



SAFETY DATA SHEET

HAMONITE

The following Safety Data Sheet has been created according to the Regulation GHS Hazardous Chemical Information List - (safe work australia)

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

1.1. Product identifier HAMONITE

1.1.1. Dates and Modifier of the Safety Data Sheet

Creation Date	03/03/2023
Revision Date:	03/03/2028
Modifier	GAMECO

1.1.2. SDS (Safety Data Sheet) status:

Revision

1.2. Relevant identifier uses of the substances or mixture and uses advised against:

1.2.1. Relevant identified uses:

Usages of the product according to the ECHA (European CHemical Agency) - Guidance R.12 Use descriptor system - draft version 2.0
 SU10; 13+NACE C23.2+PC 10+PROC 1; 2; 3; 4; 5; 8a; 9; 13; 14; 19; 21; 22; 23; 24; 26+ERC 2; 3; 5+AC 12-1; 12-2
 Unshaped refractory material
 Restricted to industrial or professional users for application as safety or wear linings and maintenance of both in all industrial devices at temperatures > 1000°C.

1.2.2. Uses advised against:

Non relevant.

1.3. Details of the supplier of the safety data sheet:

1.3.1. Supplier:

AUSTRALIA :

Gameco Artisan Supplies.
 161 Parramatta Road, Auburn - NSW 2144 Australia

Phone: (02) 9648 5856 - Australia

1.3.5. E-mail:

For any precision about the content of this MSDS, please refer to the point 1.3.6.

1.3.6. National contact's name:

GAMECO-0296485856
www.artisansupplies.com.au

1.4. Emergency telephone number:

See enclosed annex for Emergency telephone

1.5. Opening hours (if not 24/24 h):

Non relevant.

SECTION 2: Hazards identification



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2.1 Classification of the substance or the mixture:

2.1.0. Substances linked to the Classification of the product

Silicic acid, sodium salt - (CAS Nr. 1344-09-8)

2.1.1. Classification according to Regulation:

GHS Hazardous Chemical Information List - (safe work Australia)

Skin Irrit. 2 - Skin irritation, hazard category 2; H315: Causes skin irritation.

Eye Dam. 1 - Serious eye damage / Eye irritation, hazard category 1; H318: Causes serious eye damage.

- 2.1.1.1 Other:

Non relevant.

2.1.3. Additional information:

Non relevant.

2.2. Label elements:

2.2.1.2. Signal word:

Danger

2.2.2.1. Symbol(s) in black/white or colour according to the Regulation:

GHS Hazardous Chemical Information List - (safe work Australia)

GHS05: Corrosion



2.2.8. Labelling according to the Regulation:

GHS Hazardous Chemical Information List - (safe work Australia)

Skin Irrit. 2; H315

Eye Dam. 1; H318

2.2.9.1. GHS, Precautionary statements — Prevention

P264: Wash ... thoroughly after handling.

P280: Wear protective gloves, protective clothing and eye protection.

2.2.9.2. GHS, Precautionary statements — Response

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

2.2.9.3. GHS, Precautionary statements — Storage

Non relevant.

2.2.9.4. GHS, Precautionary statements — Disposal

P501: Dispose of contents/containers in accordance with local regulation

2.3. Other hazards:

Unknown at that date.

2.3.1. SVHC (Substance of Very High Concern):

No.

2.3.2. CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

No.

2.3.3. PBT : Persistent, Bioaccumulative and Toxic

No.

2.3.4. vPvB: very Persistent very Bioaccumulative

No.

2.3.5. POP: Persistent Organic Pollutant

No.

2.3.6. Formation of air contaminants during hardening or processing:

No.

2.3.7. Dust explosion hazard (VDI 2263):



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Unknown at that date.

SECTION 3: Composition / Information on ingredients

3.1. Substance:

3.2. Mixture:

3.2.1. Non hazardous components

Component	CAS N° / EC N°	Weight %
Chamotte - Nr. REACH. 01-2119527779-22-xxx	CAS : 92704-41-1 Einecs : 296-473-8	>=25 <50
Aluminium oxide - Nr. REACH. 01-2119529248-35	CAS : 1344-28-1 Einecs : 215-691-6	>=10 <25

3.2.2. Hazardous components

Component	CAS N° / EC N°	Weight %
Silicic acid, sodium salt - Nr. REACH. 01-2119448725-31	CAS : 1344-09-8	>=10 <25
STOT SE 3; H335 - Skin Irrit.2; H315 - Eye Dam.1; H318 - Met.Corr. 1; H290	Einecs : 215-687-4	

SECTION 4: First aid measures

4.1. Description of first aid measures

4.1.1. Eyes:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

4.1.2. Skin:

Wash with soap and water, if irritation persists seek medical advice.
If skin irritation or rash occurs: Get medical advice/attention.

