SAFETY DATA SHEET

Revision: 2.0 Date: 09/06/2023

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

Calcined Kaolin Clay
White Armor®

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

1.1 Product identifier

Product Name	White Armor® Granules
Trade names	White Armor® Granules
Chemical Name	Calcined Kaolin Clay
CAS No.	92704-41-1 14808-60-7
EINECS No.	296-473-8 238-878-4
Nanoform	The product does not contain nanoparticles.
REACH Registration No.	Not applicable

1.2 Recommended use of the chemical and restrictions on use

Identified Use(s)	Granules - Building Materials
Uses Advised Against	Anything other than the above.

1.3 Details of the supplier of the safety data sheet

Manufacturer	U.S. Silica Company 24275 Katy Freeway, Suite 600 Katy, TX 77494 U.S.A.
Telephone	+1-844-468-7263
Fax	+1-281-394-9017
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: +1-844-468-7263 (08:00– 17:00 CST)

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	White Armor® Granules
Contains:	Calcined Kaolin Clay (< 1% Crystalline Silica – Quartz (Respirable Dust))
Hazard Pictogram(s)	None assigned.

	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.
Calcined Kaolin Clay	95-100%	92704-41-1	296-473-8
Contains: Quartz (Respirable Dust), <1 Fine Fraction Crystalline silica per SWeRF calculation	< 1	14808-60-7	238-878-4

This substance is not registered under REACH as it is either exempt under Annex V or below the 1 ton/year threshold.

3.2 Mixtures - Not applicable

SECTION 4: FIRST AID MEASURES

4.1	**Description of first aid measures**	
	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	None.
5.2	**Special hazards arising from the substance or mixture**	Non-flammable, Non-combustible, Not explosive.
5.3	**Advice for fire-fighters**	Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

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**	No special requirements.
6.3	**Methods and material for containment and cleaning up**	Vacuum clean spillage or wet sweep. Caution: wet product will be slippery. Avoid generation of dust. 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**	Atmospheric concentrations should be minimised and kept as low as reasonably practicable below the occupational exposure limit.
	Storage life	Stable under normal conditions. Store in a dry place.
	Incompatible materials	Keep away from: Strong oxidising agents - fluorine, chlorine trifluoride, and oxygen difluoride and hydrofluoric acid.
7.3	**Specific end use(s)**	See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

The UK HSE (EH40) recommends the following limits for dusts: 10 mg/m3 (8hr TWA) total inhalable dust; 4 mg/m3 (8hr TWA) total respirable dust.

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Silica, Respirable Crystalline	-	-	0.1	-	-	WEL: Workplace Exposure Limit (UK HSE EH40)

Note: For the equivalent limits in other countries, please consult a competent occupational hygienist or the local regulatory authority

8.1.2 Biological limit value

Not applicable.

8.1.3 PNECs and DNELs

Not applicable. A REACH chemical safety assessment has not been carried out.

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 protective equipment (PPE)

Use personal protective equipment as required. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Avoid dust generation. Do not breathe dust.

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	White Granules
Odour	Odourless
Odour threshold	Not available.
pH	6-8
Melting point	~3090°F/1700°C
Initial boiling point and boiling range	4046°F/2230°C
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.
Solubility(ies)	<1% in Water Soluble in: Hydrofluoric Acid
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not applicable, Solid.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
Particle characteristics	Not available

9.2 Other information None.

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: Strong oxidising agents - fluorine, chlorine trifluoride, and oxygen difluoride.
10.5 Incompatible materials	Reacts violently with - Strong oxidising agents - fluorine, chlorine trifluoride, and oxygen difluoride and hydrofluoric acid. May cause fire.
10.6 Hazardous decomposition product(s)	Soluble in: Hydrofluoric Acid release of toxic and corrosive gases/vapours: silicon tetrafluoride.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Ingestion	Based upon the available data, the classification criteria are not met.
Inhalation	Based upon the available data, the classification criteria are not met.
Skin Contact	Based upon the available data, the classification criteria are not met.

	Eye Contact	Based upon the available data, the classification criteria are not met.
	Skin corrosion/irritation	Based upon the available data, the classification criteria are not met.
	Serious eye damage/irritation	Based upon the available data, the classification criteria are not met.
	Respiratory or skin sensitization	Based upon the available data, the classification criteria are not met.
	Germ cell mutagenicity	Based upon the available data, the classification criteria are not met.
	Carcinogenicity	Based upon the available data, the classification criteria are not met.
	Reproductive toxicity	Based upon the available data, the classification criteria are not met.
	STOT - single exposure	Based upon the available data, the classification criteria are not met.
	STOT - repeated exposure	Based upon the available data, the classification criteria are not met.
	Aspiration hazard	Based upon the available data, the classification criteria are not met.
11.2	**Information on other hazards**	
11.2.1	Endocrine disrupting properties	This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
11.2.2	**Other information**	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. 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 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).

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Toxicity**	Not classified as a Marine Pollutant.
12.2	**Persistence and degradability**	Not applicable.
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	**Endocrine disrupting properties**	This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
12.7	**Other adverse effects**	None known.

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	**Maritime transport in bulk according to IMO instruments**	Not applicable
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**	
	Wassergefährdungsklasse (Germany)	Water hazard class: non-hazardous to water (nwg)
15.2	**Chemical Safety Assessment**	A REACH chemical safety assessment has been carried out..

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New SDS Regulation 2020/878 format, all sections have been updated to include new information. Please review SDS with care.

References:
Existing Safety Data Sheet (SDS).
Existing ECHA registration(s) for Calcined Kaolin Clay (CAS No. 92704-41-1); Quartz (CAS No, 14808-60-7)

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
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

Disclaimers
The information and recommendations contained herein are based upon data believed to be up to- date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by purchase, resale, use or exposure to our silica. Customers and users of silica must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.