SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH
Quellenstraße 110, A-1100 Wien
T. +43(0)1 489 3961-0
F. +43(0)1 489 3961-7
mail@szabo-scandic.com
www.szabo-scandic.com

linkedin.com/company/szaboscandic

Fuller's earth 100-200 mesh

sc-215059

Material Safety Data Sheet

The Power to Question

Hazard Alert Code Key: EXTREME | HIGH | MODERATE | LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

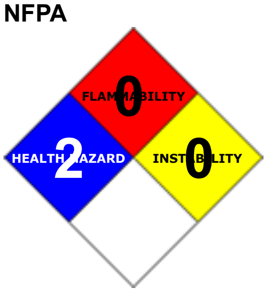
PRODUCT NAME

Fuller's earth 100-200 mesh

STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA



SUPPLIER

Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY

ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS

attapulgite, "hydrated aluminium silicate", "magnesium aluminium silicate", clay, Kaolin, Kaolinite, A14-Si4-O10(OH)

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	0		
Toxicity:	2		
Body Contact:	2		
Reactivity:	0		
Chronic:	2		

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW
RISK

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ Accidental ingestion of the material may be damaging to the health of the individual.
■ Acute toxic responses to aluminum are confined to the more soluble forms.

EYE
■ There is some evidence to suggest that this material can causeeye irritation and damage in some persons.

SKIN
■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
■ Open cuts, abraded or irritated skin should not be exposed to this material.
■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED
■ The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified using animal models).
Nevertheless, adverse effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
■ Effects on lungs are significantly enhanced in the presence of respirableparticles.

CHRONIC HEALTH EFFECTS
■ Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
Exposure to large doses of Aluminum has been connected with the degenerative brain disease Alzheimer's Disease.
Overexposure to respirable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function. Chronic symptoms may include decreased vital lung capacity, chest infections
Repeated exposures, in an occupational setting, to high levels of fine- divided dusts may produce a condition known as pneumoconiosis which is the lodgement of any inhaled dusts in the lung irrespective of the effect. This is particularly true when a significant number of particles less than 0.5 microns (1/50,000 inch), are present. Lung shadows are seen in the X-ray. Symptoms of pneumoconiosis may include a progressive dry cough, shortness of breath on exertion (exertional dyspnea), increased chest expansion, weakness and weight loss. As the disease progresses the cough produces a stringy mucous, vital capacity decreases further and shortness of breath becomes more severe. Other signs or symptoms include altered breath sounds, diminished lung capacity, diminished oxygen uptake during exercise, emphysema and pneumothorax (air in lung cavity) as a rare complication.
Removing workers from possibility of further exposure to dust generally leads to halting the progress of the lung abnormalities. Where worker-exposure potential is high, periodic examinations with emphasis on lung dysfunctions should be undertaken
Dust inhalation over an extended number of years may produce pneumoconiosis.. Pneumoconiosis is the accumulation of dusts in the lungs and the tissue reaction in its presence. It is further classified as being of noncollagenous or collagenous types. Noncollagenous pneumoconiosis, the benign form, is identified by minimal stromal reaction, consists mainly of reticulin fibres, an intact alveolar architecture and is potentially reversible.
The health hazards associated with bentonite, kaolin, and common clay, which are commercially important clay products, as well as the related phyllosilicate minerals montmorillonite, kaolinite, and illite, have an extensive literature. Fibrous clay minerals, such as sepiolite, attapulgite, and zeolites, have a separate literature.
The biological effects of clay minerals are influenced by their mineral composition and particle size. The decreasing rank order of the potencies of quartz, kaolinite, and montmorillonite to produce lung damage is consistent with their known relative active surface areas and surface chemistry.
Clays are chemically all described as aluminosilicates; these are further classified as bentonite, kaolin and common clays.
Bentonite is a rock formed of highly colloidal and plastic clays composed mainly of montmorillonite, a clay mineral of the smectite group.
Kaolin or china clay is a mixture of different minerals. Its main component is kaolinite; in addition, it frequently contains quartz, mica, feldspar, illite, and montmorillonite.
The main components of common clay and shale are illite and chlorite. Illite is also a component of ball clays. Illite closely resembles micas,
From the limited data available from studies on bentonite-exposed persons, retained montmorillonite appears to effect only mild nonspecific tissue changes, which are similar to those that have been described in the spectrum of changes of the “small airways mineral dust disease” (nodular peribronchiolar dust accumulations containing refractile material [montmorillonite] in association with limited interstitial fibrosis). In some of the studies, radiological abnormalities have also been reported

Long-term occupational exposures to bentonite dust may cause structural and functional damage to the lungs. However, available data are inadequate to conclusively establish a dose-response relationship or even a cause-and-effect relationship due to limited information on period and intensity of exposure and to confounding factors, such as exposure to silica and tobacco smoke.

