed

- U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**
- Vacuum Gas Oil and components (unless indicated below) Not Listed

- U.S. - CERCLA/SARA - Section 313 - Emission Reporting**
- Vacuum Gas Oil and components (unless indicated below) Not Listed

United States - California

Environment

- U.S. - California - Proposition 65 - Carcinogens List**
- Vacuum Gas Oil and components (unless indicated below) Not Listed

NOTE: This product may contain detectable amounts of benzo(k)fluoranthene CAS 207-08-9, benzo(a)pyrene CAS 50-32-8, benzo(b)fluoranthene CAS 205-99-2, chrysene CAS 218-01-9, dibenz(a,h)anthracene CAS 53-70-3, indeno(1,2,3-cd)pyrene CAS 193-39-5, all of which are listed on the Proposition 65 Carcinogens list.

- U.S. - California - Proposition 65 - Developmental Toxicity**
- Vacuum Gas Oil and components (unless indicated below) Not Listed
- Toluene 108-88-3 Listed

- U.S. - California - Proposition 65 - Reproductive Toxicity - Female**
- Vacuum Gas Oil and components (unless indicated below) Not Listed

- U.S. - California - Proposition 65 - Reproductive Toxicity - Male**
- Vacuum Gas Oil and components (unless indicated below) Not Listed

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Section 16: Other Information

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| NFPA Ratings | Health: 2 Fire: 2 Instability: 0 Hazard Scale: 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe |
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| Revision Date | - |
| Version # | 01 |

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| Key to Abbreviations | DOT – Department of Transportation TDG – Transportation of Dangerous Goods IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods MARPOL 73/78 = International Convention for the Prevention of Pollution from Ships, 1973 as modified by the protocol of 1978 (MARPOL = Marine Pollution) |
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| Disclaimer/Statement of Liability | <p>The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However, this SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.</p> |
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