SAFETY DATA SHEET

Flux calcined diatomaceous earth - filter aid - Alicante

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	Flux calcined diatomaceous earth - filter aid - Alicante
Substance Name	Diatomaceous earth (flux calcined)
Synonyms; trade names	Celite® 305, Celite® 322, Celite® 503, Celite® 535, Celite® 535I, Celite® 545, Celite® 545V, Celite® 545VO, Celite® 560, Hyflo SuperCel™, Kenite® 5500, Primisil® 502, Primisil® 602, Primisil® 802, Primisil® 1202, Swimming Pool Grade
EU REACH registration number	01-2119488518-22-0005
CAS number	68855-54-9
EC number	272-489-0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	A filter aid
Uses advised against	None

1.3. Details of the supplier of the safety data sheet

Supplier	Imerys Minerals Ltd Imerys Technology Centre UK Par Moor Road Par, Cornwall England PL24 2SQ Tel. +44(0)1726 818000 Fax. +44(0)1726 811200 SDS.expert@imerys.com
Contact person	Please approach your usual Imerys contact in the first instance.
Manufacturer	Imerys Diatomita Alicante Apartdo de Correos No. 46 Carretera de Elche Km 6 ES - 03080 Alicante Spain Tel. +34 (96) 528 4033 Fax. +34 (96) 528 4069 SDS.expert@imerys.com

1.4. Emergency telephone number

Emergency telephone	CHEMTREC + 1 703 527 3887

SECTION 2: Hazards identification

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2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified

Human health	This product does not meet the criteria for classification as hazardous as defined in the Regulation EC 1272/2008. Depending on the type of handling and use (e.g. grinding, drying), airborne respirable crystalline silica may be generated. Prolonged and/or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable crystalline silica dust should be monitored and controlled.
Environmental	The product is not expected to be hazardous to the environment.
Physicochemical	This product is an inorganic substance and does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH. This product should be handled with care to avoid dust generation.

2.2. Label elements

EC number	272-489-0
Hazard statements	NC Not Classified

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current UK criteria.

Endocrine disrupting properties	Available data for the substance have been considered against the criteria laid down in Regulations ((EC) No 1907/2006, (EU) 2017/2100, (EU) 2018/605) and found not to apply.

SECTION 3: Composition/information on ingredients

3.1. Substances

Diatomaceous Earth, Flux Calcined	**100%**
CAS number: 68855-54-9	EC number: 272-489-0
Classification Not Classified	

The full text for all hazard statements is displayed in Section 16.

Product name	Flux calcined diatomaceous earth - filter aid - Alicante
EU REACH registration number	01-2119488518-22-0005
CAS number	68855-54-9
EC number	272-489-0
Ingredient notes	This is a UVCB substance. This product does not contain any SVHC substances at levels greater than 0.1 % by weight.
Composition comments	This product contains less than 1% crystalline silica (fine fraction) consisting of cristobalite (fine fraction) and quartz (fine fraction). Quartz:CAS-No.:14808-60-7 EC No.: 238-878-4. Cristobalite: CAS-No.: 14464-46-1 EC No.: 238-455-4. The classification of the product is shown in section 2 of this safety data sheet.

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information No acute and delayed symptoms and effects are observed.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Ingestion Rinse mouth thoroughly with water. Get medical attention if any discomfort continues. Do not induce vomiting.

Skin contact Wash skin thoroughly with soap and water. Use suitable lotion to moisturise skin.

Eye contact Do not rub eye. Rinse with copious quantities of water and seek medical attention if irritation persists.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation Breathing dust containing crystalline silica over a prolonged period of time may cause lung damage. Crystalline silica is a known cause of silicosis, a progressive, sometimes fatal lung disease.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media This product is non-combustible. No specific extinguishing media is needed. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media No restriction on the extinguishing media to be used.

5.2. Special hazards arising from the substance or mixture

Specific hazards Non combustible. No hazardous thermal decomposition.

