SAFETY DATA SHEET

Version 2.0
Revision Date: 03/01/2019

1. IDENTIFICATION

Product Identifiers

Product Name: D-E Black®
Product Number: Varies
Trade Name: Recovered Carbon Black
General Use: Reinforcement, Filler and/or Pigment
Chemical Family: Carbon Black, Mineral Based

Relevant Identified Uses
Identified Uses: As a Base Ingredient for Further Processing or Manufacturing

Supplier Details
Company: Delta-Energy Group, LLC
61 A Carthage Point Rd.
Natchez, MS 30120
Phone: (769) 355-2288

Emergency Telephone Number
Emergency Phone#: (769) 355-2288; Office Hours, 8AM-5PM US Central Standard Time

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Component Classified – None

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) – Not Classified

GHS Label elements, including precautionary statements

Pictogram	Not applicable
Signal word	No signal word
Hazard statement(s)	Not applicable
Precautionary statement(s)	Not applicable

Hazards not otherwise classified (HNOC) or not covered by GHS – none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Other Means of Identification: Phoenix Black®, Zephyr Black® and rCB

Ingredients

Chemical Name, Empirical Formula	CAS Number	EINECS Number	Percentage (Wt %)
Carbon Black (Mineral Based)	1333-86-4	215-609-9	78% - 84%
Silicon Dioxide, SiO2 (Non-Respirable)	14808-60-7	238-878-4	0.3% - 0.7%
Silicon Dioxide, SiO2 (Amorphous)	7631-86-9	231-545-4	1% - 2%
Zinc Sulfide	1314-98-3	215-251-3	3% - 7%
Poly(Ethylene Terephthalate)	25038-59-9	924-655-5	3% - 5%
Water (H2O)	7732-18-5	231-791-2	0.5% - 1.5%
Inert Metal Oxides	Varies	----	0.5% - 1.5%
Naturally Occurring Inert Minerals	Varies	----	3% - 4%

Hazardous Components
Per XRC(M) analysis, which combines the analytical capabilities of X-Ray Diffraction, Computer Controlled Scanning Electron Microscopy/Energy Dispersive Spectroscopy, Raman Spectroscopy and Inductively Coupled Plasma to conduct particle-by-particle intrainstrumental physicochemical/mineralogical analysis – any naturally occurring Respirable Crystalline Silica (RCS) that may exist in this product is inextricably bound, environmentally unavailable and at de minimis concentration. Thus, in its current and anticipated future physical state, the product is incapable of causing toxicologically relevant RCS exposure under either normal conditions of use or in case of extreme upset.

Additional Information
Per the XRD Rietveld Method, used to determine mixture components and content, there are no additional ingredients present at significant levels within these products and based on the best available information, any trace level impurities that might exist are not at concentration levels capable of triggering detection or classification and hence, are not reportable within this section. Therefore, any and all trace level components have been excluded from reporting and classification as either a health or environmental hazard.

4. FIRST AID MEASURES

Description of Necessary First Aid Measures

Eye Contact: In case of eye contact, flush eyes with water. If necessary, seek medical attention.

Inhalation: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

Skin Contact: Use good hygiene practices including washing of skin with soap and water. If irritation occurs, seek medical attention.

Ingestion: Not an anticipated route of exposure. If a large amount is swallowed, get medical attention.

Most Important Symptoms/Effects, Acute and Delayed

Potential Acute Health Effects

Eye Contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin Contact	No known significant effects or critical hazards
Ingestion	No known significant effects or critical hazards

Over-Exposure Signs/Symptoms

Eye Contact	No known significant effects or critical hazards
Inhalation	Long term exposure to high airborne concentrations may result in inflammation of the small airways and asthma-like symptoms
Skin Contact	No known significant effects or critical hazards
Ingestion	No known significant effects or critical hazards

Indication of any Immediate Medical Attention and Special Treatment Needed
Treat symptomatically. Seek medical care if large quantities have been ingested or inhaled.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media
Use water fog, carbon dioxide, foam or dry chemical

Unsuitable Extinguishing Media
High pressure water can spread fire by floating airborne dust.

Special Hazards Arising from the Chemical
Carbon Black can burn with an almost invisible flame. Watch for smoldering and flare-ups for at least 48 hours.

Hazardous Thermal Decomposition Products
Combustion produces toxic gases.

