

SAFETY DATA SHEET

Revision: 2.0 Date: 10.07.2017



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 2015/830

Bentonite, Acid Leached
GRADE F 115FF

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier	
Product Name	GRADE F 115FF
Trade names	GRADE F 115FF
Chemical Name	Bentonite, Acid Leached
CAS No.	70131-50-9
EINECS No.	274-324-8
REACH Registration No.	01-2119485596-21-0006
1.2 Recommended use of the chemical and restrictions on use	
Identified Use(s)	Adsorbents
Uses Advised Against	Anything other than the above.
1.3 Details of the supplier of the safety data sheet	
Manufacturer	EP Engineered Clays Corporation 600 East McDowell Road Jackson, MS 39204 USA
Telephone	+1-601-985-4857
Fax	+1-601-985-4857
E-Mail (competent person)	inquiry.minerals@epengineeredclays.com
Importer	EP Minerals Europe GmbH & Co, KG Rehrhofer Weg 115 D-29633, Munster, Germany
Telephone	+49 51 92 98970
Fax	+49-51 92 989715
E-Mail (competent person)	EPME@epminerals.com
1.4 Emergency Phone No.	Europe: +49 51 92 98970 (08:00– 17:00 CET) Languages spoken: English, French and German USA: +1-601-985-4857 (08:00– 17:00 PST)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	This product contains quartz (fine fraction) at: < 1% 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.
2.1.1 Regulation (EC) No. 1272/2008 (CLP)	Not classified as hazardous for supply/use.
2.2 Label elements	According to Regulation (EC) No. 1272/2008 (CLP)
Product Name	GRADE F 115FF
Contains:	Bentonite, Acid Leached; (< 1% Crystalline Silica – Quartz (Respirable Dust))
Hazard Pictogram(s)	None assigned.

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Signal Word(s)	None assigned.
Hazard Statement(s)	None assigned.
Precautionary Statement(s)	None assigned.
2.3 Other hazards	None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.
Bentonite, Acid Leached	circa.100	70131-50-9	274-324-8
Contains: Quartz (Respirable Dust), <1 Fine Fraction Crystalline silica per SWeRF calculation	< 1	14808-60-7	238-878-4

3.2 Mixtures - Not applicable.

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing vapours. Avoid contact with skin and eyes. Contaminated clothing should be laundered before reuse.

Inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If irritation develops and persists, get medical attention. Blow nose to evacuate dust.

Skin Contact

Remove clothing and wash thoroughly before use. Wash affected skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Eye Contact

Flush eyes with water for at least 15 minutes while holding eyelids open. Get medical attention if eye irritation develops or persists.

Ingestion

Rinse mouth. Give plenty of water to drink. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

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. Acute inhalation can cause dryness of the nasal passage and lung congestion, coughing and general throat irritation. Chronic inhalation of dust should be avoided. May cause irritation to the respiratory system.

4.3 Indication of any immediate medical attention and special treatment needed

Unlikely to be required but if necessary treat symptomatically. There is no specific antidote. Remove person to fresh air and keep comfortable for breathing.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media

Non-flammable. Extinguish with carbon dioxide, dry chemical, foam or waterspray. As appropriate for surrounding fire.

Unsuitable extinguishing media

Direct water jet may spread the fire.

5.2 Special hazards arising from the substance or mixture

Non-flammable, Non-combustible, Not explosive. Combustion may cause toxic

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5.3 Advice for fire-fighters

fumes. (Carbon monoxide, Carbon dioxide).

Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Wear appropriate personal protective equipment, avoid direct contact. Where engineering controls are not fitted or inadequate wear suitable respiratory protective equipment.

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Vacuum clean spillage or wet sweep. Caution: wet product will be slippery. Sweep spilled substances into containers if appropriate moisten first to prevent dusting. Use vacuum equipment for collecting spilt materials, where practicable. Transfer to a container for disposal.

6.4 Reference to other sections

See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle packaged products carefully to prevent accidental bursting. If you require advice on safe handling techniques, please contact your supplier or check the Good Practice Guide referred to in section 16. Avoid generation of dust. In case of inadequate ventilation wear respiratory protection. Do not breathe dust. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Caution: wet product will be slippery.

7.2 Conditions for safe storage, including any incompatibilities

Storage life

Atmospheric concentrations should be minimised and kept as low as reasonably practicable below the occupational exposure limit.

Incompatible materials

Stable under normal conditions. Store in a dry place.

7.3 Specific end use(s)

Keep away from: Hydrofluoric Acid

See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Silica, Respirable Crystalline	-	-	0.1	-	-	WEL
Nuisance Dust	-	-	10	-	-	WEL
	-	-	4	-	-	Inhalable Dust. Respirable Dust.

Note: WEL: Workplace Exposure Limit (UK HSE EH40)

8.1.2 Biological limit value

Not applicable.