5.3. Advice for firefighters

Protective actions during firefighting No specific fire-fighting protection is required. Use an extinguishing agent suitable for the surrounding fire. Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid airborne dust generation, wear personal protective equipment in compliance with national legislation. Provide adequate ventilation. Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Avoid spreading dust or contaminated materials.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation. Wear personal protective equipment in compliance with national legislation. Collect and place in suitable waste disposal containers and seal securely. Do not handle broken packages without protective equipment.

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Precautionary measures to prevent the occurrence of secondary hazards Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid airborne dust generation. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. Handle packaged products carefully to prevent accidental bursting. If you require advice on safe handling techniques, please contact your supplier. Do not eat, drink and smoke in work areas; wash hands after use; remove contaminated clothing and protective equipment before entering eating areas. Product on floor when wetted will become slippery and may present a hazard; wear anti-slip boots. For personal protection, see Section 8.

Advice on general occupational hygiene Keep dust levels to a minimum. Minimize dust generation. General occupational hygiene measures are required. These include good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices). Shower and change clothes at end of work shift. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in a dry covered area. Minimise airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store packaged products so as to prevent accidental bursting.

7.3. Specific end use(s)

Usage description If you require advice on specific uses, please contact your supplier.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

A European Binding OEL (Occupational Exposure Limit) for respirable crystalline silica dust is set at 0.1 mg/m³ in the Directive (EU) 2017/2398, measured as an 8-hour TWA (Time Weighted Average).

Cristobalite

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m³ respirable dust

Inorganic dust

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust
Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

Quartz

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m³ respirable dust
WEL = Workplace Exposure Limit.

Ingredient comments Maintain personal exposure below occupational exposure limits for dust (inhalable and respirable) as dictated in the national legislation.

Biological limit values None.

DNEL Workers - Inhalation; Long term systemic effects: 0.05 mg/m³, AF=1
General population - Inhalation; Long term systemic effects: 0.05 mg/m³, AF=1
General population - Oral; Long term systemic effects: 18.7 mg/kg bw/day, AF=200, NOAEL

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PNEC	Fresh water; n/a Fish Daphnia >100% v/v saturated solution Exceeds maximum solubility of substance STP; 100 mg/l STP NOAEL AF = 100 Sediment; n/a Inert, not reactive. Soil; n/a Inert, not reactive.

8.2. Exposure controls

Appropriate engineering controls	Minimise airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing. .
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield. Contact lenses should not be worn when working with this product.
Hand protection	Appropriate protection (e.g. gloves, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session. It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). Neoprene. Rubber (natural, latex).
Other skin and body protection	For skin, normal work clothes are appropriate.
Hygiene measures	When using do not eat, drink or smoke. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Use appropriate skin cream to prevent drying of skin.
Respiratory protection	Local ventilation to control airborne dust levels below occupational exposure limits is recommended. In case of exposure, where engineering controls are insufficient, the use of Respiratory Protective Equipment (RPE) is recommended. A risk assessment process must be followed to ensure adequate protection from the airborne dust. The type of RPE must suit the work situation and the specific requirements of the wearer. Other environmental conditions should also be considered. The minimum “Assigned Protection Factor” (APF) required will depend on the measured or predicted occupational exposure levels divided by the OEL detailed in section 8.1. Filters specified as FFP2 and P2 have an APF of 10. Correctly fitted, these would reduce the exposure to the wearer down to one tenth of the working atmosphere. Depending on the assessment of the exposure, a lesser or higher efficiency of filter may be required. The manufacturer’s instructions and regulatory guidance regarding duration of use and correct fitting should be followed. The wearer of the selected RPE should receive training before use.
Environmental exposure controls	All ventilation systems should be filtered before discharge to atmosphere. Avoid wind dispersal. Contain the spillage.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Powder