4.1.3. Ingestion:

Due to the physical form of the product, ingestion is considered an unlikely route of entry.
If swallowed, rinse mouth with water (only if the person is conscious).
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

4.1.4. Inhalation:

Remove to fresh air, seek medical advice.

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

Stinging to eyes
Stinging to skin
Symptoms: Pain, redness and blurred vision.
Severe causticity with the possibility of severe ocular lesions
Swallowing will have a severe caustic effect on the mouth and throat with a danger of perforation of the oesophagus and stomach
Dust may cause temporary irritation of upper respiratory tract and slight irritation of eyes and nose

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

Non relevant.

SECTION 5: Fire-fighting measures



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5.1. Extinguishing media

5.1.1. Suitable fire-fighting methods :

In case of fire use water based extinguishers or hosepipe.

5.1.2. Unsuitable extinguishing media:

Non relevant.

5.2. Special hazards arising from the substance or mixture

In standard storage conditions, non-combustible, non-explosive and non-flammable.

5.2.1. Hazardous decomposition products

None

5.3. Advice for firefighters

5.3.1. Personal precautions:

Personal precautions : see Section 8.

Wear standard Firefighter clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

6.1.1.1. Protective equipment:

Personal precautions : see Section 8.

6.1.1.2. Emergency procedures

Non relevant.

6.1.2. For emergency responders

Non relevant.

6.2. Environmental precautions

Non relevant.

Prevent access to water table, running or stagnant water, or drains.

6.3. Methods and material for containment and cleaning up

6.3.1. Appropriate containment techniques may include any of the following:

6.3.1. - (a) bunding, covering of drains;

Non relevant.

6.3.1. - (b) capping procedures.

Non relevant.

6.3.2. Appropriate advices on how to clean-up a spill. Appropriate clean-up procedures may include any of the following:

6.3.2. - (a) neutralisation techniques;

Non relevant.

6.3.2. - (b) decontamination techniques;

Non relevant.

6.3.2. - (c) adsorbent materials;

Non relevant.

6.3.2. - (d) cleaning techniques;

No special precautions for cleaning or removal.

6.3.2. - (e) vacuuming techniques;

Remove by vacuum cleaner or mechanical means.

6.3.2. - (f) equipment required for containment/clean-up (include the use of non-sparking tools and equipment where applicable).

Non relevant.

6.3.3. Other information relating to spills and releases:



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6.3.3.1. Non allowed techniques:

Non relevant.

6.4. Reference to other sections

6.4.1. References:

Personal precautions : see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:

7.1.1. Protective measures:

7.1.1.1.- (a) Measures to prevent fire:

Non relevant.

7.1.1.1.- (b) Measures to prevent aerosol and dust generation:

Avoid bulk handling susceptible to create dust.

7.1.1.1.- (c) Measures to protect environment:

Prevent access to water table, running or stagnant water, or drains.

7.1.2. Advice on general occupational hygiene:

When using do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities:

7.2.1. Technical measures and storage conditions:

Engineering measures, such as local dust extraction, to ensure compliance with Occupational

Exposure Limits.

Avoid dust formation.

Avoid bulk handling susceptible to create dust.

Stacking height: up to 2 pallets maximum.

Clean area frequently to avoid buildup of dust

7.2.2. Recommended packing:

Multi-ply paper sacks or big-bags.

Plastic shrink or cling film.

Wooden pallet with shrink film.

Always keep the main pallet label

7.2.3. Requirements for storage rooms and vessels:

Store in dry conditions

Do not store outside.

Store away from acids.

Avoid contact with incompatibles mentioned under item 10

7.2.4. Storage class (national):

Unknown at that date.

7.2.5. Further information on storage conditions:

Always keep in the original packaging.

7.3.1. Recommendations:

Stacking height: up to 2 pallets maximum.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Substance	CAS N° / EC N°	L.T.E - 8 hr TWA mg/m ³
Chamotte - Nr. REACH. 01-2119527779-22-xxx	CAS : 92704-41-1	No data
	Einecs : 296-473-8	
	CAS : 1344-28-1	1,5



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Aluminium oxide - Nr. REACH. 01-2119529248-35

Einecs : 215-691-6

Silicic acid, sodium salt - Nr. REACH. 01-2119448725-31

CAS : 1344-09-8

STOT SE 3; H335 - Skin Irrit.2; H315 - Eye Dam.1; H318 - Met.Corr. 1; H290

Einecs : 215-687-4

No data

8.2. Exposure Controls:

All the values indicated in the chart above are available in the (Worldwide) GESTIS database: <http://limitvalue.ifa.dguv.de/>

Customers are advised to check the limit values indicated , that could have been up-dated (in GESTIS) since the creation of this SDS.

