## <u>Certificate of Analysis</u> -Indian Kaolin Clay

Date: Batch No.: 4562405

Best Before Date: November 2027

Colour: White Odour: Odourless

Description	Specification	<u>Result</u>
Beschphen		
Brightness (%)	88 +/- 1	89.7
pH (10% solution)	7.7 – 8.5	8.45
Specific Gravity	2.5 - 2.6	2.6
Moisture (%)	2.0 % max	0.79
Oil absorption (gm/100gm)	30 - 40	33
$AI_2O_3 + SiO_2$	82.2 +/-1 % min	82.23
TiO2 + Fe2O3	1.5 % max	1.42
Loss of Ignition (%)	14 % max	13.59

Test Result: PASS

## Section 1

India
1332-58-7
310-194-1
25070010

### Section 2

### Manufacturing Flow Guide

Kaolin is a soft white clay composed of fine grain plate like particles. Kaolin is quarried from open pit mines using either excavators or high pressure water hoses. The required grades are initially selected, with further selection and refining happening throughout the production process. The kaolin ultimately passes through a series of refining and milling processes to achieve the required particle size.



#### 10-01-2022

### SAFETY DATA SHEET Indian Kaolin Clay

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier			
Product name	Indian Kaolin Clay		
Chemical name	!Hydrated aluminium silicate		
Synonyms; trade names	China clay, Kaolin		
REACH registration notes	Exempted in accordance with REACH Annex V.7		
CAS number	1332-58-7		
EC number	310-194-1		
1.2. Relevant identified uses of the substance or mixture and uses advised against!			
Identified uses	A functional additive		
1.3. Details of the supplier of the safety data sheet			
Madar Corporation Limited Email: madarcorporation.co.uk			

1.4 Emergency Telephone 01425 655 555

#### SECTION 2: Hazards identification

2.1. Classification of the substance or mixture			
<u>Classification</u>			
Physical hazards	Not Classified		
Health hazards	Not Classified		
Environmental hazards	Not Classified		
Human health	This product does not meet the criteria for classification as hazardous as defined in the Regulation EC 1272/2008. 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.		
Environmental	The product is not expected to be hazardous to the environment.		

Physicochemical	This product is an inorganic substance and does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH. This product should be handled with care to avoid dust generation.			
2.2. Label elements				
EC number	310-194-1			
Hazard statements	NC Not Classified			
2.3. Other hazards				
This substance is not classifier	d as PBT or vPvB according to current EU criteria.			
SECTION 3: Composition/infor	mation on ingredients			
3.1 Substances				
KAOLIN	100%			
CAS number: 1332-58-7	EC number: 310-194-1			
Classification Not Classified				
The full text for all hazard state Product name REACH registration notes	ements is displayed in Section 16. White Clay.AgM.C10 Exempted in accordance with REACH Annex V.7 1332-58-7			
CAS number	Impurities: Quartz: CAS-No · 1/808-60-7 EC No · 238-878-4 This product contains			
EC number	less than 1% quartz (fine fraction)			
Composition comments				
SECTION 4: First aid measure	S			
4.1. Description of first aid mea	asures			
General information	No acute and delayed symptoms and effects are observed.			
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.			
Ingestion	Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.			
Skin contact	Wash skin thoroughly with soap and water. Use suitable lotion to moisturise skin.			
Eye contact	Do not rub eye. Rinse with copious quantities of water and seek medical attention if irritation persists.			
4.2. Most important symptoms and effects, both acute and delayed				
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.			
4.3. Indication of any immediate medical attention and special treatment needed				
Notes for the doctor	No specific recommendations.			
SECTION 5: Firefighting meas	ures			

#### 5.1. Extinguishing media

Suitable extinguishing media This product is non-combustible. No specific extinguishing media is needed.