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Colour	White/off-white.
Odour	Odourless.
Odour threshold	Not applicable.
pH	8-11 @ 10 % Slurry.
Melting point	1083°C
Initial boiling point and range	not applicable (Solid with a melting point > 450°C)
Flash point	not applicable (Solid with a melting point > 450°C)
Evaporation rate	not applicable (Solid with a melting point > 450°C)
Flammability (solid, gas)	Non flammable EU method A10 Read-across data: Kaolin
Upper/lower flammability or explosive limits	Non explosive (void of any chemical structures commonly associated with explosive properties)
Vapour pressure	not applicable (Solid with a melting point > 450°C)
Vapour density	not applicable (Solid with a melting point > 450°C)
Relative density	2.3 - 2.5
Solubility(ies)	Insoluble in water.
Partition coefficient	Not applicable (inorganic substance)
Auto-ignition temperature	Not auto flammable
Decomposition Temperature	Not applicable (Solid with a melting point > 450°C)
Viscosity	Not applicable (Solid with a melting point > 450°C)
Explosive properties	Non explosive (void of any chemical structures commonly associated with explosive properties)
Oxidising properties	Non explosive (void of any chemical structures commonly associated with explosive properties)

9.2. Other information

Other information	No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No hazardous reactions.

10.4. Conditions to avoid

Conditions to avoid	No particular incompatibility.

10.5. Incompatible materials

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Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} > 2000 mg/kg, Oral, Rat OECD 401

Acute toxicity - dermal

Notes (dermal LD_{50}) Not applicable.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) LC_{50} > 2.6 mg/l, Inhalation, Rat OECD 403

Skin corrosion/irritation

Skin corrosion/irritation Not irritating. Rabbit OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Not irritating. Rabbit OECD 405

Skin sensitisation

Skin sensitisation Not a skin sensitiser. Guinea pig OECD 429

Germ cell mutagenicity

Genotoxicity - in vitro Negative. OECD 471. OECD 473. OECD 476.

Carcinogenicity

Carcinogenicity Not applicable.

Reproductive toxicity

Summary Not applicable.

Specific target organ toxicity - single exposure

STOT - single exposure Not applicable.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not applicable.

Target organs Respiratory system, lungs

Aspiration hazard

Aspiration hazard Not applicable.

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Inhalation

No acute effects were seen in an animal study following acute inhalation exposure. A 90 day repeated dose inhalation study has been proposed. Calcined diatomaceous earth (Kieselgur) contains crystalline silica, which is a known cause of silicosis, a progressive, sometimes fatal lung disease. In a 1997 monograph (Volume 68, “Silica, Some Silicates, Coal Dust and Para-aramid Fibrils”), the International Agency for Research on cancer (IARC) has classified “inhaled crystalline silica from occupational sources” in Group 1 as a substance “carcinogenic to humans”. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Crystalline silica has also been classified by the German MAK Commission as a human carcinogen (Category A1). Dust in high concentrations may irritate the respiratory system.

Ingestion

No acute or long term effects were seen in animal studies following oral exposure.

Skin contact

No acute effects were seen in an animal study following acute dermal exposure. Kieselguhr soda ash flux calcined is not a skin irritant. Prolonged contact may cause dryness of the skin.

Eye contact

Kieselguhr soda ash flux calcined is not an eye irritant.

Acute and chronic health hazards

Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica. In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. “There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore preventing the onset of silicosis will also reduce the cancer risk…“ (SCOEL SUM Doc 94-final, June 2003). In 2009, in the Monographs 100 series, IARC confirmed its classification of Silica Dust, Crystalline, in the form of Quartz and Cristobalite (IARC Monographs, Volume 100C, 2012). So there is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis should be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required (see section 16 below).

Endocrine disrupting properties

Available data for the substance have been considered against the criteria laid down in Regulations ((EC) No 1907/2006, (EU) 2017/2100, (EU) 2018/605) and found not to apply.

