Dicalite Management Group, Inc.

SAFETY DATA SHEET

Version 2.4
Revision Date: 5/12/2020

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifiers

Product Name:	Dicalite Flux-Calcined Diatomaceous Earth (DE)
Product Number:	(All Flux-Calcined Products) Dicalite 341, Speedplus, 375, Speedex, 2500, SwimPool, 4200, 4500, 4500C, 5000, 6000, 7000, WB-6, and WB-6A
Trade Name:	Flux-Calcined Diatomaceous Earth (Dicalite)
General Use:	Processing Aid/Filter Aid/ Industrial Filler
Chemical Family:	Diatomaceous Earth

Relevant Identified Uses

Identified Uses:	Chemically inert filter aid and filler used in a variety of food and beverage, industrial, chemical, and specialty filtration, filler, and functional additive applications.

Supplier Details

Company:	Dicalite Management Group, Inc. 1 Belmont Ave, Suite 500 Bala Cynwyd, PA 19004
Telephone:	(610) 660-8840

Emergency Telephone Number

Emergency Phone #:	(866) 728-3303; Regular Business Hours (8AM – 5PM)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Ingredient(s) Classified – Respirable Crystalline Silica (Cristobalite)

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Carcinogenic – Category 1A
Specific Target Organ Toxicity – Repeated Exposure, Inhalation (Category 2)

GHS Label elements, including precautionary statements

Pictogram:

Signal Word: Danger

Hazard Statement(s):

H350	May cause cancer
H373	May cause damage to organs through prolonged or repeated exposure if inhaled

Precautionary statement(s):

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P260	Do not breathe dust / fume / gas / mist / vapors / spray
P281	Use personal protective equipment as required
P308 + P313	If exposed or concerned: Get medical advice / attention
P405	Store locked up
P501	Dispose of contents / container to an approved waste disposal plant

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances (Diatomaceous Earth)
Substance/Mixture: Mixture

Other Means of Identification: Flux-Calcined Diatomaceous Earth

Ingredients

Chemical Name, Empirical Formula	CAS Number	EINECS Number	Percentage (%)
Flux-Calcined Diatomaceous Earth (Amorphous Silica)	68855-54-9	272-489-0	20% - 40% WT
Silicon Dioxide (SiO_2, Non-Respirable)	14464-46-1	238-455-4	60% - 77% WT
Cristobalite (SiO_2, Respirable)	14464-46-1	238-455-4	0% - 3% WT
Quartz (SiO_2, Respirable)	14808-60-7	238-878-4	<0.1% WT

Hazardous Components
Finer grades of our Flux-Calcined Diatomaceous Earth products were found to contain Respirable Crystalline Silica - Cristobalite at levels above the HazCom 2012 and GHS Revision 3 hazard classification limit of 0.1% w/w. Additionally, this concentration varied in accordance with the level of particle agglomeration and permeability, ranging from a low of <0.01% w/w for highly course products to a maximum of 3% w/w in fine and medium course filtration products. The end user should be aware of this potential for inhalation exposure and utilize personal protective measures accordingly.

Additional Information
Per XRC analysis, which combines the analytical capabilities of X-Ray Diffraction, Computer Controlled Scanning Electron Microscopy/Energy Dispersive Spectroscopy and Raman Spectroscopy to conduct particle-by-particle inter-instrumental relocation and physicochemical/mineralogical analysis - naturally occurring levels of Respirable Crystalline Silica – Cristobalite (CAS #14464-46-1) were identified as described above while Respirable Crystalline Silica - Quartz (CAS #14808-60-7) was consistently shown to be inextricably bound, environmentally unavailable and at de minimis concentrations.

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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: If a large amount is swallowed, get medical attention

Most Important Symptoms/Effects, Acute and Delayed

Potential Acute Health Effects

Eye Contact	May cause abrasive irritation (tear formation and redness) if dust gets in the eyes.
Inhalation	Acute inhalation can cause dryness of the nasal passage, lung congestion, coughing and general throat irritation.
Skin Contact	No known significant effects or critical hazards
Ingestion	May cause irritation of the mouth, throat, and stomach.