8.1.3 PNECs and DNELs

A chemical safety assessment is not required under REACH.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure adequate ventilation. Atmospheric levels should be controlled in compliance with the occupational exposure limit. Avoid dust generation.

8.2.2 Individual protection measures, such as personal

Keep good industrial hygiene. Use personal protective equipment as required.

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protective equipment (PPE)

Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Avoid dust generation. Do not breathe dust. Do not eat, drink or smoke at the work place.

Eye/ face protection

Wear eye protection with side protection (EN166).



Skin protection

Use skin barrier cream before handling the product. Wear suitable gloves if prolonged skin contact is likely - Wear impervious gloves (EN374).



Respiratory protection

Atmospheric levels should be controlled in compliance with the occupational exposure limit. In case of inadequate ventilation wear respiratory protection. Recommended: Half-face mask (DIN EN 140), Filter type P2/P3 - efficiency of at least 90%



Thermal hazards

Not applicable.

8.2.3 Environmental Exposure Controls

Avoid wind dispersal.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Off-white to Light Grey Powder
Odour	Odourless
Odour threshold	Not available.
pH	Not established
Melting point/freezing point	>450 °C
Initial boiling point and boiling range	Not applicable
Flash point	Non-flammable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Non-flammable.
Upper/lower flammability or explosive limits	Non-flammable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	2.28 g/cm ³
Solubility(ies)	<1% Water Soluble in: Hydrofluoric Acid
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not applicable
Decomposition Temperature	Not available.
Viscosity	Not applicable, Solid.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

9.2 Other information

Self-heating substance or mixture	It is not a substance capable of spontaneous heating. (UN Test N.4 (self heating substances))
Bulk Density	561 - 881 kg/m ³
pKA	The substance does not dissociate
Surface tension	Based on chemical structure, surface activity is not to be expected
Grain size distribution	Particle Size < 10 µm: < 1.2%

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Particle Size < 100 µm: 4.7%

SECTION 10: STABILITY AND REACTIVITY

10.1	Reactivity	Stable under normal conditions.
10.2	Chemical stability	Stable under normal conditions.
10.3	Possibility of hazardous reactions	Stable under normal conditions.
10.4	Conditions to avoid	Avoid contact with: Hydrofluoric Acid. Do not leave in enclosed spaces when mixed with highly flammable material, as heat can build up over long periods of time and flammable material may eventually ignite. Avoid dust generation. Protect from moisture.
10.5	Incompatible materials	Strong oxidising agents. Strongly alkaline. Reacts violently with - Hydrofluoric Acid
10.6	Hazardous decomposition product(s)	No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	Information on toxicological effects	
	Acute toxicity - Ingestion Bentonite, Acid Leached:	Based upon the available data, the classification criteria are not met. Not classified. LD50 (oral, rat) mg/kg: >5000 (study result: EPA OPP 81-1)
	Quartz (Respirable Dust): Acute toxicity - Inhalation Bentonite, Acid Leached:	Not classified. No data. Based upon the available data, the classification criteria are not met. Not classified. LC50 (inhalation, rat) mg/l/4h: 50 (study result: Unnamed, 1985)
	Quartz (Respirable Dust): Acute toxicity - Skin Contact Bentonite, Acid Leached:	Not classified. No data. Based upon the available data, the classification criteria are not met. Not classified. LD50 (skin, rat) mg/kg: >2000 (study result: OECD 402)
	Quartz (Respirable Dust): Skin corrosion/irritation Bentonite, Acid Leached:	Not classified. No data. Based upon the available data, the classification criteria are not met. Not classified. Not irritating to skin (rabbit) (study result: OECD 404)
	Quartz (Respirable Dust): Serious eye damage/irritation Bentonite, Acid Leached:	Not classified. No data. Based upon the available data, the classification criteria are not met. Not classified. Not irritating to eyes (rabbit) (study result: OECD 405)
	Quartz (Respirable Dust): Respiratory or skin sensitization Bentonite, Acid Leached:	Not classified. No data. Based upon the available data, the classification criteria are not met. Not classified. Skin Sensitisation (mouse) - Negative (study result: OECD 429)
	Quartz (Respirable Dust): Germ cell mutagenicity Bentonite, Acid Leached:	Not classified. No data. Based upon the available data, the classification criteria are not met. Not classified. In vitro: Negative (study result: OECD 471) In vivo: No data
	Quartz (Respirable Dust): Carcinogenicity Bentonite, Acid Leached: Quartz (Respirable Dust):	Not classified. No data. Based upon the available data, the classification criteria are not met. Not classified. No data. Carc. 1A; H350 In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans (human carcinogen category 1). 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 2009, in the Monographs 100 series, IARC confirmed its

