



# SIGMA-ALDRICH

## Material Safety Data Sheet

Date Printed: 08/11/2005  
Date Updated: 03/07/2004  
Version: 1.90

### Section 1 - Product and Company Information

**Product Name** Filter agent, Cellite® 521  
**Product Number** 221791  
**Brand** Aldrich Chemical

**Company** Sigma-Aldrich  
**Street Address** 3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 314 771 5765  
**Fax:** 800 325 5052

**Emergency Phone:** 414 273 3850 Ext. 5996

### Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
SILICA, AMORPHOUS, DIATOMACEOUS EARTH, CONTAINING >1% CRYSTALLINE SILICA	61790-53-2	No		

**Ingredient Name**  
Information regarding the specific chemical identity of this material is being withheld as a trade secret of the manufacturer.

**Formula**  
**Synonyms** Celite, Diatomaceous earth, natural, Kieselguhr, Silica, amorphous, diatomaceous earth, containing >1 % crystalline silica (OSHA), Silica, amorphous - diatomaceous earth (uncalcined) (ACGIH)

### Section 3 - Hazards Identification

**Emergency Overview**  
Toxic.  
May cause cancer. Irritating to eyes and skin.  
Calf. Prop. 65 carcinogen. Target organ(s): Lungs.

**HMS Rating**  
Health: 2+ Flammability: 0 Reactivity: 0

**NFPA Rating**  
Health: 2 Flammability: 0 Reactivity: 0

\*additional chronic hazards present.  
For additional information on toxicity, please refer to Section 11.

### Section 4 - First Aid Measures

**Oral Exposure**  
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**Inhalation Exposure**  
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

**Dermal Exposure**  
In case of contact, immediately wash skin with soap and copious amounts of water.

**Eye Exposure**  
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

### Section 5 - Fire Fighting Measures

**Autoignition Temp:** N/A

**Extinguishing Media**  
**Suitable**  
Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

**Firefighting**  
**Protective Equipment**  
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
**Specific Hazard(s)**  
Emits toxic fumes under fire conditions.

### Section 6 - Accidental Release Measures

**Procedure to be Followed in Case of Leak or Spill**  
Evacuate area.

**Procedure(s) of Personal Precaution(s)**  
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

**Methods for Cleaning Up**  
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

### Section 7 - Handling and Storage

**Handling**  
**User Exposure**  
Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

**Storage**  
**Suitable**  
Keep tightly closed.

### Section 8 - Exposure Controls / PPE

**Engineering Controls**  
Use only in a chemical fume hood. Safety shower and eye bath.

**Personal Protective Equipment**

**Respiratory**  
Government approved respirator in nonventilated areas and/or for exposure above the TLV or PEL.

**Hand**  
Compatible chemical-resistant gloves.

**Eye**  
Chemical safety goggles.

**General Hygiene Measures**  
Wash contaminated clothing before reuse. Wash thoroughly after handling.

Exposure Limits, RTECS		
Country	Source	Type
USA	ACGIH	TWA
USA	MSHA Standard-dust in air	TWA
USA	OSHA	PEL
New Zealand	OEL	
USA	Remarks: check ACGIH TLV	TWA
	NIOSH	
		6 MG/M3

**Section 9 - Physical/Chemical Properties**

Appearance	
Physical State	Solid
Molecular Weight:	N/A
pH	N/A
BP/MP Range	N/A
MP/MP Range	N/A
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
SG/Density	N/A
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point °F	N/A
Flash Point °C	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A

**Solubility**  
N/A  
N/A = not available

**Section 10 - Stability and Reactivity**

<b>Stability</b>
Stable
Stable.
Materials to Avoid
Strong acids, hydrogen fluoride.
<b>Hazardous Decomposition Products</b>
<b>Hazardous Decomposition Products</b>
Nature of decomposition products not known.
<b>Hazardous Polymerization</b>
<b>Hazardous Polymerization</b>
Will not occur.