Long-term exposure to kaolin may lead to a relatively benign pneumoconiosis, in an exposure-related fashion. known as kaolinosis. Deterioration of lung function has been observed only in cases with prominent radiological alterations. Based on data from china clay workers in the United Kingdom, it can be very roughly estimated that kaolin is at least an order of magnitude less potent than quartz.. Clearcut deterioration of respiratory function and related symptoms have been reported only in cases with prominent radiological findings.

The composition of the clay - i.e., quantity and quality of minerals other than kaolinite — is an important determinant of the effects. Bentonite, kaolin, and other clays often contain quartz, and exposure to quartz is causally related to silicosis and lung cancer. Statistically significant increases in the incidence of or mortality from chronic bronchitis and pulmonary emphysema have been reported after exposure to quartz.

The removal of clay particles from the lungs takes place by solubilisation in situ and by physical clearance.

In humans, there was a rapid initial clearance of 8% and 40% of aluminosilicate particles that were, respectively, 1.9 and 6.1 um in aerodynamic diameter from the lung region over 6 days. Thereafter, 4% and 11% of the two particle sizes were removed following a halftime of 20 days, and the rest with half-times of 330 and 420 days.

Ultrafine particles (<100 nm) have a high deposition in the nasal area; they can penetrate the alveolar/capillary barrier. Epidemiological studies have indicated an increase in morbidity and mortality associated with an increase in airborne particulate matter, particularly in the ultrafine size range

An important determinant of the toxicity of clays is the content of quartz. The presence of quartz in the clays studied hampers reliable independent estimation of the fibrogenicity of other components of clays.

Single intratracheal injection into rodents of bentonite and montmorillonite with low content of quartz produced dose- and particle size-dependent cytotoxic effects, as well as transient local inflammation, the signs of which included oedema and, consequently, increased lung weight. After high doses of intratracheal kaolin (containing 8-65% quartz), fibrosis has been described in some studies, whereas at lower kaolin doses, no fibrosis has been observed in the few available studies.

There are limited data on the effects of multiple exposures of experimental animals to montmorillonite or bentonite. Mice maintained on diets containing 10% or 25% bentonite but otherwise adequate to support normal growth displayed slightly reduced growth rates, whereas mice maintained on a similar diet with 50% bentonite showed minimal growth and developed fatty livers and eventually fibrosis of the liver and benign hepatomas.

In vitro studies of the effects of bentonite on a variety of mammalian cell types usually indicated a high degree of cytotoxicity. Concentrations below 1.0 mg/ml of bentonite and montmorillonite particles less than 5 um in diameter caused membrane damage and even cell lysis, as well as functional changes in several types of cells.

No adequate studies are available on the carcinogenicity of bentonite. In an inhalation study and in a study using intrapleural injection, kaolin did not induce tumours in rats. No studies are available on the genotoxicity of clays.

Single, very limited studies did not demonstrate developmental toxicity in rats after oral exposure to bentonite or kaolin.

Chronic dust inhalation of kaolin, as experienced in mineral extraction, has caused kaolinosis with heavy lung marking, emphysema, and nodular pneumoconiosis.

Evidence of kaolinosis (pneumoconiosis) was found in 9% of 553 Cornish china clay workers who had been exposed to kaolin dust for periods exceeding 5 years, whereas no kaolinosis was observed in workers exposed for less than 5 years. Workers in more heavily exposed jobs of milling, bagging and loading showed a prevalence of kaolinosis rising from 6% in those within between 5 and 15 years exposure to 23% in those exposed for more than 15 years. Workers intermittently and less heavily exposed in the older, outdated drying plants required 25 years of massive exposure before reaching the highest prevalence of 17%. Massive fibrosis was seen in four workers, and six workers needed antituberculosis chemotherapy. Preventative measures instituted include preemployment chest examination and approaches to the problem of dust control.