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	<p>classification of Silica Dust, Crystalline, in the form of Quartz and Cristobalite (IARC Monographs, Volume 100C, 2012). 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). 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).</p> <p>Based upon the available data, the classification criteria are not met. Not classified. Reproductive toxicity: No data Developmental toxicity: NOAEL 1000 – 1500 mg/kg bw/day. 2% calcium montmorillonite or sodium montmorillonite in the diet had no effect on maternal weight or maternal organ weights, litter weight, embryonic implantations, or resorptions. (Read across: Wiles MC et al, 2004)</p> <p>Not classified. No data. Based upon the available data, the classification criteria are not met. Not classified. No data. STOT SE 3; H335 Irritating to respiratory system. (IARC (1997) and SITTIG (4th, 2002)) Based upon the available data, the classification criteria are not met. Not classified. Oral: NOAEL 1000 – 1500 mg/kg bw/day. Results suggested that dietary inclusion of NovaSil at levels as high as 2.0% (w/w) which is ~equivalent to 1000-1500 mg/kg/day does not result in overt toxicity. (Read across: Afriyie-Gyawu E et al, 2005) Inhalation: No data. Dermal: No data. STOT RE 1; H372 Prolonged and/or massive exposure to fine fraction crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica. (Ziskind et al., 1976; IARC, 1987) Based upon the available data, the classification criteria are not met. Not applicable Not applicable</p>
Reproductive toxicity Bentonite, Acid Leached:	
Quartz (Respirable Dust): STOT - single exposure Bentonite, Acid Leached: Quartz (Respirable Dust):	
STOT - repeated exposure Bentonite, Acid Leached:	
Quartz (Respirable Dust):	
Aspiration hazard Bentonite, Acid Leached: Quartz (Respirable Dust):	
11.2 Other information	None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity Bentonite, Acid Leached: Quartz (Respirable Dust):	Based upon the available data, the classification criteria are not met. EC50 (Daphnia magna) >100 mg/l (study result: OECD 202) Not classified. No data.
12.2 Persistence and degradability	Not applicable for inorganic substances.
12.3 Bioaccumulative potential	The product has no potential for bioaccumulation. Some organisms accumulate Si(OH) ₄
12.4 Mobility in soil	The product is predicted to have low mobility in soil.
12.5 Results of PBT and vPvB assessment	This product is an inorganic substance and does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH.
12.6 Other adverse effects	None known.

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SECTION 13: DISPOSAL CONSIDERATIONS

- | | |
|-------------------------------------|---|
| 13.1 Waste treatment methods | Dispose of empty containers and wastes safely. Dispose of contents in accordance with local, state or national legislation. |
| 13.2 Additional Information | Packaging waste: Remove all packaging for recovery or disposal. Make sure that packaging is completely empty before recycling. Inform consumer about possible hazards of unclean empty packaging for recycling or disposal. |

SECTION 14: TRANSPORT INFORMATION

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

ADR/RID / IMDG / ICAO/IATA

- | | |
|--|---|
| 14.1 UN number | Not applicable. |
| 14.2 UN proper shipping name | Not applicable. |
| 14.3 Transport hazard class(es) | Not applicable. |
| 14.4 Packing group | Not applicable. |
| 14.5 Environmental hazards | Not classified as a Marine Pollutant. |
| 14.6 Special precautions for user | Not applicable. |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Bentonite, Acid Leached , No special measures are required. |
| 14.8 Additional Information | None. |

SECTION 15: REGULATORY INFORMATION

- | | |
|--|---|
| 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| 15.1.1 EU regulations
Authorisations and/or Restrictions On Use | None. |
| 15.1.2 National regulations
Germany | Water hazard class: VwVwS Annex 3: WGK 1 |
| 15.2 Chemical Safety Assessment | A chemical safety assessment is not required under REACH. |

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New format has been issued, all sections have been updated to include new information. Review SDS with care.

References: Existing ECHA registration for Bentonite, acid-leached (CAS No. 70131-50-9)

Literature References:

1. Wiles MC, Huebner HJ, Afriyie-Gyawu E, Taylor RJ, Bratton GR & Phillips TD, 2004, Toxicological evaluation and metal bioavailability in pregnant rats following exposure to clay minerals in the diet, Journal of Toxicology and Environmental Health, Part A,67:863-874.
2. Afriyie-Gyawu E, Mackie J, Dash B, Wiles M, Taylor T, Huebner H, Tang L, Guan H, Wang J & Phillips T, 2005, Chronic toxicological evaluation of dietary Novasil clay in sprague-dawley rats, Food Additives and Contaminants. 22(3): 259-269

Training advice:

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 respirable crystalline silica. Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers.

LEGEND

LTEL Long Term Exposure Limit

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STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	PBT: Persistent, Bioaccumulative and Toxic
vPvB	vPvT: very Persistent and very Toxic
OECD	Organisation for Economic Cooperation and Development
SCOEL	The EU Scientific Committee on Occupational Exposure Limits
IARC	International Agency for Research on Cancer
SWeRF	Size-Weighted Respirable Fraction

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Annex to the extended Safety Data Sheet (eSDS)

Not applicable. Not hazardous. Exposure Scenarios are not applicable