

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, FA140, WB-6, and WB-6D

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, LLC
1001 Conshohocken State Road, Ste. 1-500
West Conshohocken, PA 19428

Telephone: 866-728-3303

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

Appearance: White

Physical State: Powder

Odor: Odorless

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

P402 + P404 Store in a dry place. Store in a closed container.

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

Synonyms: (All Flux-Calcined Products) Dicalite 341, Speedplus, 375, Speedex, 2500, SwimPool, 4200, 4500, 4500C, 5000, 6000, 7000, FA140, WB-6, and WB-6D, diatomite, kieselguhr, siliceous earth, fossil meal

Substances: Diatomaceous Earth

Substance/Mixture: Mixture

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 2024 and GHS Revision 7 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 coarse products to a maximum of 3% w/w in fine and medium coarse 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.

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, firefighters 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 waste in accordance with local requirements.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Use only in area provided with appropriate exhaust ventilation. Do not breathe dust. Do not use compressed air for clean-up. Wear personal protective equipment. Avoid dust formation.

Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Incompatible Products

Hydrofluoric Acid

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

OSHA (PEL):	50 µg/m ³ (TWA, respirable crystalline silica)
	15 mg/m ³ (TWA, total particulates, not otherwise regulated)
ACGIH (TLV):	25 µg/m ³ (TWA, respirable crystalline silica, quartz and cristobalite)
	10 mg/m ³ (TWA, inhalable 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. Launder contaminated clothing before reuse.
Eye/Face Protection:	Wear eye protection where there is danger of eye contact. Provide eyewash stations to carefully rinse product from eyes should contact be made.
Skin and Body protection:	No specific protection noted, but gloves and coveralls may be used wherever processes create significant levels of skin contact. Wash hands at the end of each work shift and before eating, smoking and personal hygiene.
Respiratory Protection:	No specific recommendation made, but appropriate respiratory protection must be used where general dust levels exceed occupational exposure limits. If needed to prevent irritation, wear appropriate protection 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:	0% of the mixture consists of ingredient(s) of unknown toxicity
Sensitization:	No information available.
Mutagenicity:	No information available.
Carcinogenicity:	See table below.
Reproductive Toxicity:	No information available.
Specific Target Organ Toxicity (Single Exposure):	No information available.
Specific Target Organ Toxicity (Repeated Exposure):	Causes damage to lungs through prolonged or repeated exposure if inhaled.
Chronic Toxicity:	Inhalation exposure to respirable levels of crystalline silica may cause respiratory impairment and lung damage.
Target Organ Effects:	Lungs.
Aspiration Hazard:	No information available.
The following values are calculated based on chapter 3.1 of the GHS document:	
LD50 Oral:	10000 mg/kg; Acute toxicity estimate

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

Eye Contact:	Dust contact with the eyes can lead to mechanical irritation.
Inhalation:	May cause irritation of respiratory tract. Inhalation overexposure to respirable crystalline silica may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease. Inhalation exposure to respirable levels of crystalline silica may cause respiratory impairment and lung damage.
Skin Contact:	Prolonged or repeated contact may dry skin and cause irritation.
Ingestion:	May cause irritation.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics

Symptoms:	No information available.
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Delayed and Immediate Effects - Chronic Effects from Short- and Long-Term Exposure

Carcinogenicity:	The table below indicates whether each agency has listed any ingredient as a carcinogen.
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Chemical Name	ACGIH	ACGIH	NTP	OSHA
Silica, Cristobalite	A2	Group 1		X
Quartz (SiO ₂ , Respirable)	A2	Group 1	Known	X

ACGIH: (American Conference of Governmental Industrial Hygienists) A2 - Suspected Human Carcinogen

IARC: (International Agency for Research on Cancer) Group 1 - Carcinogenic to Humans

NTP: (National Toxicity Program) Known - Known Carcinogen

OSHA: (Occupational Safety & Health Administration) X - Present

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.
Bio-accumulative 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 ecological hazard and is non-combustible.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging: Do not re-use empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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

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.

Canada

Canada Domestic Substances List	Listed
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U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Silica, Cristobalite	X	X	X		
Quartz	X	X	X	--	X

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 Determine Classification

Classification	Justification
Carcinogenic - Category 1A Specific Target Organ Toxicity - Repeated Exposure, Inhalation (Category 2)	Materials Characterization, Toxicology Library and Databases

Further Information

License is 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, 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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General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.