Over-Exposure Signs/Symptoms

Eye Contact	No known significant effects or critical hazards
Inhalation	Prolonged inhalation of dust containing Respirable Crystalline Silica may cause lung disease, silicosis, and lung cancer.
Skin Contact	Although not absorbed by the skin, may cause dryness in prolonged exposure conditions.
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
Uncontaminated product is not flammable. Use fire extinguishing media appropriate for surrounding materials

Unsuitable Extinguishing Media
None Known

Special Hazards Arising from the Chemical
No specific fire or explosion hazard

Hazardous Thermal Decomposition Products
None Known

Special Protective Actions for Firefighters
No special measures are required

Special Protective Equipment for Firefighters
As appropriate, fire-fighters should wear protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel
Ensure adequate ventilation. Avoid dust formation and inhalation of dust.

For Emergency Responders
Emergency responders shall heed product warnings and protect as appropriate against dusts.

Environmental Precautions
Products are earthen materials. No special precautions are known.

Methods and Material for Containment and Cleaning Up Use appropriate vacuuming equipment for spilled material, or wet wipe/sweep. Avoid creating dusts. Place in appropriate container for disposal and dispose of wastes in accordance with local requirements.

7. HANDLING AND STORAGE

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

Conditions for Safe Storage, Including any Incompatibilities
Store in dry place to maintain package integrity and product quality. Store in accordance with local regulations and away from incompatible materials described in Section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

OSHA (PEL): 5 mg/m^3 (TWA, respirable particulates, not otherwise regulated)
0.050 mg/m^3 (TWA, respirable crystalline silica)

ACGIH (TLV): 3 mg/m^3 (TWA, respirable particulates, not otherwise regulated)
0.025 mg/m^3 (TWA, respirable crystalline silica)

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

Personal Protection:

Hygiene Measures: Avoid breathing dusts. Always follow good hygiene practices. Wash hands, forearms and face after handling products and prior to eating, smoking and using the lavatory. Dispose of contaminated clothing or launder before reuse.

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 also be utilized in high dust conditions and affected work areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Powder
Color:	White to Off-White
Upper/lower flammability/explosive limits:	Not Applicable
Odor:	Odorless
Odor threshold:	Not Applicable
Vapor pressure:	Not Applicable
Vapor density:	Not Applicable
VOC Content:	None, as produced
Viscosity:	Not Applicable
pH:	5-10 (Neutral-10% Solution in Water)
Specific Gravity:	2.2-2.4 (water=1)
Melting/Freezing point:	>1300 °C (>2372 °F) / None-Solid
Solubility(ies)	Negligible, but miscible
Initial boiling point and boiling range:	Not Applicable
Partition coefficient: n-octanol/water:	Not Applicable
Flash point:	Not Applicable
Auto-ignition temperature:	Not Applicable
Evaporation rate	Not Applicable
Decomposition temperature:	Not Available
Flammability (solid, gas):	Not Flammable (Inorganic Solid)

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)*
Avoid contact with hydrofluoric acid or concentrated caustic solutions.

Incompatible Materials
This substance is incompatible with hydrofluoric acid and concentrated caustic solutions. Products containing silica may react violently with hydrofluoric acid and concentrated caustic solutions.

Hazardous Decomposition Products
Hazardous decomposition products should not be produced under normal conditions of storage and use. In the presence of hydrofluoric acid, hazardous gases may form.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity: Repeated extreme high level airborne exposure conditions could result in lung damage.

Irritation/Corrosion: This product is not classified.

Sensitization: This product is not classified.

Mutagenicity: This product is not classified.

Carcinogenicity: See information located below in this Header.

Reproductive Toxicity: This product is not classified.

Teratogenicity: This product is not classified.

Specific Target Organ Toxicity (Single Exposure): No Known Significant Effects or Critical Hazards associated with single exposure events.