Sheer, G.; Brit. Jnl. Ind. Med. 21, pp 218-225, 1964.

Some clay minerals can dangerous because of their limited solubility in the lung, reactivity, small particle size, and fibrous habit. Fibrous clays of the palygorskite group, such as attapulgite (also known as palygorskite), halloysite and sepiolite, are used in a variety of applications which may lead to inhalation exposure. The fibrous crystals are similar in structure to the amphibole mineral group.

The pathogenicity of sepiolite and palygorskite appears to be related to geological formation conditions since these determine fibre length and particle crystallinity. In vivo and in vitro studies indicated that, in some cases, sepiolite and palygorskite could be dangerous for human health. Health hazards depend mostly on the type of deposit and its geological formation conditions, which determine fibre length and particle crystallinity.

Epidemiological studies of sepiolite and palygorskite workers showed that exposure to sepiolite-bearing dust does not increase the risk of pulmonary disease. There is no evidence of pleural plaque and no reported mesothelioma.

The epidemiological data on the pathogenicity of sepiolite, both in in vivo studies with different methods of administration
(inhalation, intrapleural injection, and intraperitoneal inoculation) and in in vitro studies produce results which are consistently negative, showing a low intrinsic biological activity and an absence of exposure-related diseases.

A Spanish study of 210 sepiolite showed those with greatest exposure to have increasing reduction in lung function and capacity. Radiographic results did not correlate with decreased lung function.

A single cohort study of attapulgite miners and millers is available. It shows a small excess of mortality from lung cancer and stomach cancer but no indications of any exposure-response for either cancer.

In one inhalation study in rats using sepiolite in which all fibres were shorter than 6 um, no significant increase in tumour incidence was found. In one study by intrapleural injection, sepiolite with a fibre length ranging 1-100 um, induced pleural mesotheliomas. In similar studies by intrapleural injection using fibres with lengths less than 6 um, no increase in tumour incidence were observed.

In two studies in rats, intraperitoneal injection of sepiolite, using samples, in which 0.9% of the fibres had lengths greater than >5 um, no significant increases in the incidences of abdominal tumours were found.

In one study in mice by intraperitoneal injection, sepiolite with fibre length ranging from 1-100 um produced a small increase in the incidence of peritoneal mesotheliomas

Intrapleural tests with sepiolite in rats found no increased incidence of tumours. Similar results were obtained with rats inhaling sepiolite and palygorskite. These minerals did not produce fibrosis but only an interstitial reaction similar to that caused by nuisance dust.

In one inhalation study in rats, using attapulgite from Leicester, UK, in which about 20% of the fibres were longer than 6 um, bronchiolar

hyperplasia and a few benign and malignant alveolar tumours and mesotheliomas were observed. The same sample induced a high incidence of pleural mesotheliomas in rats after intrapleural administration.
One attapulgite sample from Torrejon, Spain, in which 0.5% of the fibres were longer than 6 um produced significant increase in the incidence of pleural mesotheliomas after intrapleural injection. In rats, intraperitoneal injection of attapulgite, in which about 30% of the fibres were longer than 5 um, produced a high incidence of malignant abdominal tumours
In vivo studies of palygorskite suggested that most palygorskite-bearing dusts are mildly active in the lung, though some samples can be very active.
In one study sepiolite and palygorskite, containing a significant number of fibres greater than 5-6 mm in length, produced mesothelioma. In another study an intraperitoneal injection study with a sepiolite caused a high incidence of tumours; this sample of sepiolite was classified as ‘‘probably carcinogenic. This sepiolite was from a geological deposit in Finland. The
mineral was formed under hydrothermal conditions, allowing for the development of a high degree of crystallinity.
The biological activity of sedimentary and non-sedimentary sepiolites with different crystallisation grade and particle length has been subject to review Well-crystallised sepiolite with long particles showed strong cytotoxic and genotoxic effects. A relationship, between fibre length and cytotoxicity, for sepiolite and palygorskite, seems to exist. In other non-erythrocyte cell types palygorskite is non-genotoxic and, at most, only slightly cytotoxic.
Both sepiolite and palygorskite were found to lyse erythrocytes i.e they are haemolytic. In vitro experiments indicated palygorskite is as haemolytic as chrysotile. The edge surfaces and silanol groups of the minerals are important to the lysing process, whereas their elongate particle morphology appears to be irrelevant. It has been reported that the in vitro activity of palygorskite varies between samples. Among nine palygorskites, with varied surface characteristics, researchers found a corresponding range in haemolytic activity. It is suggested that samples with fibres >5 mm in length were harmful, whereas materials consisting entirely of short fibres were not
Aerosols of attapulgite and sepiolite were produced experimentally and airborne particles examined with the transmission electron microscope. Although the particles appeared to be compact conglomerates of non-fibrous material, many discrete fibres were found in the lungs of rats which had been exposed to them. This indicates that the particles contain a fibrous component which is released in vivo. This effect was reproduced by treating aqueous suspensions of particles by either hand shaking or sonication. It would appear that microscopical examination of an airborne dust alone may fail to provide an indication of a potential ‘fibre hazard’.
Inhalation of dusts containing crystalline silicas may lead to silicosis. Effects are cumulative, with scarring, impairment of breathing, emphysema, and restriction and obstruction of lung function.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
fuller's earth	8031-18-3	
as		
hydrated aluminium silicate		
aluminium silicate hydrated	1335-30-4	>98
asbestos free		