Contains some substances without any approved Occupational Exposure values

8.2.0. DNEL (Derived no effect level)

Acronyms used in the following sentences.

DDD = DNEL Short Term exposure - Acute effect - Local

ROEX = Route of Exposure

INH = Inhalation dose in mg/m³

DERM = Dermal exposition in mg/kg bodyweight

8.2.0.1. Substance:

Silicic acid, sodium salt - CAS Nr.1344-09-8 - Einecs Nr.215-687-4 - DDD; ROEX; DERM = 1,59 - INH = 5,61

8.2.1. Appropriate engineering controls

Provide appropriate exhaust ventilation and filtering at the places where dust can be generated.

8.2.2. Individual protection measures, such as personal protective equipment

8.2.2.1. Good occupational hygiene practices

For details about the following HS personal devices, please see the annex dedicated to. (Section .17)

8.2.2.2. Personal Protective Equipment

8.2.2.2. (a) Eye/face protection

Wear safety glasses with side shields or chemical goggles with lateral protection confirm with Australian/New Zealand Standard AS/NZS 1337 - Eye Protector for Industrial Application



8.2.2.2. (b) Skin protection

Standard industrial clothing is suitable for installations at ambient temperatures (ISO 6942)
Do not shake the working clothes. Do not remove dust with compressed air.



8.2.2.2. (c) Hands:

All kind of gloves have to suit requirements of the AS/NZS 2161.1: Occupational protective gloves

Wear alkali resistant gloves

Leather gloves should not be used for handling this product after mixing with its binder.



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8.2.2.2. (d) Respiratory protection

Maintain adequate ventilation whenever dust is present.

Consult the local regulation.

All kind of anti-dust mask or respiratory devices have to suit requirements of the Australian/New Zealand Standard AS/NZS 1715 for Respiratory Protective Device and AS/NZS 1716.

Wear P1:P2 respirator referring the Australian/New Zealand Standard AS/NZS 1715 for Respiratory Protective Device and AS/NZS 1716.

Use a filtering respiratory device, in case of airborne concentrations are expected to exceed exposure limits.



8.2.3. Environmental exposure controls

Prevent access to water table, running or stagnant water, or drains during installation or during washing the tools used for installation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Name of the characteristic	Value
Appearance:	Dry mixture of aggregates and fine powders
Color:	Grey
Odour:	No particular odour
Melting point	> 1650 °C
Vapour density:	Non relevant.
pH:	Unable to determine. Mixture of dry minerals.
Segregation:	Non relevant.
Boiling point:	Non relevant.
Flash point:	Non relevant.
Inflammability:	No.
Explosive properties:	No.
Combustive properties:	No.
Solubility solvent:	No.
Partition coefficient n-octanol/water:	Non relevant.
Viscosity:	Non relevant.
Hydrosolubility:	Lower than 10%



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9.2. Other informations:

All non relevant data are linked to the nature of our products - mineral mixtures.

SECTION 10: Stability and reactivity

10.1. Reactivity

May react vigorously with strong acids.

10.2. Chemical stability

Mixture of inert minerals.

Chemically stable refractory product

10.3. Possibility of hazardous reactions

Chemically stable refractory product

Strong exothermic reaction with acids

10.4. Conditions to avoid

Chemically stable refractory product

Danger : Hazardous reaction in contact with acids.

Danger: Hazardous reaction in contact with metals (may generates highly infammable hydrogen gas).

Avoid incompatible materials mentioned in section 10.5.

10.5. Incompatible materials

Avoid ordinary steels, bases, nitrates, chlorates, calcium carbide, cyanid, sulphurs and sulphites.

Chemically stable refractory product

Avoid contact with light alloy metal, aluminium, zinc or tin coated steel.

10.6. Hazardous decomposition products

None

SECTION 11: Toxicological information

Substance	CAS N° / EC N°
Silicic acid, sodium salt - Nr. REACH. 01-2119448725-31	CAS : 1344-09-8
STOT SE 3; H335 - Skin Irrit.2; H315 - Eye Dam.1;	Einecs : 215-687-4
H318 - Met.Corr. 1; H290	

11.1. Information on toxicological effects.

11.1.1. Substances.

Non relevant.

11.1.1.1. The relevant hazard classes for which information shall be provided, are:

Non relevant.

11.1.1.1. - (a) acute toxicity:

Non relevant.

11.1.1.1. - (b) skin corrosion/irritation:

Non relevant.

11.1.1.1. - (c) serious eye damage/irritation:

Non relevant.