19-20 Sandleheath Industrial Estate, Fordingbridge, Hampshire, SP6 1PA, UK

Tel: 01425 655555 Email: technical@madarcorporation.co.uk

5.2. Special hazards arising from the substance or mixture					
Specific hazards	zards Non combustible. No hazardous thermal decomposition.				
5.3. Advice for firefighters					
Protective actions during firefighting	No specific fire-fighting protection is required. Use an extinguishing agent suitable for the surrounding fire.				
SECTION 6: Accidental release	e measures				
6.1. Personal precautions, prot	ective equipment and emergency procedures				
Personal precautions	Avoid airborne dust generation, wear personal protective equipment in compliance with national legislation.				
6.2. Environmental precautions	2				
Environmental precautions	Do not discharge into drains or watercourses or onto the ground.				
6.3. Methods and material for o	containment and cleaning up				
Methods for cleaning up	Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation. Wear personal protective equipment in compliance with national legislation.				
6.4. Reference to other sections					
Reference to other sections	For personal protection, see Section 8. For waste disposal, see Section 13.				
SECTION 7: Handling and storage					
7.1. Precautions for safe handling					
Usage precautions	Avoid airborne dust generation. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. Handle packaged products carefully to prevent accidental bursting. If you require advice on safe handling techniques, please contact your supplier. Do not to eat, drink and smoke in work areas; wash hands after use; remove contaminated clothing and protective equipment before entering eating areas.				
7.2. Conditions for safe storage	e, including any incompatibilities				
Storage precautions	Store in a dry covered area. 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.				
7.3. Specific end use(s)					
Usage description	If you require advice on specific uses, please contact your supplier.				
SECTION 8: Exposure Control	s/personal protection				
8.1. Control parameters					
Occupational exposure limits					
Long-term exposure limit (8-hour TWA): WEL 2 mg/m <sup>3</sup> respirable dust					
Inorganic dust					
Long-term exposure limit (8-hour TWA): WEL 4 mg/m <sup>3</sup> respirable dust					
Quartz					
Long-term exposure limit (8-nour LVVA): WEL 0,1 mg/m <sup>3</sup> respirable dust WEL = Workplace Exposure Limit					
8.2. Exposure controls					

Appropriate engineering controls	Minimise airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield. Contact lenses should not be worn when working with this product.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). Rubber (natural, latex).
Other skin and body protection	No specific requirement. Appropriate protection (e.g. protective clothing, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin.
Hygiene measures	When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Use appropriate skin cream to prevent drying of skin.
Respiratory protection	In case of prolonged exposure to airborne dust concentrations, wear a respiratory protective equipment that complies with the requirements of European or national legislation.

### SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties			
Appearance	Powder		
Colour	White/off-white.		
Odour	Almost odourless.		
Relative density	2.6 - 2.7 g/cm <sup>3</sup>		
Solubility(ies)	Insoluble in water.		
9.2. Other information			
Other information	No information required.		
SECTION 10: Stability and read	ctivity		
10.1. Reactivity			
Reactivity	There are no known reactivity hazards associated with this product.		
10.2. Chemical stability			
Stability	Stable at normal ambient temperatures and when used as recommended.		
10.3. Possibility of hazardous reactions			
Possibility of hazardous reactions	Not applicable.		
10.4. Conditions to avoid			
Conditions to avoid	No particular incompatibility.		
10.5. Incompatible materials			
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.		
10.6. Hazardous decomposition products			
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Hazardous decomposition Does not decompose when used and stored as recommended. products