Section 4 - FIRST AID MEASURES

SWALLOWED
· If swallowed do NOT induce vomiting. · If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

EYE
■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN
■ If skin or hair contact occurs: · Flush skin and hair with running water (and soap if available). · Seek medical attention in event of irritation.

INHALED
· If fumes or combustion products are inhaled remove from contaminated area. · Other measures are usually unnecessary.

NOTES TO PHYSICIAN
■ Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Not applicable
Upper Explosive Limit (%):	Not applicable
Specific Gravity (water=1):	1.8-2.6
Lower Explosive Limit (%):	Not applicable

EXTINGUISHING MEDIA

· There is no restriction on the type of extinguisher which may be used.
Use extinguishing media suitable for surrounding area.

FIRE FIGHTING

· Alert Emergency Responders and tell them location and nature of hazard.
· Wear breathing apparatus plus protective gloves for fire only.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

¦ Decomposition may produce toxic fumes of: silicon dioxide (SiO_2), metal oxides.
May emit poisonous fumes.
May emit corrosive fumes.
· Non combustible.
· Not considered to be a significant fire risk, however containers may burn.

FIRE INCOMPATIBILITY

¦ None known.

ÿEXTINGUISHING MEDIA
· There is no restriction on the type of extinguisher which may be used.
Use extinguishing media suitable for surrounding area.
ÿFIRE FIGHTING
· Alert Emergency Responders and tell them location and nature of hazard.
· Wear breathing apparatus plus protective gloves for fire only.
ÿGENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS
¦ Decomposition may produce toxic fumes of: silicon dioxide (SiO_2), metal oxides.
May emit poisonous fumes.
May emit corrosive fumes.
· Non combustible.
· Not considered to be a significant fire risk, however containers may burn.
ÿFIRE INCOMPATIBILITY
¦ None known.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

· Remove all ignition sources.
· Clean up all spills immediately.
· Avoid contact with skin and eyes.
· Control personal contact by using protective equipment.
· Use dry clean up procedures and avoid generating dust.
· Place in a suitable, labelled container for waste disposal.

MAJOR SPILLS

¦ Moderate hazard.
· CAUTION: Advise personnel in area.
· Alert Emergency Responders and tell them location and nature of hazard.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

· Avoid all personal contact, including inhalation.
· Wear protective clothing when risk of exposure occurs.

RECOMMENDED STORAGE METHODS

· Polyethylene or polypropylene container.
· Check all containers are clearly labelled and free from leaks.