Special Protective Actions for Firefighters
Wet Carbon Black is very slippery

Special Protective Equipment for Firefighters
Fire-fighters should wear protective equipment appropriate to the fire hazard which exists.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel
No special precautions are known.

For Emergency Responders
No special precautions are known.

Environmental Precautions
No special precautions are known.

Methods and Material for Containment and Cleaning Up
Handle wastes in accordance with local requirements.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Wear personal protective equipment in accordance with those recommendations provided in Section 8. Use good hygiene practices and wash hands and face before eating, drinking or conducting personal hygiene. Reduce contamination from clothing and protective equipment before entering eating areas.

Conditions for Safe Storage, Including any Incompatibilities
Store in accordance with local regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits (General Dusts):

OSHA (PEL): 15 mg/m3 (TWA, total particulates, not otherwise regulated)
5 mg.m3 (TWA, respirable particulates, not otherwise regulated)

ACGIH (TLV): 10 mg/m3 (TWA, inhalable particulates, not otherwise regulated)
3 mg/m3 (TWA, respirable particulates, not otherwise regulated)

Engineering Controls:
Observe occupational exposure limits and provide local ventilation as necessary to control dust inhalation.

Personal Protection:

Hygiene Measures: No specific recommendation made, but good hygiene practices are advised. Wash hands, forearms and face after handling products and prior to eating, smoking, and using the lavatory.

Eye/Face Protection: Wear eye protection where excessive eye contact may occur. Provide eyewash station.

Skin and Body Protection: Follow good Industrial Hygiene practices. Wash hands at the end of each work shift and before eating, smoking, and personal hygiene.

Respiratory Protection: No specific recommendations made, but respiratory protection must be used where general dust levels exceed occupational exposure limits. If desired, appropriate respiratory protection may be utilized in high dust conditions and affected work areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Granular or Pelletized
Color:	Black
Upper/Lower Flammability/Explosive Limits:	Not Determined / LEL 122 g/m3
Minimum Ignition Temperature (MIT):	>1094°F / >590°C (Dust Cloud, ASTM E149)
Minimum Ignition Temperature (MIT):	>608°F / >320°C (Dust Layer, ASTM B2001)
Minimum Ignition Energy (MIE):	>10 joules (Dust Cloud, ASTM E2019)
Kst Value:	77 bar/m3/sec (20L Sphere, ASTM E2121)
Maximum Absolute Explosion Pressure:	7.6 bar at an Initial Starting Pressure of 1 bar (VDI 2263) *(Higher Starting Pressures Will Yield Higher Explosion Pressures)*
Maximum Rate of Pressure Rise:	285 bar/sec (VDI 2263 and ASTM E1226-88)
Dust Class:	ST 1 (Minimal Explosion Hazard)
Flash point:	Not Applicable
Auto-ignition temperature:	>500°F / 260°C
Odor:	Odorless
Odor threshold:	Not Applicable
Vapor pressure:	Negligible @20 °F (Carbon Black)
Vapor density:	Not Applicable

VOC Content:	None, As Produced
Viscosity:	Not Applicable
pH:	8-9.5 (ASTM D1512)
Specific Gravity:	1.8-2.0 @ 60 °F
Melting/Freezing point:	Not Applicable
Solubility(ies)	Negligible (Insoluble in Water)
Initial boiling point and boiling range:	Not Applicable
Partition coefficient: n-octanol/water:	Not Applicable
Evaporation rate	Not Applicable
Decomposition temperature:	Not Applicable

10. STABILITY AND REACTIVITY

Reactivity
Stable under normal temperature conditions.

Chemical Stability
Stable under normal storage and handling conditions.

Possibility of Hazardous Reactions
None known under normal conditions of storage and use.

Conditions to Avoid *(e.g., static discharge, shock, or vibration)*
None known under normal conditions of storage and use.

Incompatible Materials
Avoid contact with oxidizing chemicals

Hazardous Decomposition Products
None known under normal conditions of storage and use.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects
These substances have shown no evidence of adverse health effects under normal conditions of use or in extreme upset environments.

Acute Toxicity: This product is not classified.

Irritation/Corrosion: This product is not classified.

Sensitization: This product is not classified.

Mutagenicity: This product is not classified.

Carcinogenicity: This product is not classified.

Reproductive Toxicity: This product is not classified.

Teratogenicity: This product is not classified.