11.1.1.1. - (d) respiratory or skin sensitisation:

Non relevant.

11.1.1.1. - (e) germ cell mutagenicity:

Non relevant.

11.1.1.1. - (f) carcinogenicity:

Non relevant.

11.1.1.1. - (g) reproductive toxicity:

Non relevant.

11.1.1.1. - (h) STOT-single exposure:

Non relevant.

11.1.1.1. - (i) STOT - repeated exposure:



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Non relevant.

11.1.1.1. - (j) aspiration hazard:

Non relevant.

11.1.2.1. The relevant effects classes for which information shall be provided, are:

11.1.2.1. - (a) acute toxicity:

Non relevant.

11.1.2.1. - (b) skin corrosion/irritation:

Skin irritation, hazard category 2

11.1.2.1. - (c) serious eye damage/irritation:

Serious eye damage, hazard category 1

11.1.2.1. - (d) respiratory or skin sensitisation:

Non relevant.

11.1.2.1. - (e) germ cell mutagenicity:

Non relevant.

11.1.2.1. - (f) carcinogenicity:

Non relevant.

11.1.2.1. - (g) reproductive toxicity:

Non relevant.

11.1.2.1. - (h) STOT-single exposure:

Non relevant.

11.1.2.1. - (i) STOT - repeated exposure:

Non relevant.

11.1.2.1. - (j) aspiration hazard:

Non relevant.

11.1.2.2.1. GHS: Germ cell mutagenicity - Carcinogenicity - Reproductive toxicity

Non relevant.

11.1.2.3. Other health effects of the mixture.

The mixture wasn't tested as whole, read the information given for the substances used.

SECTION 12: Ecological information

12.1. Toxicity

The following points are theoretical conclusions:

12.1.1. Air:

Non relevant.

12.1.2. Water:

Unknown at that date.

12.1.2.0 Toxicity linked to fishes, Daphnia, Other aquatic invertebrates, Bacteria, Algae:

Acronyms used in the following sentences.

TOF LC50 = Toxicity on fish LC50

TDOAI EC50 = Toxicity to daphnia and other aquatic invertebrates (EC50)

TDOAI NOEC = Toxicity to daphnia and other aquatic invertebrates NOEC

TTA EC50 = Toxicity to algae EC50

12.1.2.1 Substance:

Silicic acid, sodium salt - CAS Nr.1344-09-8 - EINECS Nr.215-687-4 - TOF LC50 = [1108 mg/l; 96 h] - Test unknown - [Fish: Danio Rerio] / TDOAI EC50 = [1700 mg/l; 48 h] - Test unknown - [Water flea: Daphnia magna] / TDOAI NOEC = [3480 mg/l; 18 h] - Test unknown - [Bacteria: Pseudomonas putida] / TTA EC50 = [207 mg/l; 72 h] - Test unknown - [Green Algae: Scenedesmus subspicatus]

12.1.2.2 PNEC : Predicted No-Effect Concentration

Acronyms used in the following sentences.

PNEC FW = PNEC Freshwater

PNEC SW = PNEC Seawater

PNEC WIR = PNEC Water intermittent release

PNEC Sd = PNEC Sediment

PNEC So = PNEC Soil



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NR = Non relevant

12.1.2.3. Substance:

Silicic acid, sodium salt - CAS Nr.1344-09-8 - EINECS Nr.215-687-4 - PNEC FW: 7,5 mg / l - PNEC SW: 1 mg / l - PNEC WIR: 7,5 mg / l - PNEC Sd: NR - PNEC So: NR

12.1.3. Soil :

Non relevant.

12.1.4. Flora:

Unknown at that date.

12.1.5. Fauna:

Unknown at that date.

12.1.6. Bee:

Non relevant.

12.2. Persistence and degradability

Non relevant.

12.3. Bioaccumulative potential

Non relevant.

12.4. Mobility in soil

Non relevant.

12.5. Results of PBT and vPvB assessment

Non relevant.

12.6. Other adverse effects

Unknown at that date.

The product components are not classified as environmentally hazardous.

However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment;

SECTION 13: Disposal considerations

13.0. DIRECTIVE 2008/98/EC ON INDUSTRIAL WASTE. - Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal - UNEP

13.1. WASTE TREATMENT METHODS

As this product is a mixture of minerals, all kind of methods are relevant.

The unused product is not considered dangerous for the environment

Please consult local regulations.

Unused material can be disposed according to local regulations.

Do not flush into drains or surface water

13.1.1. DISPOSAL OPERATIONS

D 9 Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcination, etc.)

13.1.2. RECOVERY OPERATIONS

R 5 Recycling/reclamation of other inorganic materials.