STORAGE REQUIREMENTS

· Plastic bag
· NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.
Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes

US OSHA Permissible Exposure Levels (PELs) - Table Z1	fuller's earth (Silicates (less than 1% crystalline silica) - Talc (containing asbestos); use asbestos limit; see 29 CFR 1910.1001)	0.1			See Table Z-3; (STEL (Excursion limit)(as averaged over a sampling period of 30 minutes))
US OSHA Permissible Exposure Levels (PELs) - Table Z1	fuller's earth (Silicates (less than 1% crystalline silica) - Tremolite, asbestiform; see 1910.1001)	0.1			(STEL (Excursion limit)(as averaged over a sampling period of 30 minutes))
US OSHA Permissible Exposure Levels (PELs) - Table Z3	fuller's earth (Silicates (less than 1% crystalline silica): Tremolite, asbestiforms (see 29 CFR 1910.1001))			0.1	
US - Idaho - Limits for Air Contaminants	fuller's earth (Silicates (less than 1% crystalline silic))	[3]			
US - Michigan Exposure Limits for Air Contaminants	fuller's earth (Silicates (less than 1% crystalline silica) Tremolite)			0.1	R 325.51311 et seq, Asbestos for General Industry
US - Hawaii Air Contaminant Limits	fuller's earth (Silicates (less than 1% crystalline silica) - Soapstone, total dust)	6			
US - Hawaii Air Contaminant Limits	fuller's earth (Silicates (less than 1% crystalline silica) - Soapstone, respirable dust)	3			
US - Washington Permissible exposure limits of air contaminants	fuller's earth (Silicates (less than 1% crystalline silica) Mica - Respirable fraction)	3	6		
US - Michigan Exposure Limits for Air Contaminants	fuller's earth (Sillicates (less than 1% crystalline silica) Mica, respirable dust)	3			

US - Michigan Exposure Limits for Air Contaminants	fuller's earth (Sillicates (less than 1% crystalline silica) Talc (containing no asbestos), respirable dust)	2			
US - Michigan Exposure Limits for Air Contaminants	fuller's earth (Sillicates (less than 1% crystalline silica) Soapstone, total dust)	6			
US - California Permissible Exposure Limits for Chemical Contaminants	fuller's earth (Aluminum welding fumes)	5			
Canada - Prince Edward Island Occupational Exposure Limits	fuller's earth (Particles (Insoluble or Poorly Soluble) [NOS] Respirable particles)	3			See Appendix B current TLV/BEI Book
Canada - Alberta Occupational Exposure Limits	fuller's earth (Particulate Not Otherwise Regulated - Respirable)	3			
Canada - Prince Edward Island Occupational Exposure Limits	aluminium silicate hydrated (Aluminum - Insoluble compounds)	1			TLV Basis: Pneumoconiosis; lower respiratory tract irritation; neurotoxicity
US ACGIH Threshold Limit Values (TLV)	aluminium silicate hydrated (Aluminum - Insoluble compounds)	1			TLV Basis: Pneumoconiosis; lower respiratory tract irritation; neurotoxicity
Canada - Nova Scotia Occupational Exposure Limits	aluminium silicate hydrated (Aluminum - Insoluble compounds)	1			TLV Basis: Pneumoconiosis; lower respiratory tract irritation; neurotoxicity
Canada - British Columbia Occupational Exposure Limits	aluminium silicate hydrated (Aluminum metal and insoluble compounds, Respirable, Revised 2008)	1.0			
Canada - Ontario Occupational Exposure Limits	aluminium silicate hydrated (Particles (Insoluble or Poorly Soluble)	10 (I)			

	Not Otherwise)					
Canada - British Columbia Occupational Exposure Limits	aluminium silicate hydrated (Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC))		10 (N)			
Canada - Ontario Occupational Exposure Limits	aluminium silicate hydrated (Specified (PNOS) / Particules (insolubles ou peu solubles) non précisées par ailleurs)		3 (R)			
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	aluminium silicate hydrated (Particulates not otherwise regulated Respirable fraction)		5			
US - California Permissible Exposure Limits for Chemical Contaminants	aluminium silicate hydrated (Particulates not otherwise regulated Respirable fraction)		5			(n)
US - Oregon Permissible Exposure Limits (Z-1)	aluminium silicate hydrated (Particulates not otherwise regulated (PNOR) (f) Total Dust)	-	10			Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means “particles not otherwise regulated.”
US - Michigan Exposure Limits for Air Contaminants	aluminium silicate hydrated (Particulates not otherwise regulated, Respirable dust)		5			
US - Oregon Permissible Exposure Limits (Z-1)	aluminium silicate hydrated (Particulates not otherwise regulated (PNOR) (f) Respirable Fraction)	-	5			Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means “particles not otherwise regulated.”