**Section 11 - Toxicological Information**

<b>Route of Exposure</b>
<b>Skin Contact</b>
Causes skin irritation.
<b>Skin Absorption</b>
May be harmful if absorbed through the skin.
<b>Eye Contact</b>
Causes eye irritation.
<b>Inhalation</b>
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
<b>Ingestion</b>
May be harmful if swallowed.

**Target Organ(s) or System(s)**  
Lungs.

**Signs and Symptoms of Exposure**  
Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis characterized by fibrotic changes and primary nodules in the lungs; a dry cough, shortness of breath, emphysema, decreased chest expansion, and increased susceptibility to tuberculosis. In advanced stages, loss of appetite, pleuritic pain, and total incapacity to work. Advanced silicosis may result in death due to cardiac failure or destruction of lung tissue. Crystalline silica is classified as group 1 known to be carcinogenic to humans by IARC and "sufficient evidence" of carcinogenicity by the NTP.

**RTECS Number:** VV7311000

**Chronic Exposure - Carcinogen**  
Result: This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

**IARC Carcinogen List**  
Rating  
Group 3

**Section 12 - Ecological Information**

No data available.

### Section 13 - Disposal Considerations

**Appropriate Method of Disposal of Substance or Preparation**  
Contact a licensed professional waste disposal service to dispose of this material.  
Observe all federal, state, and local environmental regulations.

### Section 14 - Transport Information

#### DOT

**Proper Shipping Name:** None  
**Non-Hazardous for Transport:** This substance is considered to be non-hazardous for transport.

#### IATA

**Non-Hazardous for Air Transport:** Non-hazardous for air transport.

### Section 15 - Regulatory Information

#### EU Additional Classification

**Symbol of Danger:** T  
**Indication of Danger**

#### Toxic

**Risk Statements** R: 45 36/38  
May cause cancer. Irritating to eyes and skin.

**Safety Statements** S: 53 22 26 45

Avoid exposure - obtain special instructions before use. Do not breathe dust. In case of contact with eyes, nose immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### US Classification and Label Text

##### Indication of Danger

##### Toxic

**Risk Statements**  
May cause cancer. Irritating to eyes and skin.

##### Safety Statements

Avoid exposure - obtain special instructions before use. Do not breathe dust. In case of contact with eyes, nose immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

##### US Statements

Calif. Prop. 65 carcinogen. Target organ(s): Lungs.

#### United States Regulatory Information

**SARA Listed:** No

**TSCA Inventory Item:** Yes

#### United States - State Regulatory Information

**California Prop - 65**

This product is or contains chemical(s) known to the state of California to cause cancer.

#### Canada Regulatory Information

##### WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

**DSL:** No

**NDSL:** Yes

### Section 16 - Other Information

**Disclaimer**  
For R&D use only. Not for drug, household or other uses.

#### Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.



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DATE: 01/08/92  
CUST#: 938609  
PO#: 70341