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General information	This product has low toxicity. Only large quantities are likely to have adverse effects on human health.		
Inhalation	Dust in high concentrations may irritate the respiratory system.		
Ingestion	No harmful effects expected from quantities likely to be ingested by accident.		
Skin contact	Prolonged contact may cause dryness of the skin.		
Eye contact	Particles in the eyes may cause irritation and smarting.		
SECTION 12: Ecological Inform	nation		
Ecotoxicity	The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.		
12.1. Toxicity			
Acute toxicity - fish	LC <sub>50</sub> , 96 hours: >1000 mg/l, Fish		
Acute toxicity - aquatic invertebrates	EC <sub>50</sub> , 48 hours: >1000 mg/l, Daphnia magna		
Acute toxicity - aquatic plants	IC <sub>50</sub> , 72 hours: >1000 mg/l, Algae		
12.2. Persistence and degrada	bility		
Persistence and degradability	The product is not biodegradable.		
12.3. Bioaccumulative potentia	<u>l</u>		
Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.		
<u>12.4. Mobility in soil</u>			
Mobility	The product is insoluble in water.		
12.5. Results of PBT and vPvE	assessment		
Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.		
12.6. Other adverse effects			
Other adverse effects	None known.		
SECTION 13: Disposal conside	erations		
13.1. Waste treatment method	<u>s</u>		
General information	This mineral can be disposed of as a non toxic/inactive material in approved landfill sites in accordance with local regulations. Dust formation from residues in packaging should be avoided and suitable worker protection assured. Store used packaging in enclosed receptacles. Recycling and disposal of packaging should be carried out in compliance with local regulations. The re-use of packaging is not recommended. Recycling and disposal of packaging should be carried out by an authorised waste management company.		
Disposal methods	Where possible, recycling is preferable to disposal. Can be disposed of in compliance with local regulations. 20 Sandleheath Industrial Estate, Fordingbridge, Hampshire, SP6 1PA, UK Tel: 01425 655555 Email: technical@madarcorporation.co.uk Page 7 of 12		

#### SECTION 14: Transport information

General

No special precautions. The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

No information required.

14.4. Packing group

No information required.

#### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant No.

14.6. Special precautions for user

Not applicable.

#### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to No information required. Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

National regulations	EH40/2005 Workplace exposure limits. Health and Safety at Work etc. Act 1974 (as amended). The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended)
	amended).

EU legislation Exempted in accordance with REACH Annex V.7

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

#### General information

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 crystalline silica (fine fraction). Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers. 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. 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 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. Health & Safety Executive: Detailed reviews of the scientific evidence on the health effects of crystalline silica have been published by HSE (Health and Safety Executive, UK) in the Hazard Assessment Documents EH75/4 (2002) and EH75/5 (2003). The HSE points out on its website that "Workers exposed to fine dust containing quartz are at risk of developing a chronic and possibly severely disabling lung disease known as "silicosis"." In addition to silicosis, there is now evidence that heavy and prolonged workplace exposure to dust containing crystalline silica can lead to an increased risk of lung cancer. The evidence suggests that an increased risk of lung cancer is likely to occur only in those workers who have developed silicosis. .

Revision date	10/01/2022
Reason	Updated product information
Revision	1
SDS number	Clay01

Such information is to the best of!  $\geq \neq \infty$  knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

### Allergens

Kaolin is a natural mineral that occurs in nature and has not been chemically modified. As such our Kaolin does not contain any allergens. Furthermore, no allergens or allergenic substances are added during any stage of the production process of our Kaolin. To the best of our knowledge none of the materials used during the production of our Kaolin, contains or is contaminated with any known allergens. No routine presence testing is performed since the presence of any allergens in our Kaolin is not considered a reasonable possibility. Our understanding of allergens includes: animal fats, barley, beef, celery, cereals containing gluten, cocoa, coconut, corn, crustaceans, duck, egg, enzymes, fish, fruit, gelatin, gluten, lactose, lamb, latex, lupin, maize, milk, molluscs, mustard, MSG, nuts, nut oils, oats, offal, peanuts, phenylalanine, poppy seeds, pork, poultry, rye, sesame seeds, other seeds, seed oil, soya, sugar, sulphites, tree nuts, vegetables, wheat, yeast, yellow #5, vanillin (or the extracts or derivatives of any of the prior). With respect to cosmetics, none of the kaolin produced by our supplier naturally contains any detectable quantity of the allergens listed in European Council Directive 76/768/EEC and subsequent amendments or Regulation (EC) No 1223/2009, which replaced it.