13.1.3. PROPERTIES OF WASTE WHICH RENDER IT HAZARDOUS

H 8 (Corrosive): substances and preparations which may destroy living tissue on contact.

13.2. POTENTIAL DANGER FROM THE WASTE:

Before destruction and disposal of the refractory lining, customers are advised to evaluate any changes to the product that may be induced by the introduction of substances, or operating conditions outside the control of the Vendor

SECTION 14: Transport information

Australian Road and Rail Transport (ADG Code)

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code - 7th edition)

ADR/RID/ADN class:

Non relevant to the UN classification on dangerous goods.



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ICAO-TI / IATA-DGR class:

Non relevant to the UN classification on dangerous goods.

IMDG (marine) class:

Non relevant to the IMDG classification on dangerous goods.

14.1. UN number

Non relevant.

14.2. UN proper shipping name

Non relevant.

14.3. Transport hazard class(es)

Non relevant to the UN classification on dangerous goods.

14.4. Packing group:

Non relevant.

14.5. Environmental hazards:

Unknown at that date.

SECTION 15: Regulatory information

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

Classified as Hazardous according to the Globally System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

15.1.5. Other Regulation used to create this Safety Data Sheet:

The following Safety Data Sheet has been created according to the Regulation GHS Hazardous Chemical Information List - (safe work australia)

15.1.10. MONTREAL Protocol on Substances That Deplete the Ozone Layer (7th revision)

This product does not meet the criteria for classification in that protocol: Mixture of inert minerals.

15.1.11. IBC: Institutional Biosafety Committee

This product does not meet the criteria for any biosafety classification.

15.1.12. MARPOL 73/78 (the International Convention for the Prevention of Pollution from Ships)

This product does not meet the criteria for classification in that directive.

15.1.13. STOCKHOLM convention on persistent organic pollutants (POPs)

This product does not meet the criteria for classification in that directive.

15.1.14. ROTTERDAM Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

This product does not meet the criteria for classification in that directive.

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been completed for this product

This product doesn't require a Chemical Safety Assessment.

15.5. Other national relevant Safety, health and environmental regulations/legislation specific for the substance or mixture:

15.5.- (a) TA Air/TA Luft (German Technical Instructions on Air Quality Control)

This product does not meet the criteria for classification in that directive.

15.5.- (b) WgK: German Water hazard class (from the Administrative Regulation on substances hazardous to water - assessment):

The product, (according to German regulation) is classified as (in the sense of 17.05.1999): WGK 1: slightly hazardous to water (self-classification)

15.5.- (c) Technical rules for dangerous substances (Technische Regeln für Gefahrstoffe)

This product does not meet the criteria for classification in that directive.

15.5.- (d) Nomenclature of classified installations for environmental protection.

This product does not meet the criteria for classification in that directive.

15.5.- (e) list of carcinogens, mutagens and reproductive toxins SZW (Dutch Regulation)

This product does not meet the criteria for classification in that directive.

15.5.- (f) The General Water Assessment methodology (ABM) - Dutch Regulation

This product does not meet the criteria for classification in that directive.



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15.5.- (g) The Dutch Emissions Directive (NeR) - Dutch Regulation

This product does not meet the criteria for classification in that directive.

15.5.- (h) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal - UNEP

This Convention is applied in the points 13.1.1, 13.1.2. and 13.1.3.

SECTION 16: Other information

16.0. Additionnal safety information:

Skin Irrit.2; H315 - Eye Dam.1; H318.

16.1. GHS Pictograms

16.1.1. Symbol(s) in black/white or colour according to the Regulation:

GHS Hazardous Chemical Information List - (safe work Australia)
Non relevant.



16.1.2. Labelling according to the Regulation:

GHS Hazardous Chemical Information List - (safe work Australia)
Skin Irrit. 2; H315
Eye Dam. 1; H318

16.1.3. Classification according to Regulation:

GHS Hazardous Chemical Information List - (safe work Australia)
Skin Irrit. 2 - Skin irritation, hazard category 2; H315: Causes skin irritation.
Eye Dam. 1 - Serious eye damage / Eye irritation, hazard category 1; H318: Causes serious eye damage.

16.1.4. Signal word:

Danger

16.1.5. GHS Hazard statement phrases (H - EUH):

H315: Causes skin irritation.
H318: Causes serious eye damage.

16.2. GHS Precautionary statement phrases (P)

P264: Wash ... thoroughly after handling.
P280: Wear protective gloves, protective clothing and eye protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.

16.3. Hazardous substances present, below GHS classification limits:

Non relevant.

16.5. Training:

Non relevant.