M A T E R I A L   S A F E T Y   D A T A   S H E E T P A G E   1

----- IDENTIFICATION -----

PRODUCT #: 22179-1  
CAS #: 61790-53-2

NAME: FILTER AGENT, CELITE 521

SYNONYMS

AMORPHOUS SILICA \* SILICA, AMORPHOUS-DIATOMACEOUS EARTH (ACGIH, OSHA) \*

----- TOXICITY HAZARDS -----

RTECS NO: HL8600000

DIATOMACEOUS EARTH, NATURAL

REVIEWS, STANDARDS, AND REGULATIONS

ACGIH TLV-TWA 10 MG/M3, TOTAL DUST 85INA8 5,520,86

IARC CANCER REVIEW: ANIMAL INADEQUATE EVIDENCE IMEMDT 42,39,87

IARC CANCER REVIEW: HUMAN INADEQUATE EVIDENCE IMEMDT 42,39,87

IARC CANCER REVIEW: GROUP 3 IMSUDL 7,341,87

MSHA STANDARD-DUST IN AIR: TWA 20 MCCPF DTLWS\* 3,33,73

OSHA PEL: 8H TWA 80 MG/M3/% SiO2 FEREAC 54,2923,89

OSHA PEL FINAL: 8H TWA 6 MG/M3 FEREAC 54,2923,89

NDES 1983: HZD X3017000; TNF 109; NIS 11151; NOS 97; TNE 169362; TFE 24496

EPA TSCA CHEMICAL INVENTORY, JUNE 1990

ADDITIONAL INFORMATION

OSHA PEL-TWA: 0.05 MG/M3 SILICA, CRYSTALLINE CRISTOBALITE ( AS RESPIRABLE QUARTZ DUST ).

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

----- HEALTH HAZARD DATA -----

ACUTE EFFECTS

HARMFUL IF INHALED.

MAY BE HARMFUL IF SWALLOWED.

CAUSES EYE IRRITATION.

MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

MAY CAUSE SKIN IRRITATION.

TARGET ORGAN(S):

LUNGS

FIRST AID

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.

ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS.

IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.

CONTINUED ON NEXT PAGE

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**M A T E R I A L   S A F E T Y   D A T A   S H E E T**      **P A G E   2**

**CUST#: 938609**  
**PO#: 70341**

**PRODUCT #: 22179-1**  
**CAS #: 61790-53-2**

**NAME: FILTER AGENT, CELITE 521**

**----- HEALTH HAZARD DATA -----**

**IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.**  
**IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.**

**----- PHYSICAL DATA -----**

**APPEARANCE AND ODOR**  
**TAN POWDER**

**----- FIRE AND EXPLOSION HAZARD DATA -----**

**EXTINGUISHING MEDIA**  
**NONCOMBUSTIBLE.**

**USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.**

**SPECIAL FIREFIGHTING PROCEDURES**

**WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.**

**----- REACTIVITY DATA -----**

**INCOMPATIBILITIES**

**STRONG ACIDS**

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS**

**NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.**

**----- SPILL OR LEAK PROCEDURES -----**

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

**WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY RUBBER GLOVES.**

**SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.**

**AVOID RAISING DUST.**

**VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.**

**WASTE DISPOSAL METHOD**

**BURY IN A LANDFILL SITE APPROVED FOR THE DISPOSAL OF CHEMICAL AND HAZARDOUS WASTES.**

**--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ---**

**CHEMICAL SAFETY GOGGLES.**

**CONTINUED ON NEXT PAGE**

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M A T E R I A L   S A F E T Y   D A T A   S H E E T      P A G E   3

CUST#: 938609  
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PRODUCT #: 22179-1  
CAS #: 61790-53-2

NAME: FILTER AGENT, CELITE 521

--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ---

COMPATIBLE CHEMICAL-RESISTANT GLOVES.  
NIOSH/MSHA-APPROVED RESPIRATOR IN NONVENTILLATED AREAS AND/OR FOR  
EXPOSURE ABOVE THE ACGIH TLV.  
SAFETY SHOWER AND EYE BATH.  
MECHANICAL EXHAUST REQUIRED.  
AVOID CONTACT AND INHALATION.  
WASH THOROUGHLY AFTER HANDLING.  
HARMFUL DUST.  
KEEP CONTAINER CLOSED.

LABEL PRECAUTIONARY STATEMENTS

HARMFUL  
HARMFUL BY INHALATION.  
IRRITATING TO EYES AND RESPIRATORY SYSTEM.  
TARGET ORGAN(S):  
LUNGS  
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF  
WATER AND SEEK MEDICAL ADVICE.  
WEAR SUITABLE PROTECTIVE CLOTHING.  
DO NOT BREATHE DUST.

----- ADDITIONAL PRECAUTIONS AND COMMENTS -----

ADDITIONAL INFORMATION

CAUTION: INCOMPATIBLE WITH HYDROFLUORIC ACID.

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE  
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