Specific Target Organ Toxicity (Single Exposure): This product is not classified

Specific Target Organ Toxicity (Repeated Exposure): This product is not classified

Aspiration Hazard: This product is not classified.

Information on the Likely Routes of Exposure (Dermal Contact, Eye Contact, Inhalation, Ingestion)

Potential Acute Health Effects

Eye Contact: No known significant health effects or critical hazards.

Inhalation: No known significant health effects or critical hazards.

Skin Contact: No known significant health effects or critical hazards.

Ingestion: No known significant health effects or critical hazards.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics

Eye Contact: Particles in the eyes may cause irritation

Inhalation: Dust in high concentrations may irritate the respiratory system

Skin Contact: Powder may irritate skin

Ingestion: May cause discomfort if swallowed

Delayed and Immediate Effects and Also Chronic Effects from Short- and Long-Term Exposure

Short Term Exposure

Potential Immediate Effects: No known significant health effects or critical hazards.

Potential Delayed Effects: No known significant health effects or critical hazards.

Long Term Exposure

Potential Immediate Effects: No known significant effects or critical hazards.

Potential Delayed Effects: No known significant effects or critical hazards.

Potential Chronic Health Effects

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental Effects: No known significant effects or critical hazards.

Fertility Effects: No known significant effects or critical hazards.

Numerical Measures of Toxicity

Acute Toxicity Estimates:

Acute toxicity (Oral LD50): Not relevant
Acute toxicity (Dermal LD50): Not relevant
Acute toxicity (Inhalation LC50): Not relevant

Toxicity: No data available for this product.

Persistence and Degradability: No data available for this product.

Bioaccumulative Potential: No data available for this product.

Mobility in Soil (Soil/Water Partition Coefficient): No data available for this product.

Other Adverse Effects: None known

12. ECOLOGICAL INFORMATION

Ecotoxicity
Not regarded as dangerous for the environment.

Acute Fish Toxicity
Not considered toxic to fish.

Persistence and Degradability
These products are not readily biodegradable.

Bioaccumulative Potential
These products are not bioaccumulating.

Mobility in Soil
Not relevant, due to the form of the products.

Other Adverse Effects
None. These products represent a heat processed inert material that does not constitute any known health hazards and is generally non-combustible.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods
Dispose of waste and residues in accordance with local and national environmental requirements.

14. TRANSPORT INFORMATION

	DOT Classification	IMDG	IATA
UN Number	Not Regulated	Not Regulated	Not Regulated
UN Proper Shipping Name	--	--	--
Transport Hazard Class(es)	--	--	--
Packing Group	--	--	--
Environmental Hazards	No	No	No

AERG: Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

Special Precautions for User: Not applicable

Additional Information: Not applicable

15. REGULATORY INFORMATION

US Federal Regulations

TSCA 8(a) PAIR
Not determined

TSCA 8(a) CDR Exempt/Partial exemption
Not determined

United States Inventory (TSCA 8b)
All components are listed or exempted

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAP's)
Not listed

Clean Air Act Section 602 Class I Substances
Not listed

Clean Air Act Section 602 Class II Substances
Not listed

DEA List I Chemicals (Precursor Chemicals)
Not Listed

DEA List II Chemicals (Essential Chemicals)
Not Listed

SARA 302/304 - Composition/Information on Ingredients
No products were found

SARA 313/304 RQ
Not Applicable

SARA 311/312 - Classification
Not applicable

SARA 313
Not applicable. This product does not contain chemicals subject to SARA Title III Section 313 Reporting requirements.

State Regulations

California Proposition 65 Components

These products do not contain detectable chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm at levels above the "safe harbor" designation.

Other State Right to Know Components
No investigation of State and Local requirements was performed. For details on these regulatory requirements, contact the appropriate agencies within your region.

16. OTHER INFORMATION

Procedures Used to Drive Classification

Classification	Justification
Not Classified	Toxicology Library and Available Databases

Further Information

License granted to make unlimited paper copies for internal use only. The above information is believed to be correct as of the date of preparation and does not purport to be all inclusive or account for naturally occurring variation in the composition of raw ores. It therefore, represents no guarantee of the properties associated with these products.

The information in this document should be used only as a guide in applying the appropriate safety precautions and professional consultation is advised. Should naturally occurring variation cause significant change in product composition, this information will undergo revision as appropriate. Delta-Energy Group, LLC and its affiliates shall not be held liable for any damage resulting from the end user's handling or contact with these products.

Document History

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