16.7. Local contact for your country:

Australia: Gameco - 161Parramatta Road NSW 2144 Australia - Phone: (02) 9648 4858

SDS status :

Modifier

Gameco

Modification Date : 03/03/2023

Acronyms and abbreviations used:

AAA = DNEL Long Term exposure - Chronic effect - Local
ADR: European regulation on transport of dangerous goods by road.



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AOEL: Acceptable Operator Exposure Level
 AOX: Adsorbable Organic Halogen
 BBB = DNEL Long Term exposure - Acute effect - Local
 BCF: Bioconcentration factor
 BOD: Biochemical Oxygen Demand (BOD)
 CAS: Chemical Abstracts Service
 CCC = DNEL Short Term exposure - Chronic effect - Local
 CLP : Classification, Labelling and Packaging of chemicals
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
 COD: Chemical Oxygen Demand.
 CSA : Chemical Safety Assessment
 CSR : Chemical Safety Report
 DDD = DNEL Short Term exposure - Acute effect - Local
 DNEL : Derived No-Effect Level
 EC: Ecotoxicity
 EC50: Half maximal effective concentration
 ECHA : European Chemical Agency
 EINECS: European Inventory of Existing Commercial Chemical Substance.
 ES : Exposure Scenario
 eSDS : extended Safety Data Sheet
 GefStoffV: German regulation on hazardous substances.
 GHS : Global Harmonized System of classification and labelling of chemicals
 GHS/CLP: Globally Harmonized System of Classification, Labelling and Packaging of chemicals
 IATA: International Air Transport Association.
 IATA-DGR: Dangerous Goods Regulation by the International Air Transport Association
 ICAO: International Civil Aviation Organization.
 ICAO-TI: Technical Instruction by the International Air Transport Association
 IMDG: International Maritime code for Dangerous Goods.
 JAP-ISHA-C.O.Nr. = Japanese Industrial Safety and Health Act - Cabinet Order Nr.
 JAP-PDSA-C.O.Nr. = Japanese Poisonous and Deleterious Substances Control Act - Cabinet Order Nr.
 JAP-PRTR-C.O.Nr. = Japanese Pollutant Release and Transfer Register - Cabinet Order Nr.
 LC50: Lethal Concentration, 50%.
 LD50: Lethal Dose, 50%.
 LOAEL: Lowest observed adverse effect level
 MFSU: Manufacture, Formulation, Supply and Use
 NEC: No effect concentration
 NOEC: No Observed Effect Concentration
 N.O.S. : Not Otherwise Specified
 NLP : No-Longer Polymers
 OECD: Organisation for Economic Co-operation and Development
 PAH: Polycyclic Aromatic Hydrocarbon.
 PBT : Persistent, Bioaccumulative and Toxic
 PEC : Predicted Environmental Concentration
 PNEC : Predicted No-Effect Concentration
 PNEC Co = PNEC Coral
 PNEC FW = PNEC Freshwater
 PNEC Sd = PNEC Sediment
 PNEC So = PNEC Soil
 PNEC SW = PNEC Seawater
 PNEC WIR = PNEC Water intermittent release
 POP: Persistent Organic Pollutant
 CSFF: Crystalline Silica Fine Fraction (according to the standard EN 481)
 REACH : Registration, Evaluation, Authorisation and Restriction of Chemical substances
 RID: International regulation on transport of dangerous goods by railway.
 RIP : REACH Implementation Project
 RMM : Risk Management Measure
 ROEX = Route of Exposure



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SVHC : Substance of Very High Concern
TDOAI EC50 = Toxicity to daphnia and other aquatic invertebrates (EC50)
TDOAI NOEC = Toxicity to daphnia and other aquatic invertebrates NOEC
TGD : Technical Guidance Document
ThOD: Theoretical Oxygen Demand
TOF LC50 = Toxicity on fish LC50
TOF NOEC = Toxicity on fish NOEC
TTA EC10 = Toxicity to algae EC10
TTA EC50 = Toxicity to algae EC50
TTA NOEC = Toxicity to algae NOEC
TTB EC0 = Toxicity to Bacteria (EC0)
TTB NOEC = Toxicity to Bacteria NOEC
UVCB : Substances of Unknown Variable composition, complex reaction products or Biological materials
vPvB: very Persistent very Bioaccumulative

17. Annexes:

Attached annex : Medical toxicology units
Attached annex: HS Devices - Personal protection
Attached annex: ECHA, Guidance R.12 - Standard Use descriptors.



