SAFETY DATA SHEET

Revision date 16-Nov-2023 **Revision Number** 2

1. Identification

Product identifier

Product Name Celite 545 (LOM)

Other means of identification

Synonyms • Flux Calcined Diatomaceous Earth

Recommended use of the chemical and restrictions on use

Recommended use Functional filler or filter aid in a variety of applications.

Restrictions on use Food ingredient.

Details of the supplier of the safety data sheet

Supplier Address
Imerys Filtration Minerals, Inc.
100 Mansell Court East, Ste 300
Roswell, GA 30076 USA
+1-770-645-3300

Manufacturer Address
Imerys Filtration Minerals, Inc.
2500 San Miguelito Road
Lompoc, CA 93436
+1-805-735-7791

Emergency telephone number

Company Phone Number +1-770-645-3300

Emergency Telephone CHEMTREC: +1-800-424-9300
CHEMTREC International Number: +1 703-741-5970

2. Hazard(s) identification

Classification

Specific target organ toxicity (repeated exposure)	Category 1

Appearance Powder **Physical state** Solid **Odor** Odorless

Label elements

Danger

Hazard statements
Causes damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention
Do not breathe dusts or mists
Do not eat, drink or smoke when using this product
In case of inadequate ventilation wear respiratory protection
Precautionary Statements - Response
Get medical advice/attention if you feel unwell

Precautionary Statements - Storage
Store in a dry place. Store in a closed container
Store in a well-ventilated place
Precautionary Statements - Disposal
Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

Other information
Repeated and prolonged exposure to large amounts of dust can cause lung injury (pneumoconiosis). Long term exposure to crystalline silica can cause lung injury (silicosis). IARC and NTP have determined that crystalline silica inhaled from occupational sources can cause cancer in humans. Risk of injury is dependent on the duration and level of exposure.

3. Composition/information on ingredients

Substance

Synonyms Flux Calcined Diatomaceous Earth.

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Flux Calcined Diatomaceous Earth***	68855-54-9	100	-	-
Cristobalite	14464-46-1	<50	-	-
Quartz	14808-60-7	<4	-	-

Composition Comments The cristobalite and/or quartz (crystalline silica) are constituents of the product and not intentionally added during manufacturing.
A proportion of the quartz & cristobalite may become available in the respirable fraction. The level of exposure to Respirable Crystalline Silica will depend on the actions performed on the product during handling and use. Exposure levels should, therefore, be measured during use, in comparison to relevant occupational exposure limits, as exposure cannot be determined from bulk product analysis.

4. First-aid measures

Description of first aid measures

General advice No acute or delayed symptoms are expected under normal conditions of use and with proper personal protective equipment (PPE). Do not breathe dust. Get medical attention if irritation or other symptoms occur.

Inhalation Move victim to fresh air.

Eye contact Rinse eyes. Keep eye wide open while rinsing.

Skin contact Wash with soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion Not an expected route of exposure. Clean mouth with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms No acute or delayed symptoms are expected under normal conditions of use and with proper personal protective equipment (PPE).

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical No information available.

Hazardous combustion products None.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid generation of dust. Do not breathe dust. If respirator is required, use of a MSHA/OSHA/NIOSH/STPS approved respirator is recommended. Spilled materials may cause slippery conditions when wet. Care should be exercised when walking on spills on floors or concrete pads.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation. Vacuum, pump or scoop spilled material into containers for reclaiming or disposal. Do not discharge into drains, watercourses or onto the ground.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Avoid generation of dust. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Control parameters
Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Flux Calcined Diatomaceous Earth*** 68855-54-9	**	* TWA: 15 mg/m³ (total); 5 mg/m³ (respirable)	-
Cristobalite 14464-46-1	TWA: 0.025 mg/m³ respirable particulate matter	TWA: 50 µg/m³ (vacated) TWA: 0.05 mg/m³ respirable dust : (1/2)(250)/(%SiO2 + 5) mppcf TWA respirable fraction : (1/2)(10)/(%SiO2 + 2) mg/m³ TWA respirable fraction	IDLH: 25 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust
Quartz 14808-60-7	TWA: 0.025 mg/m³ respirable particulate matter	TWA: 50 µg/m³ (vacated) TWA: 0.1 mg/m³ respirable dust : (250)/(%SiO2 + 5) mppcf TWA respirable fraction : (10)/(%SiO2 + 2) mg/m³ TWA respirable fraction	IDLH: 50 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust

Chemical name	Alberta	British Columbia	Ontario	Quebec
Cristobalite 14464-46-1	TWA: 0.025 mg/m³	TWA: 0.025 mg/m³	TWA: 0.05 mg/m³	TWA: 0.05 mg/m³
Quartz 14808-60-7	TWA: 0.025 mg/m³	TWA: 0.025 mg/m³	TWA: 0.10 mg/m³	TWA: 0.1 mg/m³

Other information * Inert dusts, nuisance dust, PNOR (Particulates not otherwise regulated). 29 CFR 1900.1000, table Z-3 Mineral Dusts and table Z-1 Limits for Air Contaminants.
** No TLV established. It is recommended that airborne concentrations be kept below 3 mg/m³ (respirable particles) and 10 mg/m³ (inhalable particles) for insoluble particles of low toxicity for which no TLV has been established. See Appendix B of the TLV booklet for guidelines.