### Carcinogenic, Mutagenic or toxic to Reproduction (CMR)

Kaolin is a natural mineral that occurs in nature and has not been chemically modified. As such Kaolin naturally does not contain any substances classified as CMR. Furthermore, no substances classified as CMR are added during any stage of the production process of our Kaolin. To the best of our knowledge none of the materials used during the production of our Kaolin, contains or is contaminated with any substances classified as CMR. No routine presence testing is performed since the presence of substances classified as CMR in our Kaolin is not considered a reasonable possibility.

### Cosmetics

Kaolin does not appear among the prohibited substances listed in Annex II of Regulation (EC) N1223/2009 on cosmetics products, nor is it among the substances in Annex III that can only be used with restrictions.

### Genetically Modified Organisms (GMO)

Kaolin is a natural mineral that occurs in nature and has not been chemically modified. Kaolin is not a living organism and so has no genes to manipulate. Thus, none of our Kaolin contains any GMO's. Furthermore, no GMO's are added during any stage of the production process of our Kaolin. To the best of our knowledge none of the materials used during the production of our Kaolin, contains or is contaminated with any GMO's. No routine presence testing is performed since the presence of GMO's in our Kaolin is not considered a reasonable possibility.

### IFRA50

Kaolin is a natural mineral that occurs in nature and has not been chemically modified. Our Kaolin contains no additives nor do they contains any GMO's or have undergone irradiation. The production process does not utilise solvents nor volatile organics as raw materials.

### Origin

Kaolin is a natural mineral that occurs in nature and has not been chemically modified. It is soured from naturally kaolin mineral deposits in India.

### REACh (Europe & UK)

Kaolin is a natural mineral that occurs in nature and has not been chemically modified. Kaolin is thus exempt under Europe and UK REACH (Annex V, paragraph 7). Annex V exemptions: "The following substances which occur in nature, if they are not chemically modified. Minerals, ores, ore concentrates, raw and processed natural gas, crude oil, coal." Kaolin falls under this exemption and is therefore not registered.

### **Soil Association**

Kaolin is a natural mineral that occurs in nature and has not been chemically modified. Our Kaolin contains no additives nor do they contains any GMO's or have undergone irradiation. The production process does not utilise solvents nor volatile organics as raw materials. To the best of our understanding "organic certification" are debated by various agencies, and thus it is for each user of our Kaolin to determine how regulations relate to their individual application.

### Vegan

Kaolin is a natural mineral that occurs in nature and has not been chemically modified. There is no contact whatsoever with any product of animal origin and or animal derivatives.

## Indian Kaolin Clay Technical Data Sheet

### **General Information**

Kaolin, also called china clay, is a soft white clay that is an essential ingredient in the manufacture of china and porcelain and is widely used in the making of paper, rubber, paint, and many other products.

White cosmetic clay, also known as white kaolin clay, is a very fine and light clay that has natural absorbency properties

Light Kaolin is a hydrated aluminium silicate freed from most of its purities and dried. It does not contain a dispersing agent.

### **Mineralogical Composition**

A light white powder free from gritty particles, odourless and fine powdery clay.

Typical Physical Analysis		Typical Chem	ical Analysis	
Bulk Density Oil Absorption Moisture Specific Gravity	0.50 +/- 0.02 gm/cc 45 g/100g <2.0 % 2.5	SiO <sub>2</sub> Al <sub>2</sub> O <sub>3</sub> Loss of Ignitio pH	'n	57 +/-2 % 33 +/-2 % 14.0 +/-1 7.5 +/- 0.5
Typical Particle Size Analysis		Typical Optica	al Analysis	
Top cut D97 Median particle size D50 Lower cut D10	97 μ 23 μ 6 μ	Whiteness	L*	88

### <u>Other</u>

Storage Conditions	Dry storage
Shelf Life	5 yrs. from manufacture date
Packaging	Dry powder, 25Kg bags

Version 1.0 Dated: 10.January 2022