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Annex:

MEDICAL TOXICOLOGY UNITS

Australia:

1- South Australian Poisons Information Centre Women's and Children's Hospital,

72 King William Road North Adelaide SA 5006 - Tel: +61 82 04 72 22 - Fax: +61 82 04 60 49

2 - Canberra A.C.T. Poisons Information Service, Woden Valley Hospital, Garran, Yamba Drive -

Tel: +61 62443333 / +61 62852852 - Fax: +61 6244 3334



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ROUTE OF EXPOSURE			
EYES	SKIN	HANDS	INHALATION
Dedicated Usage: Non labelled, cast, hydraulic bonded products, cold conditions.			
Glasses with lateral protection 166 rev, S4KN2	Clothes 340 rev	Gloves 388 - 3111	Mask FFP3
Dedicated Usage: Non labelled, cast, hydraulic bonded products, hot conditions.			
Glasses with lateral protection 166 rev, S4KN2	Clothes ISO6942	Gloves 407 - 2122	Mask FFP3
Dedicated Usage: Non labelled, gunned, hydraulic bonded products, cold conditions.			
Face shield 166 rev, F4KN2	Clothes 340 rev	Gloves 388 - 3111	Mask FFP3
Dedicated Usage: Non labelled, gunned, hydraulic bonded products, hot conditions.			
Face shield 166 rev, F4KN2	Clothes 340 rev	Gloves 388 - 3111	Mask FFP3
Dedicated Usage: Non labelled chemical bonded gunning mixes, cold installation			
Face shield 166 rev, F4KN2	Clothes ISO6942	Gloves 407 - 2122	Mask FFP3
Dedicated Usage: Non labelled chemical bonded gunning mixes, hot installation			
Glasses with lateral protection 166 rev, S4KN2	Clothes 340 rev	Gloves 388 - 3111	Mask FFP3
Dedicated Usage: Labelled hydraulic bonded products, cold installation			
Glasses with lateral protection 166 rev, S4KN2	Clothes ISO6942	Gloves 407 - 2122	Mask EN 141:2000
Dedicated Usage: Labelled hydraulic bonded products, hot installation			
Face shield 166 rev, F4KN2	Clothes ISO6529-463	Gloves 3121 - 1994	Mask Local rules
Dedicated Usage: Phosphate bonded products			
Face shield 166 rev, F4KN2	Clothes ISO17491-3	Gloves 3121 - 1994	Mask Local rules
Dedicated Usage: Sodium silicate bonded products			
Glasses with lateral protection 166 rev, S4KN2	Clothes 340 rev	Gloves 388 - 3111	Mask EN 141:2000
Dedicated Usage: Labelled dry mixes			
Glasses with lateral protection 166 rev, S4KN2	Clothes 340 rev	Gloves 388 - 3111	Mask FFP3
Dedicated Usage: Non labelled dry mixes			
Glasses with lateral protection 166 rev, S4KN2	Clothes 340 rev	Gloves 388 - 3111	Mask Local rules
Dedicated Usage: Non labelled plastics or ramming mixes			
Glasses with lateral protection 166 rev, S4KN2	Clothes 340 rev	Gloves 388 - 3111	Mask FFP3
Dedicated Usage: Resin bonded products, cold installation.			
Glasses with lateral protection 166 rev, S4KN2	Clothes ISO6942	Gloves 407 - 2122	Mask EN 141:2000
Dedicated Usage: Resin bonded products, hot installation			
Glasses with lateral protection	Clothes	Gloves	Mask



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166 rev, S4KN2	340 rev	388 - 3111	Local rules
DEDICATED USAGE: Non labelled cement, patched, sprayed or trowelled products			



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CALDERYS table for Standard Use prescriptors

	Standard Use by Refractory producer	DEFINITION	Comments and explanations	CALDERYS examples	Standard Use by Refractory user	Definition, Comments or Examples
Sector of use						
SU a	SU10	<i>Companies mixing and blending chemicals (formulators) to produce preparations (mixtures).</i>	Monolithics producers.		SU3	<i>Industrial end-users</i>
SU b	SU13	<i>Manufacture of other non-metallic mineral products, e.g. plasters, cement</i>	Monolithics producers.		SU13	<i>Use of refractory products at e.g. cement, glass or lime industry</i>
SU c					SU14	<i>Use of refractory products at e.g. metal industry</i>
SU d					SU 0-1	<i>Other activity related to manufacturing of chemical products</i>
NACE	C23.2	<i>Manufacturing of refractory products</i>	Monolithics producers.			
Chemical Product category						
PC a	PC 10	<i>Building and construction preparations not covered elsewhere</i>	Monolithics producers.		PC 10	<i>Building and construction preparations not covered elsewhere.</i>
Process categories						
PROC a	PROC 1	<i>Use in closed process, no likelihood of exposure</i>	Use of the substances in high integrity contained system where little potential exists for exposures	Plant but mainly linked to research and control labs.	PROC 1	<i>General terms of use at refractories. Producers and Users.</i>
PROC b	PROC 2	<i>Use in closed, continuous process with occasional controlled exposure (e.g. sampling)</i>	Continuous process not specifically aimed at minimizing emissions It is not high integrity and occasional expose will arise.	Plant but mainly linked to research and control labs.	PROC 2	<i>General terms of use at refractories. Producers and Users.</i>
PROC c	PROC 3	<i>Use in closed batch process (synthesis or formulation)</i>	Batch manufacture of a chemical or formulation where the predominant handling is in a contained manner,	Plant but mainly linked to research and control labs.	PROC 3	<i>General terms of use at refractories. Producers and Users.</i>



