



SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

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

1.1. Product identifier

Product name : MULCOA® 47 / MULGRAIN® 47

Calcined kaolin

Synonyms: calcined clay, chamotte, metakaolin, grog

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

The product has a variety of industrial and professional uses and is notably used in the manufacture of : ceramics (refractories, sanitary ware, tiles, table ware, enamels, porcelain, etc...), paper and board, fibreglass, paint, plastic & rubber, adhesives and sealants, building materials & cement, animal nutrition, fertilisers & agricultural products and cosmetics & pharmaceuticals.

1.3. Details of the supplier of the safety data sheet

Registered company name : Imerys Refractory Minerals.

Address : 100 Mansell Ct. E, Ste 615.GA 30076.Roswell.USA.

Telephone : +1 (770) 225-7923. Fax : .

product_stewardship_irm@imerys.com

www.imerys.com

1.4. Emergency telephone number : +1 (229) 924-4461.

Association/Organisation : After 5PM weekdays, weekends and holidays: +1 (229) 815-1036.

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

This substance does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

This substance does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

This substance does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

No labelling requirements for this substance.

2.3. Other hazards

The substance does not fulfil the PBT or vPvP criteria in accordance with annexe XIII of the REACH regulations EC 1907/2006.

No other hazards identified.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Composition :

Identification	(EC) 1272/2008	Note	%
INDEX: 92704_41_1 CAS: 92704-41-1 EC: 296-473-8 REACH: Exempted - Annex V.7 CALCINED KAOLIN			100%

Information on ingredients :

Kaolin calcined is a UVCB substance sub-type 4.

This product contains less than 1% of quartz-fine fraction (CAS: 14808-60-7; EC: 238-878-4) and less than 1% of cristobalite-fine fraction (CAS: 14464-46-1; EC: 238-455-4). Quartz-fine fraction and cristobalite fine fraction are self-classified as STOT RE1

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of exposure by inhalation :

Movement of the exposed individual from the area to fresh air is recommended.

In the event of splashes or contact with eyes :

Rinse with copious quantities of water and seek medical attention if irritation persists.

In the event of splashes or contact with skin :

No special first aid measures necessary.

In the event of swallowing :

No special first aid measures necessary.

4.2. Most important symptoms and effects, both acute and delayed

No acute and delayed symptoms and effects are observed.

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

No need for immediate medical attention; follow the advice given in section 4.1

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

No specific extinguishing media is needed.

Unsuitable methods of extinction

No restriction on the extinguishing media to be used.

5.2. Special hazards arising from the substance or mixture

None. The material is not flammable and it does not lead to hazardous thermal decomposition products.

5.3. Advice for firefighters

No specific fire-fighting protection is required.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Keep dust levels to a minimum. Minimise dust generation.

Ensure adequate ventilation.

Keep unprotected persons away.

Avoid contact with skin, eyes, and personal 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).

Take care of wet product on floor, which presents a slip hazard.

For first aid worker

Keep dust levels to a minimum. Minimise dust generation.

Ensure adequate ventilation.

Keep unprotected persons away.

Avoid contact with skin, eyes, and personal 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).

Take care of wet product on floor, which presents a slip hazard.

6.2. Environmental precautions

No special environmental measures are necessary.

6.3. Methods and material for containment and 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

For more information on exposure controls/personal protection or disposal considerations, please refer to sections 8 and 13 of this safety data sheet.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the substance is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Keep dust levels to a minimum. Minimise dust generation.

Fire prevention :

Prevent access by unauthorised personnel.

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Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

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). Other suitable controls may include enclosure, isolation, water suppression. 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.

Shower and change clothes at end of work shift.

Regular cleaning with suitable cleaning devices.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the substance is used.

Do not wear contaminated clothing at home.

7.2. Conditions for safe storage, including any incompatibilities

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.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

If you require advice on specific uses, please contact your supplier.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

A European Binding OEL (Occupational Exposure Limit) for respirable crystalline silica dust is set at 0.1 mg/m³ in the Directive (EU) 2017/2398, measured as an 8-hour TWA (Time Weighted Average).

Maintain personal exposure below occupational exposure limits for dust (inhalable and respirable) as dictated in the national legislation.

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.

Personal protection measures, such as personal protective equipment

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Wear safety glasses with side-shields, or tight-fitting full-vision goggles in circumstances where there is a risk of penetrative eye injuries. Do not wear contact lenses.

- Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

For hands, appropriate protection (e.g. PVC, neoprene or natural rubber gloves) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session.

- Body protection

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Avoid breathing dust.

In case of prolonged exposure to airborne dust concentrations wear a respiratory protective equipment that complies with the requirements of European and national legislation. The use of a suitable particle filter mask type FFP1, FFP2 or FFP3 is recommended.

See EN 143: 2000 (Respiratory Protective devices – Particle filters) and EN149: 2001 (Respiratory protective devices - Filtering half masks to protect against particles).

- Thermal risks

The substance does not represent a thermal hazard, thus special consideration is not required.

Exposure controls linked to environmental protection

All ventilation systems should be filtered before discharge to atmosphere.

Avoid releasing to the environment. Contain the spillage.

