FULLSEAL

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

PRODUCT NAME: FULLSEAL – THIXOTROPIC SEALANT

PART NO.: FULLSEAL

APPLICATIONS: Sealant

SUPPLIER:
Steve Vick International Limited
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2 HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to CLP Regulation (EC) 1272/2008
Not classified

Classification according to Directive 67/548/EEC
Not classified

2.2 Label Elements

Pictogram
The substance does not require labelling according to CLP Regulations (EC) 1272/2008

2.3 Other Hazards
The substance does not meet the criteria for PBT(Persistent Bio accumulative and Toxic) or vPvB (very Persistent, very Bio accumulative and/or Toxic) substance according to REACH Regulation (EC) 1907/2006.

Crystalline Silica Quartz, Crystobalite and Tridymite EC 238-878-4, CAS 14808-60-7, at <10% of which the Respirable Crystalline Silica (<7.1µ) is <1% may be present and at this concentration is not classified (as hazardous).

3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Mixtures
Bentonite is a naturally occurring mineral classified as UVCB (Variable composition, Complex reaction products or Biological materials) according to REACH & CLP Regulations. While being of Variable Composition, the purity of the product is 100 % w/w. The composition of the substance consists mainly in Smectite (Montmorillonite, CAS: 1318-93-0) together with some other accessory minerals such as quartz, feldspar, mica and calcite.

The full Text for all R-Phases and Hazard Statements are displayed in Section 16

4 FIRST AID MEASURES

4.1 Description of first aid measures

GENERAL INFORMATION: No known delayed effects. Consult a physician for all exposures except for minor instances.

INHALATION: No special measures; move source of dust or move person to fresh air. If respiratory irritation persists or breathing becomes difficult seek medical attention immediately.

INGESTION: No special measures; clean mouth with water and drink plenty of water. If symptoms persist, seek medical advice.

SKIN: No special measures; wash affected area with soap and plenty of water. If necessary, seek medical advice.

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EYES:	No special measures; rinse eyes immediately with plenty of water. If symptoms persist, seek medical advice.
PROTECTION FOR FIRST AIDERS:	First aid personnel should wear appropriate protective equipment during any rescue.

4.2 Most important symptoms and effects, both acute and delayed

GENERAL INFORMATION	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
INHALATION	No important symptoms
INGESTION	No important symptoms
SKIN CONTACT	No important symptoms
EYE CONTACT	The acute symptoms would be pain in the eyes because of dust entry. No delayed effects are anticipated if first aid treatment is applied and is effective.

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

Notes for the doctor	Treat symptomatically. No need for immediate medical attention; follow the advice in section 4.1

5 FIRE FIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media
The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

By preference use a dry powder, foam or CO_2 fire extinguisher to extinguish the surrounding fire as the product may become very slippery and hard to clear up once wet.

Unsuitable extinguishing media
No restriction on the extinguishing media to be used in cases of fire in its vicinity – though it should be noted that the product may become very slippery and hard to clear up once wet.

5.2 Special hazards arising from the substance or mixture

Specific hazards
The material is not flammable and it does not support fire.

Hazardous combustion products
No hazardous thermal decomposition products.

5.3. Advice for fire fighters

Protective actions during fire fighting
Avoid generation of dust. Use breathing apparatus.

Special protective equipment for fire fighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Fire fighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. Floor may become slippery when product is wet.

6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Ensure adequate ventilation. Keep dust levels to a minimum respect Workplace Exposure Limits (WEL). Keep unprotected persons away. Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8). Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8). Try not to wet, and take care of wet product on floor, which presents a slip hazard.

For emergency responders
Keep dust levels to a minimum. Ensure adequate ventilation. Keep unprotected persons away. Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8). Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective

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equipment is used, wear suitable protective equipment (see section 8). Try not to wet and take care of wet product on floor, which presents a slip hazard.

6.2. Environmental precautions

Environmental precautions
No special requirements. Contain the spillage. If product is released from trucks in roads, place signposts to divert traffic and remove the spill using vacuum cleaning systems, or shovel into bags – do not attempt to wash away.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Avoid dust formation; avoid dry sweeping where possible. Use vacuum suction unit, or shovel into bags. Do not use water.

6.4. Reference to other sections

Reference to other sections
For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Usage precautions
Keep dust levels to a minimum and Minimize dust generation. Respect Workplace Exposure Limits (WEL). Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment refer to section 8 of this safety data sheet. 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.

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Remove contaminated clothing and protective equipment before entering eating areas. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions
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. Keep dry and do not use water for clean up as becomes slippery when wet.

7.3. Specific end use(s)

Specific end use(s)
The identified uses for this product are detailed in Section 1.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1. Control parameters

Components with occupational exposure limits and/or biological occupational exposure limits requiring monitoring.

Air Limit Values:
Maintain personal exposure below occupational exposure limit for inhalable and respirable dust as according to COSHH E40/2005 amended Oct 2007 (For data on EU TWA for dust see appendix A).

Biological limit Values
None

8.2. Exposure controls

Protective Equipment

Appropriate engineering controls
The substance does not represent any kind of thermal hazard, thus special consideration is not required.

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Eye/face protection
Do not wear contact lenses without eye protection. For powders, tight fitting goggles with side shields, or wide vision full goggles. It is also advisable to have individual pocket eyewash.

Hand protection
For hands, 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.

Other skin and body protection
For skin, normal work clothes are appropriate.

Respiratory protection
Local ventilation to keep levels below established threshold values is recommended. In case of prolonged exposure to airborne dust concentrations, a suitable particle filter mask that complies with the requirements of national legislation is recommended, depending on the expected exposure levels.

Environmental exposure controls
Local ventilation systems should be filtered before discharge to atmosphere. Avoid releasing ti the environment. Contain any spillages.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance Lump, granular or fine powder.

Colour Light grey / yellow or red / brown

Odour Odourless.

Odour threshold Not applicable/

pH 7.0 – 10.5 (5% solids in water suspension) typically 7.0 – 9.5

Melting point > 450°C (Study result, EU A.1 method)

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)

Evaporation factor Not applicable (Solid with a melting point > 450°C)

Upper/lower flammability or explosive limits Non flammable

Vapour pressure Not applicable (Solid with a melting point > 450°C)

Vapour density Not applicable

Relative density 2.5 g/cm^3 @ 20^{O}C

Bulk density 1 – 1.4 g/cm^3

Solubility(ies) < 0.9 mg/L at 20^{O}C

Partition coefficient Not applicable (inorganic substances)

Auto-ignition temperature No self-ignition temperature below 400^{O}C

Decomposition Temperature Not applicable

Viscosity Not applicable

Explosive properties Non explosive

Oxidising properties No oxidizing properties predicted.

9.2 Other Information

Other Information None

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10 STABILITY AND REACTIVITY

10.1 Reactivity
Inert, not reactive

10.2 Chemical stability
Chemically stable at normal ambient temperatures and when used as recommended.

10.3 Possibility of hazardous reactions
No hazardous reactions

10.4 Conditions to avoid
Minimise exposure to air. Slippery when wet.

10.5 Incompatible materials
Avoid storing together with materials that may be affected by dust.

10.6 Hazardous decomposition products
None Known

11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity – oral.
Based on available data, classification criteria are not met. (LD_{50} > 2000 mg/kg bw (OECD 420, rat)

Acute toxicity – dermal.
Based on available data, classification criteria are not met.

Acute toxicity – inhalation
Based on available data, classification criteria are not met. (LC_{50} > 5,27 mg/L (OECD 436, rat)

Skin corrosion/irritation
Animal data
Not irritating to skin (in vivo, OECD 404, rabbit)

Serious eye damage/irritation
Not irritating to eye (in vivo, OECD 405, rabbit) Is classified as a mild irritant to eyes (according to the modified Kay & Calandra criteria)

Respiratory sensitisation
Based on available data, classification criteria are not met.

Skin sensitisation
Not a skin sensitizer in accordance with local lymph node assay (OECD 429, mouse)

Germ cell mutagenicity
Genotoxicity - in vitro
Based on available data the classification criteria are not met.

Genotoxicity - in vivo
Based on available data the classification criteria are not met.

Carcinogenicity
Based on available data the classification criteria are not met.

Reproductive toxicity
Reproductive toxicity – fertility
Based on available data the classification criteria are not met.

Reproductive toxicity – development
Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure No organ toxicity observed in acute tests

Specific target organ toxicity - repeated exposure
STOT - repeated exposure
Classification for toxicity upon prolonged exposure by oral route is not warranted (Mice)

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Aspiration hazard
No aspiration hazard envisaged.

Mutagenicity
In vitro tests (OECD 471, 473 and 476) Negative

Carcinogenicity
No data available.

Toxicity for reproduction
Classification for reproductive toxicity according to regulation (EC) 1272/2008 is not warranted.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Acute/Prolonged toxicity to fish
LC50 (96h) for freshwater fish (rainbow trout): 16000 mg/l
LC50 (24h) for marine water fish (black bass, warmouth bass, blue gill and sunfish): 2800-3200 mg/l

Acute/Prolonged toxicity to aquatic invertebrates
EC50 (96h) for freshwater invertebrates (Dungeness crab): 81.6 mg/l
EC50 (96h) for freshwater invertebrates (dock shrimp): 24.8 mg/l
LC50 (24h) for C. dubia and H. limbata: >500 mg/L

Acute/Prolonged toxicity to aquatic plants
EC50 (72h) for freshwater algae: > 100 mg/l

Toxicity to micro-organisms e.g. bacteria
EC50 (48h) for daphnia magna (OECD 202): > 100 mg/l

Chronic toxicity to aquatic organisms
No data available

Toxicity to soil dwelling organisms
No data available

Toxicity to terrestrial plants
No effect was observed on the growth of beans (Phaseolus vulgaris) or corn (Zea mays) when Bentonite was added at a concentration of 135 g/1.6 kg soil

General effect
No specific adverse effects known

Further information
None

Persistence and degradability
Not relevant for inorganic substances

Bioaccumulative potential
Not relevant for inorganic substances

Mobility in soil
Bentonite is almost insoluble and thus presents a low mobility in most soils.

Results of PBT and vPvB assessment
This substance does not meet the criteria for classification as PBT or vPvB.

Other adverse effects
No other adverse effects are identified. According to the criteria of the European classification and labeling system, the substance does not require classification as hazardous for the environment

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13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

The residues/unused product can be disposed in landfills following national and local regulations. Dispose of waste in accordance with European Directives. Dispose in such a way to avoid dust generation. Where possible, recycling should be preferred to disposal.

Packaging Disposal
No specific requirements. In all cases dust formation from residues in the packaging should be avoided and suitable protection be assured. Empty containers, dispose of as unused product. The empty and clean containers are to be reused in conformity with regulations.

14 TRANSPORT INFORMATION

The material is not classified as dangerous in terms of transport regulations and no restrictions apply for land/sea/air transportation. Avoid dust spreading.

15 REGULATORY INFORMATION

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

National regulations
Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.

EU legislation
Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment
This product is exempted from REACH registration in accordance with Annex V.7. A hazard assessment has been conducted under the umbrella of the European Bentonite Association (EUBA) and the outcome was that Bentonite is not a hazardous substance. Therefore, in absence of identified hazards, the substance is safe and presents no risk.

16 OTHER INFORMATION

Depending on the handling and use (grinding, drying, bagging), airborne respirable dust may be generated. Dust contains respirable crystalline silica. 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 dust should be monitored and controlled. The product should be handled using methods and techniques that minimize or eliminate dust generation.

The product contains less than 1% w/w RCS (respirable crystalline silica) as determined by the SWERF method. The respirable crystalline silica content can be measured using the "Size-Weighted Respirable Fraction – SWERF" method. All details about the SWERF method is available at www.crystallinesilica.eu Data is based on our latest knowledge but does not constitute a guarantee for a guarantee for any specific product features and does not establish a legally valid contractual relationship.

Abbreviations and acronyms

ACGIH	American Conference of Industrial Hygienists	PBT	Persistent bioaccumulative toxic
DMEL	Derived maximum effect level	PEL	Permissible exposure limit
DNEL	Derived no effect level	PNEC	Predicted no effect level
EC50	Median effect concentration	REL	Recommended exposure limit
EU	European Union	SCOEL	Scientific Committee on Occupational Exposure Limits
EWC	European waste catalogue	SDS	Safety data sheet
IARC	International agency for Research on Cancer	STOT	Specific target organ toxicity
LC50	Median lethal concentration	STOT RE	Specific target organ toxicity upon repeated exposure
LD50	Medial lethal dose	TLV	Threshold limit value
NIOSH	National Institute of Occupational Safety & Health	TWA	Time-Weighted Average
OECD	Organisation for Economic Co-operation and Development	vPvB	Very persistent very bioaccumulative
OEL	Occupational exposure level		
OSHA	Occupational Safety and Health Administration		

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Relevant R-phrases and/or H-statements
Not relevant as Product is not classified under REACH or CLP

Revision
Based on new available information, sections 11 & 12 have been amended. Other minor changes (mainly format) have been made to comply with the ECHA Guidance on "How to compile a SDS" (September 2011)

Training advice and other relevant information
Training 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.

Appendix 1

Occupational Exposure Limits in mg/m3 8 hours TWA dust		
Member State	**Non specified (inert) dust INHALABLE**	**Non specified (inert) dust RESPIRABLE**
Austria	15	6
Belgium	10	3
Bulgaria		4
Denmark	10	5
Finland	10	/
France	10	5
Germany	10	3
Greece	10	5
Ireland	10	4
Italy	10	3
Lithuania		10
Luxembourg	10	6
Netherlands	10	5
Norway	10	5
Portugal	10	5
Romania		10
Slovakia	10	
Spain	10	3
Sweden		5
Switzerland		6
UK	10	4

Appendix 2

CLP Regulation (EC No 1272/2008 incorporating the "Globally Harmonised System (GHS) of Classification and labelling of Chemicals"
Parameter 1 of the GHS states that "The GHS covers all **hazardous** chemicals. The mode of application of the hazard communication elements of the GHS (e.g. labels, safety data sheets) may vary by product category or stage in the life cycle. Target audiences for the GHS include consumers, workers, transport workers, and emergency responders. "

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