Specific Target Organ Toxicity (Repeated Exposure): See carcinogenicity information located below in this Header.

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: Dust contact with the eyes can lead to mechanical irritation.

Inhalation: Acute inhalation may cause dryness of nasal passages and lung congestion, coughing and general throat irritation. Repeated extreme high level airborne exposure conditions could result in lung damage.

Skin Contact: Prolonged or repeated contact may dry skin and cause irritation.

Ingestion: Ingestion of small quantities is not considered harmful, but may cause irritation.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics

Eye Contact: May cause slight irritation, watering and redness.

Inhalation: May be irritating to nose, throat and respiratory tract.

Skin Contact: May be irritating to skin.

Ingestion: May cause abdominal discomfort.

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

Short Term Exposure

Potential Delayed Effects: Upper respiratory and sensory irritant**.** Repeated extreme high level airborne exposure conditions could result in lung damage.

Potential Immediate Effects: Upper respiratory and sensory irritant**.**

Long Term Exposure

Potential Delayed Effects: Product contains crystalline silica which has been shown to cause lung disease (silicosis) and cancer if inhaled at high levels for prolonged periods.

Potential Immediate Effects: Upper respiratory and sensory irritant**.**

Potential Chronic Health Effects

General: Product contains crystalline silica which has been shown to cause lung disease (silicosis) and cancer if inhaled at high levels for prolonged periods.

Carcinogenicity: Fine and medium grades of these Flux-Calcined Diatomaceous Earth products may contain Respirable Crystalline Silica which has been classified by IARC and NTP as a known human carcinogen. Crystalline silica is only known to cause cancer when inhaled in the respirable fraction and is not known to cause cancer via any other route of exposure.

Mutagenicity: This product is not classified.

Teratogenicity: This product is not classified.

Developmental Effects: This product is not classified.

Fertility Effects: This product is not classified.

Numerical Measures of Toxicity

Acute Toxicity Estimates: Crystalline Silica: Inhalation Rate LD50 > 22,500 mg/kg

Toxicity: Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.

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: No Known Significant Effects or Critical Hazards.

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. Flux-Calcined Diatomaceous Earth products represent an inorganic, inert material that does not constitute any known health hazard and is non-combustible.

13. DISPOSAL CONSIDERATIONS Waste Treatment Methods

Dispose of waste and residues in accordance with Federal, State and local authority requirements. These products are not considered a hazardous waste under RCRA (40 CFR Part 261).

14. TRANSPORT INFORMATION

	DOT Classification	IMDG	IATA
UN Number	Not Regulated	Not Regulated	Not Regulated
UN Proper Shipping Name	--	--	--
DOT Shipping Name	Diatomaceous Earth	Diatomaceous Earth	Diatomaceous Earth
Transport Hazard Class(s)	--	--	--
Packing Group	--	--	--
Environmental Hazards	No	No	No
Additional Information	--	--	--

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: Non-bulk packages of this product are not regulated as hazardous materials unless transported by inland waterway. This product is not regulated as a hazardous material when transported in sizes of ≤5 L or ≤5 kg, provided the packaging meets general provisions of DOT §§ 173.24 and 173.24a; IMDG 4.1.1.1, 4.1.1.2 and 4.1.1. 4 to 4.1.1.8.; and IATA 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

15. REGULATORY INFORMATION

US Federal Regulations

Declaration of DSL Status
Dicalite Minerals LLC hereby certifies that Flux-Calcined grades of Kieselguhr (Diatomaceous Earth) are listed on the Domestic Substances List (DSL) found on the Canada's Managing Substances in the Environment website.
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 Right-To-Know Regulations

California Proposition 65 Components

WARNING: This product can expose you to Crystalline Silica (airborne, unbound particles of respirable size) which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Other State Right-To-Know Components
Because of rapidly changing regulatory environments, no investigation of other 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
Carcinogenic - Category 1A Specific Target Organ Toxicity - Repeated Exposure, Inhalation (Category 2)	Materials Characterization, Toxicology Library and 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. Dicalite Management Group, Inc. 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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