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SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties****General information :**

Physical state :	Solid in granules.
Apparent bulk density (Loose packed) :	1.0 -- 2.0 kg/m ³
Color:	Grey
Odour:	Odourless

Important health, safety and environmental information

pH (aqueous solution) :	6 - 8
pH :	Not stated.
	Neutral.
Boiling point/boiling range :	Not relevant.
Flash point interval :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	2 - 3 g/cm ³
Water solubility :	Insoluble. <2 mg/l @20°C
	Method for determining the water solubility :
	Method A.6 (Water solubility) as described in Part A of the Annex to Regulation (EC)No 440/2008
Melting point/melting range :	> 450°C
Self-ignition temperature :	Not specified.
Decomposition point/decomposition range :	Not specified.
Explosive characteristics :	Not explosive
Evaporation rate :	Not applicable (solid with a melting point >450°C)
Flammability (solid, gas):	Not flammable
Explosive limits :	Non explosive
Vapour density :	Not applicable
Partition coefficient: n-octanol/water:	Not applicable
Viscosity :	Not applicable
Oxidising properties :	No oxidising properties (Based on the chemical structure, the substance does not contain a surplus of oxygen or any structural groups known to be correlated with a tendency to react exothermally with combustible material)

9.2. Other information

None

SECTION 10 : STABILITY AND REACTIVITY**10.1. Reactivity**

Inert, not reactive.

10.2. Chemical stability

This substance is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

No hazardous reaction.

10.4. Conditions to avoid

None, to our knowledge

10.5. Incompatible materials

None, to our knowledge

10.6. Hazardous decomposition products

None, to our knowledge

SECTION 11 : TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****11.1.1. Substances****Acute toxicity :**

CALCINED KAOLIN (CAS: 92704-41-1)	
Oral route :	LD50 > 5000 mg/kg Other guideline
Dermal route :	LD50 > 5000 mg/kg

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Other guideline

Inhalation route (Dusts/mist) :

LC50 > 2.19 mg/l
OECD Guideline 403 (Acute Inhalation Toxicity)**Skin corrosion/skin irritation :**

Kaolin calcined is not irritating to skin (OECD 404).

Serious damage to eyes/eye irritation :

Kaolin calcined is not irritating to eye (OECD 405).

Respiratory or skin sensitisation :

CALCINED KAOLIN (CAS: 92704-41-1)

Local lymph node stimulation test :

Non-Sensitiser.

OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

Germ cell mutagenicity :

CALCINED KAOLIN (CAS: 92704-41-1)

Mutagenesis (in vitro) :

Negative.

OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Carcinogenicity :

Read-across with the substance kaolin : Epidemiological studies covering a large number of workers did not reveal an explicit association between kaolin exposure and tumour formation.

Reproductive toxicant :

No data available.

Specific target organ systemic toxicity - single exposure :

No organ toxicity observed in acute tests.

Specific target organ systemic toxicity - repeated exposure :

Read-across with the substance kaolin : Prolonged and massive exposure to kaolin dust containing respirable crystalline silica may lead to pneumoconiosis. Results indicate that the severity of effects may increase with the amount of crystalline silica in the respirable dust.

Aspiration hazard :

No data available

SECTION 12 : ECOLOGICAL INFORMATION**12.1. Toxicity****12.1.1. Substances**

CALCINED KAOLIN (CAS: 92704-41-1)

Fish toxicity :

LC50 > 1000 mg/l

Species : Oncorhynchus mykiss

Duration of exposure : 96 h

OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity :

EC50 > 707.9 mg/l

Species : Daphnia magna

Duration of exposure : 48 h

OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity :

ECr50 > 1000 mg/l

Species : Raphidocelis subcapitata

Duration of exposure : 72 h

OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

Abiotic Degradation: The substance is inorganic and therefore will not undergo abiotic degradation

Biodegradation: The substance is inorganic and therefore will not undergo biodegradation.

12.3. Bioaccumulative potential

Not relevant for inorganic substances. Bioaccumulation is not expected.

12.4. Mobility in soil

Kaolin calcined is almost insoluble and thus presents a low mobility in most soils.

12.5. Results of PBT and vPvB assessment

The substance does not satisfy the PBT or vPvB criteria in accordance with annexe XIII of the REACH regulations EC 1907/2006.

12.6. Other adverse effects

No other adverse effects are identified.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the substance and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Dispose of waste in such a way to avoid dust generation. Where possible, recycling should be preferred to disposal

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

Dust formation from residues in packaging should be avoided and suitable worker protection assured.

SECTION 14 : TRANSPORT INFORMATION

Exempt from transport classification and labelling.

14.1. UN number

Not relevant

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14.2. UN proper shipping name

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Not relevant

14.3. Transport hazard class(es)

ADR : not classified

IMDG : not classified

ICAO/IATA : not classified

RID : not classified

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14.4. Packing group

Not applicable

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14.5. Environmental hazards

Not relevant

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14.6. Special precautions for user

Avoid any release of dust during transportation, by using air-tight tanks for powders and covered trucks for pebbles.

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SECTION 15 : REGULATORY INFORMATION

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2018/669 (ATP 11)

- Container information:

No data available.

- Particular provisions :

No data available.

15.2. Chemical safety assessment

Kaolin calcined is exempted from REACH registration in accordance with Annex V.7 of Regulation (EC) 1907/2006. Thus, no formal chemical safety assessment has been carried out for this substance by the supplier.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the substance and not as a guarantee of the properties thereof.

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, IARC confirmed its classification of Silica Dust, Crystalline, in the form of quartz and cristobalite.

In 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. Since a clear threshold for silicosis development cannot be identified, any reduction of exposure will reduce the risk of silicosis." (SCOEL SUM Doc 94-final, 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 paragraph below)

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

A source of information on how to manage the risks on respirable crystalline silica is the website <https://safesilica.eu/> . In addition, it provides a handy FAQs section, as well as information on the science behind crystalline silica.

Abbreviations :

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.