Other information

None

SECTION 12: Ecological information

Ecotoxicity

The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish

LC_{50}, 96 hours: >100% v/v saturated solution, Oncorhynchus mykiss (Rainbow trout)
Exceeds maximum solubility of substance
OECD 203

Acute toxicity - aquatic invertebrates

EC_{50}, 48 hours: >100% v/v saturated solution, Daphnia magna
Exceeds maximum solubility of substance
OECD 202

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Acute toxicity - aquatic plants	EC_{50}, 72 hours: >100% v/v saturated solution, Desmodesmus subspicatus Exceeds maximum solubility of substance OECD 201
Acute toxicity - microorganisms	EC_{50}, 3 hours: > 1000 mg/l, Activated sludge Harmless to STP microorganisms OECD 209

12.2. Persistence and degradability

Persistence and degradability The product contains only inorganic substances which are not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not applicable (inorganic substance)

12.4. Mobility in soil

Mobility Not applicable. The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current UK criteria.

12.6. Other adverse effects

Other adverse effects Not known.

Endocrine disrupting properties Available data for the substance have been considered against the criteria laid down in Regulations ((EC) No 1907/2006, (EU) 2017/2100, (EU) 2018/605) and found not to apply.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of waste in accordance with local and national regulations. Dust formation from residues in packaging should be avoided and suitable worker protection assured. Store used packaging in enclosed receptacles. The re-use of packaging is not recommended. Recycling and disposal of packaging should be carried out by an authorised waste management company.

Disposal methods Dispose of waste in accordance with local and national regulations.

SECTION 14: Transport information

General No special precautions. The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

No information required.

14.4. Packing group

No information required.

14.5. Environmental hazards

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Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information required.

SECTION 15: Regulatory information

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

National regulations EH40/2005 Workplace exposure limits.
Health and Safety at Work etc. Act 1974 (as amended).
The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

AF = Assessment Factor
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
C & L = Classification and labelling
RCS = Respirable Crystalline Silica
DNEL= Derived No Effect Level
LC50 = Median Lethal Concentration
LD50 = Medial Lethal Dose
EC = European Commission
NOAEL = No Observed Adverse Effect Level
PBT = Persistent Bioaccumulative Toxic
PEC = Predicted Effect Level
PNEC = Predicted No Effect Level
SDS = Safety Data Sheet
STOT = Specific Target Organ Toxicity
STP = Sewage Treatment Plant
vPvB = Very Persistent Very Bioaccumulative
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General information	Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations. A multi-sectoral social dialogue agreement on Workers Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it was signed on 25 April 2006. This autonomous agreement, which receives the European Commission’s financial support, is based on a Good Practices Guide. The requirements of the Agreement came into force on 25 October 2006. The Agreement was published in the Official Journal of the European Union (2006/C 279/02). The text of the Agreement and its annexes, including the Good Practices Guide, are available from http://www.nepsi.eu and provide useful information and guidance for the handling of products containing crystalline silica (fine fraction). Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers. Health & Safety Executive: Detailed reviews of the scientific evidence on the health effects of crystalline silica have been published by HSE (Health and Safety Executive, UK) in the Hazard Assessment Documents EH75/4 (2002) and EH75/5 (2003). The HSE points out on its website that “Workers exposed to fine dust containing quartz are at risk of developing a chronic and possibly severely disabling lung disease known as "silicosis"." In addition to silicosis, there is now evidence that heavy and prolonged workplace exposure to dust containing crystalline silica can lead to an increased risk of lung cancer. The evidence suggests that an increased risk of lung cancer is likely to occur only in those workers who have developed silicosis. . The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. . Insofar as materials not manufactured or supplied by (the supplier)., are used in conjunction with, or instead of (the supplier), materials, it is the responsibility of the customer himself to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of (the supplier), Kieselguhr soda-ash flux calcined in conjunction with materials from another supplier. .
Key literature references and sources for data	"IDPA Guide for Safe Handling European version - final (low resolution)" https://www.nepsi.eu/sites/nepsi.eu/files/content/document/file/idpa_guide_for_safe_handling_european_version_-final_low_resolution.pdf
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Revision	4
SDS number	23738

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.