US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	aluminium silicate hydrated (Particulates not otherwise regulated (PNOR)(f)- Respirable fraction)	5	
Canada - Prince Edward Island Occupational Exposure Limits	aluminium silicate hydrated (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)	10	See Appendix B current TLV/BEI Book

ENDOELTABLE

PERSONAL PROTECTION

RESPIRATOR

•Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

· Safety glasses with side shields.
· Chemical goggles.

HANDS/FEET

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
· frequency and duration of contact,
· chemical resistance of glove material,
· glove thickness and
· dexterity
Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).
· When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
· When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
· Contaminated gloves should be replaced.
Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.
· polychloroprene
· nitrile rubber
· butyl rubber
· fluorocaoutchouc
· polyvinyl chloride
Gloves should be examined for wear and/ or degradation constantly.

OTHER

· Overalls.
· P.V.C. apron.
· Barrier cream.
· Skin cleansing cream.
· Eye wash unit.

ENGINEERING CONTROLS

· Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
· If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Solid.
Does not mix with water.
Sinks in water.

State	Divided solid	Molecular Weight	Not applicable
Melting Range (°F)	Not available	Viscosity	Not Applicable
Boiling Range (°F)	Not applicable	Solubility in water (g/L)	Immiscible
Flash Point (°F)	Not applicable	pH (1% solution)	Not available
Decomposition Temp (°F)	Not available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not applicable	Vapour Pressure (mmHG)	Not applicable
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	1.8-2.6
Lower Explosive Limit (%)	Not applicable	Relative Vapor Density (air=1)	Not applicable
Volatile Component (%vol)	Negligible	Evaporation Rate	Not applicable

APPEARANCE

Powder. Very absorbent, darkens when wet, has a `clay' odour. Insoluble in water, acid and alkalies. High lubricity. Very inert. Fuller's earth usually has a high magnesium oxide content. Fullers earth may comprise the minerals montmorillonite or palygorskite (attapulgite) or a mixture of the two; some of the other minerals that may be present in fuller's earth deposits are calcite, dolomite, and quartz. In some countries calcium bentonite is known as fuller's earth, a term which is also used to refer to attapulgite, a mineralogically distinct clay mineral but exhibiting similar properties

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

· Presence of incompatible materials.
· Product is considered stable.

STORAGE INCOMPATIBILITY

¦ Derivative of electropositive metal.
· Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.
· These trifluorides are hypergolic oxidisers. They ignites on contact (without external source of heat or ignition) with recognised fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition.
· The state of subdivision may affect the results.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

fuller's earth

TOXICITY AND IRRITATION

FULLER'S EARTH:
■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (rat) TDLo: 59000 mg/kg	Nil Reported

ALUMINIUM SILICATE HYDRATED:

■ No significant acute toxicological data identified in literature search.

CARCINOGEN

Aluminum - Insoluble compounds	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	A4
TWAMG_M3~	US - Maine Chemicals of High Concern List	Carcinogen	A4

Section 12 - ECOLOGICAL INFORMATION

No data

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.
¦ Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:
· Reduction
· Reuse
· Recycling
· Disposal (if all else fails)
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.
· Recycle wherever possible or consult manufacturer for recycling options.
· Consult Waste Management Authority for disposal.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

Section 15 - REGULATORY INFORMATION

fuller's earth (CAS: 8031-18-3) is found on the following regulatory lists;

"Canada Domestic Substances List (DSL)","US Cosmetic Ingredient Review (CIR) Cosmetic ingredients found safe as used","US DOE Temporary Emergency Exposure Limits (TEELs)","US FDA CFSAN Color Additive Status List 6","US Food Additive Database","US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

Regulations for ingredients

aluminium silicate hydrated (CAS: 1335-30-4,58425-86-8) is found on the following regulatory lists;

"Canada Domestic Substances List (DSL)","CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP","US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE

■ Ingestion may produce health damage*.
■ Cumulative effects may result following exposure*.
■ May produce discomfort of the eyes*.
* (limited evidence).

Ingredients with multiple CAS Nos

Ingredient Name CAS aluminium silicate hydrated 1335-30-4, 58425-86-8

Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Issue Date: Jun-25-2011

Print Date:Sep-16-2011