Appropriate engineering controls

Engineering controls Minimize airborne dust generation. Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. Use proper respiratory and personal protective equipment. MSHA/OSHA/NIOSH/STPS approved respirator recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection	Wear suitable gloves. Appropriate protection (e.g. gloves, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Environmental exposure controls	Avoid creating dust. Do not allow into any sewer, on the ground or into any body of water.
General hygiene considerations	Do not breathe dust. Wash hands before breaks and immediately after handling the product. Barrier creams may help to protect the exposed areas of skin. Do not eat, drink or smoke when using this product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid
Appearance	Powder
Color	White/off-white
Odor	Odorless
Odor threshold	Not applicable

Property	**Values**	**Remarks • Method**
pH	6 - 10	10% slurry in water
Melting point / freezing point	> 1300 °C / 2372 °F	
Initial boiling point and boiling range	> 2230 °C / 4046 °F	
Flash point	No data available	Not applicable
Evaporation rate	No data available	Not applicable
Flammability	No data available	Not flammable
Flammability Limit in Air		Non-explosive
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	Not applicable
Relative vapor density	No data available	
Relative density	2.3	g/cm^3
Water solubility	Insoluble in water	
Solubility in other solvents	No data available	
Partition coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature		
Kinematic viscosity	No data available	
Dynamic viscosity	No data available	

Other information

Explosive properties	No explosive properties predicted from the structure.
Oxidizing properties	No oxidizing properties predicted from the structure.
Softening point	No information available
Molecular weight	No information available
VOC content	Not applicable
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity Stable.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization None under normal processing.

Conditions to avoid Avoid contact with hydrofluoric acid (HF).

Incompatible materials Hydrofluoric acid.

Hazardous decomposition products None under normal use conditions.
Silicon tetrafluoride (SiF_4) will form upon contact with hydrofluoric acid.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Dust in high concentrations may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing pneumoconiosis.

Long term exposure to crystalline silica can cause lung injury (silicosis). IARC and NTP have determined that crystalline silica inhaled from occupational sources can cause cancer in humans. Risk of injury is dependent on the duration and level of exposure.

The level of exposure to respirable crystalline silica will depend on the actions performed on the product during handling and use. Exposure levels should, therefore, be measured during use, in comparison to relevant occupational exposure limits, as exposure cannot be determined from bulk product analysis.

Eye contact May cause irritation.

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

Ingestion May cause irritation. Not an expected route of exposure.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Unknown.

Acute toxicity

Numerical measures of toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Flux Calcined Diatomaceous Earth*** 68855-54-9	-	-	> 2.6 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Prolonged contact may cause dryness of the skin.

Serious eye damage/eye irritation Particles in the eyes may cause irritation and smarting.

Respiratory or skin sensitization Repeated or prolonged contact may cause allergic reactions in very susceptible persons. Dust in high concentrations may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing pneumoconiosis.

Germ cell mutagenicity None known.

Carcinogenicity See section 2 for classified hazards based on component information.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Flux Calcined Diatomaceous Earth*** 68855-54-9	-	Group 3	-	-
Cristobalite 14464-46-1	A2	Group 1	Known	X
Quartz 14808-60-7	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Not classified.

STOT - single exposure Not classified.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure if inhaled.

Target organ effects Lungs.

Aspiration hazard Not classified.

12. Ecological information

Ecotoxicity The product components are not classified as environmentally hazardous. Large or frequent spills may have hazardous effects on the environment.

Persistence and degradability Not readily biodegradable.

Bioaccumulation None known.

Mobility in soil Not expected to adsorb on soil.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of contents/ container to an approved landfill. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO (air) Not regulated

IATA Not regulated

IMDG Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

15. Regulatory information

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

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA Complies.

Chemical name	CAS No.	US TSCA Inventory listing	US TSCA inactive/active designation
Flux Calcined Diatomaceous Earth***	68855-54-9	Present	Active
Cristobalite	14464-46-1	Present	Active
Quartz	14808-60-7	Present	Active

DSL/NDSL Listed on DSL. Not listed on NDSL.
EINECS/ELINCS Listed on EINECS.
ENCS Listed.
IECSC Listed.
KECL Listed.
PICCS Listed.
AIIC Listed.
NZIoC Listed.
TSCI Listed.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

WARNING
This product can expose you to chemicals including crystalline silica, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.***

Chemical name	California Proposition 65
Cristobalite - 14464-46-1	Carcinogen
Quartz - 14808-60-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Minnesota	Pennsylvania	Rhode Island
Flux Calcined Diatomaceous Earth*** 68855-54-9	-	-	-	X	-
Cristobalite 14464-46-1	X	X	X	X	-
Quartz 14808-60-7	X	X	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 1	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 1	**Flammability** 0	**Physical hazards** 0	**Personal protection** E

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 16-Nov-2023

Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet