SAFETY DATA SHEET- ILMENITE

According to regulation (EC) No 2020/878

Valentine Clays
MANUFACTURED IN THE HEART OF THE POTTERIES

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

1.1 Product Identifier

Ilmenite (Fine)

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

Use of the substance/mixture

Substance used as such, in formulation or in formulation of products such as Ceramics.

1.3 Details of the supplier of the safety data sheet

Valentine Clays LTD

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Stoke on Trent

ST4 2FJ

t: +44 (0)1782 271200

e: sales@valentineclays.co.uk

w: www.valentineclays.co.uk

1.4 Emergency Telephone Number

+44 (0)1782 271200

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation (EC) No. 1272/2008 (CLP)

Physical and chemical hazards- Not classified

Human health- Not classified

Environment- Not classified

Full text of H-phrases- see section 16

ClassificationaccordingtoDirective67/548/EEC or1999/45/EC

Not classified

Full text of R-phrases- see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2 Label Elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

No labelling applicable

2.3 Other Hazards

Other hazards not contributing to the classification. Chronic (long-term) health hazard. This product contains crystalline silica. Repeated inhalation of dusts containing crystalline silica over time can cause lung disease and cancer. Avoid dust creation. Do not inhale dusts from this product. Use a vacuum or wet clean-up method to remove dusts. In common many minerals contains low levels of naturally occurring radioactive elements of the uranium and thorium series. The main radiological hazard from the product

is internal exposure to alpha particles given off in small amounts by inhaled dust. Suitable dust control measures shall be employed to ensure occupational exposure to generated dust and alpha particles are kept as low as reasonably achievable. Low level gamma radiation from bulk or bagged stockpiles of the product may present a lesser, external hazard.

Section 3: Composition/information on ingredients

3.1 Chemical Composition

Name	CAS-No.	EC. No.	%	Classification (67/548/EEC)	Classification (1272/2008/EC)
Ilmenite	103170-28-1		93 - 96	Not Classified	Not Classified
Rutile (TiO2)	1317-80-2	215-282-2	0.5 - 5	Not Classified	Not Classified
Zircon	149040-68-2	239-019-6	0.1 - 1	Not Classified	Not Classified
Staurolite	12182-56-8		<15	Not Classified	Not Classified
Quartz	14808-60-7	238-878-4	<0.1	Not Classified	Not Classified
Monazite	1306-41-8		<0.1	Not Classified	Not Classified

Full text of R-H-and EUH-phrases- see section16

Section 4: First Aid Measures

4.1 Description of first aid measures

After Inhalation- Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

After Skin Contact- Wash skin with soap and water. Get medical attention if irritation persists after washing.

After Eye Contact- Make sure to remove any contact lenses from the eyes before rising. Rinse eye with water. immediately. Get medical attention if any discomfort continues After Ingestion- Rinse mouth thoroughly. Get medical attention if any discomfort continues.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation- May cause coughing. Irritation to respiratory tract.

Ingestion- No specific symptoms noted.

Skin contact- No specific symptoms noted.

Eye contact- May cause eye irritation. Redness of the eye tissue.

4.3 Indication of any immediate medical attention and special treatment needed

Treat Symptomatically

Section 5: Firefighting Measures

5.1 Extinguishing Media

Suitable extinguishing media

All extinguishing media allowed.

Unsuitable Extinguishing Media

None

5.2 Special Hazards arising from the substance or mixture

Fire Hazard- The product is not flammable.

Explosion Hazard- No explosive properties known.

Reactivity- Stable under normal conditions of handling and storage.

5.3 Advice for Firefighters

Fire Fighting Instructions

Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire/ Prevent fire-fighting water from entering environment.

Protection During Fire Fighting

Do not enter fire area without proper protective equipment, including respiratory protection

Section 6: Accidental Release Measures

6.1 Personal Precautions, protective equipment and emergency procedures

General measures: Keep public away from danger area. See section 8.2. avoid dust production.

For Non-Emergency Personnel

Evacuate personnel to a safe area

For Emergency Responders

Equip clean up crew with proper protection. Ventilate area.

Not specified.

6.2 Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal. Avoid dust production.

6.4 Reference to other sections

See section 8 and 13 for more information.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Precautions for safe handling

Do not breathe dust. Wash hands plentifully and other exposed areas with water after handling. Remove contaminated clothing and shoes. Wash clothing before re-using.

Packaging's

Even those that have been emptied, will retain product residue. Always obey safety warnings and handle empty packages as if they were full. Avoid all contact with this substance.

Hygiene Measures

When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothing and shoes.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in dry, cool, well-ventilated area. Keep away from food, drink and animal feeding stuffs.

Incompatible products

Strong bases. Strong acids

Incompatible materials

Remove all sources of ignition. Protect material from direct sunlight.

7.3 Specific end use(s)

The identified uses for this product are detailed in section 1.2

Section 8: Exposure Controls/ Personal Protection

8.1 Control Parameters

Chemical Name	United Kingdon
Quartz	WEL TWA: 0.1 mg/m3
Quartz	WEL STEL: 0.3mg/m3 (calculated)

Exposure Limits

Follow workplace regulatory exposure limits for all types of airborne dust (e.g. total dust, respirable dust).

Ingredients Comments

Dust contains respirable silica. Prolonged and/or massive inhalation of respirable 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 minimise or eliminate dust generation. The product contains less than 1% w/w RCS (respirable crystalline silica) as determine 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 are available at www. crystallinesilica.eu

8.2 Exposure Controls

Appropriate Engineering Controls

Use as far as possible in a closed system. Provide a regular control of the atmosphere. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Local exhaust and general ventilation must be adequate to meet exposure standards. Please refer to the annex (exposure scenarios).

Hand Protection

Use gloves resistant to chemical products corresponding to EN 374:3. Take advice to gloves' manufacturer.

Respiratory Protection

If necessary, adequate dust extraction should be provided to minimise inhalation of the product otherwise if dusty conditions exist, suitable respiratory protective device (e.g 3M 8800 dust mask) should be worn.

Eye Protection

Wear safety glasses with side shields according EN 166.

Skin and Body Protection

Wear closed protective clothing.

Respiratory Protection

Use respiratory protection mask according to EN 140 or EN 405 with filter type P3 according to EN 143:2000 or FFP3 according to EN 149:2001.

Environmental Exposure Controls

Avoid release to the environment.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state- Solid Powder

Colour- Black

Odour- odourless

Odour threshold- Not applicable

pH- Neutral

Relative evaporation rate (butyl acetate=1)- No data available

Melting point- >1,000 °C

Freezing point- No data available

Boiling point- No data available

Flash point- Not flammable

Self-ignition temperature- Not applicable

Decomposition temperature- No data available

Flammability (solid, gas)- Not flammable

Vapour pressure- Not applicable

Relative vapour density at 20 °C- No data available

Relative density- 2400 - 2700 kg/m3

Density- 4.1-4.6 at 20°C

Solubility- Material insoluble in water

Log Pow- Not Applicable

Log Know- Not Applicable

Viscosity, kinematic- Not Applicable

Viscosity, dynamic- Not Applicable

Explosive properties- Not explosive

Oxidising properties- No data available

Explosive limits- Not applicable

9.2 Other Information

No additional information available.

Section 10: Stability and Reactivity

10.1 Reactivity

No specific reactivity hazards associated with this product

10.2 Reactivity

Stable under normal conditions of handling and storage.

10.3 Possibility of Hazardous Reactions

Not established

10.4 Conditions to Avoid

Not relevant

10.5 Incompatible Materials

Incompatible with acids (e.g. Nitic Acid)

10.6 Hazardous Decomposition Products

May evolve toxic gases if heated to decomposition.

Section 11: Toxicological Properties

11.1 Information on toxicological effects

Acute toxicity- Based on available data, the classification criteria are not met.

Skin corrosion/irritation Serious- Based on available data, the classification criteria are not met.

Eye damage/irritation- Based on available data, the classification criteria are not met.

Respiratory or skin- Based on available data, the classification criteria are not met.

Sensitisation Germ cell- Based on available data, the classification criteria are not met.

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

Reproductive toxicity- Based on available data, the classification criteria are not met.

STOT – single exposure- Ilmenite sand contains a small amount of respirable crystalline silica (up to 0.01%) and precautions should be taken to avoid inhaling the dust.

STOT – repeated exposure- Radiation: Ilmenite sand contains low levels of naturally occurring radioactive elements of the uranium and thorium series. It has typical specific activities of 0.05 to 2.1 Bq/g (thorium-232) and 0.1 to 0.3 Bq/g (uranium-238). Low level gamma radiation from bulk or bagged stockpiles of ilmenite sand can increase gamma levels slightly above normal background.

Aspiration hazard- Based on available data, the classification criteria are not met.

Section 12: Ecological Information

12.1. Toxicity

No additional information available.

12.2. Persistence and Degradability

Not established.

12.3. Bio Accumulative Potential

Not established.

12.4. Mobility in Soil

No additional information available.

12.5. Results of PBT and vPvB Assessment

No additional information available.

12.6. Other Adverse Effects

Avoid release to the environment.

Section 13: Waste Disposal

13.1. Waste treatment methods

Waste disposal recommendations- Dispose of this material in a safe manner and in accordance with local authority requirements.

Ecology (waste materials)- Avoid release to the environment.

Section 14: Transport Information

14.1. UN number

The product is not covered by international regulation on transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2. UN proper shipping name

Not classified for transportation.

14.3. Transport hazard class(es)

Not classified for transportation.

14.4. Packing group

Not classified for transportation.

14.5. Environmental hazards

Other information: No environmental hazards known with this product.

14.6. Special precautions for user

Not classified for transportation.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

Section 15: Regulatory Information

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

EU Regulations

No REACH Annex XVII restrictions. Contains no REACH candidate substance.

National Regulations

Ensure all national/local regulations are observed.

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulations (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out.

Section 16: Other Information

This data sheet is provided under CLP and REACH Regulation and is not intended to constitute an assessment of workplace risk associated with product(s) used as required under any other Health and Safety Regulation.

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.

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