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			but where some opportunity for contact occurs.			
PROC d	PROC 4	<i>Use in batch and other process (synthesis) where opportunity for exposure arises</i>	Use in batch manufacture of a chemical where significant opportunity for exposure arises, and when the nature of the design is likely to result in exposure.	Plant but mainly linked to research and control labs.	PROC 4	<i>General terms of use at refractories. Producers and Users.</i>
PROC e	PROC 5	<i>Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)</i>	Manufacture or formulation of chemical products or articles using technologies related to mixing and blending of solid or liquid materials, and where the process is in stages and provides the opportunity for significant contact at any stage.	Mixing minerals and/or binders.	PROC 5	Mixing minerals and/or binders at users's site.
PROC g	PROC 8a	<i>Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</i>	Sampling, loading, filling, transfer, dumping, bagging in non-dedicated facilities. Exposure related to dust, vapour, aerosols or spillage, and cleaning of equipment to be expected.	Transport of material at refractory producer, pumping castables at customer	PROC 8a	Transport of material by pumping castables at customers' site.
PROC h	PROC 9	<i>Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</i>	Filling lines specifically designed to both capture vapour and aerosol emissions and minimise spillage	Sacking castables or mortar at refractory producer		
PROC i	PROC 13	<i>Treatment of articles by dipping and pouring</i>	Treatment of articles by dipping, pouring, immersing, soaking, washing out or washing in substances; including cold formation or resin type matrix .	E.g. Tap-Hole clays	PROC 13	E.g. Tap-Hole clays



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PROC j	PROC 14	<i>Production of preparations or articles by tableting, compression, extrusion, pelletisation</i>	Extrusion!	E.g. Tap-Hole clays, plastics.		
PROC k	PROC 19	<i>Hand-mixing with intimate contact and only PPE available.</i>	Addresses occupations where intimate and intentional contact with substances occurs without any specific exposure controls other than PPE.	Producer handling material (e.g. chemical bonded mortar), e.g. during control.	PROC 19	Customer using material (e.g. chemical bonded mortar) at site.
PROC l	PROC 21	<i>Low energy manipulation of substances in form of massive metal or bound in other materials and/or articles.</i>	Manual cutting, cold rolling or assembly / disassembly of material/article, possibly resulting in the release of fibres, rubber fumes, metal fumes or dust	SR fibres or aluminium powder handling. Demolition of precast pieces.	PROC 21	Use and demolition of refractory material at customers' sites.
PROC m	PROC 22	<i>Potentially closed processing operations with minerals/metals at elevated temperature Industrial setting.</i>	Activities at furnaces, Exposure related to dust and fumes to be expected. Emission from direct cooling may be relevant.	E.g. Heating precast pieces.	PROC 22	Firing refractory material, at customers' sites.
PROC n	PROC 23	<i>Open processing and transfer operations with minerals/metals at elevated temperature.</i>	Exposure related to dust and fumes to be expected.	E.g. Heating precast pieces.	PROC 23	Firing refractory material, at customers' sites.
PROC o	PROC 24	<i>High (mechanical) energy work-up of massive metals or substances bound in materials and/or articles.</i>	Substantial thermal or kinetic energy applied to substance by mechanical cutting or drilling. Exposure is predominantly expected to be to dust.	Plant but mainly linked to research and control labs.	PROC 24	Use and demolition of refractory material at customers' sites.
PROC p	PROC 26	<i>Handling of solid inorganic substances at ambient temperature (no corresponding TRA entry).</i>	Transfer and handling of ores, concentrates, raw metal oxides and scrap; packaging, un-packaging, mixing/blending and weighing of metal powders or other minerals;	Standard monolithics process.	PROC 26	Handling castables at customers' sites.



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Environmental Release Categories						
ERC a	ERC 2	<i>Formulation of preparations (not included into matrix).</i>	Mixing and blending of substances into preparations in all types of formulating industries.	E.g. castables formulation.	ERC 1	Mixing of raw materials, castables, mortars at customers' sites.
ERC b	ERC 3	<i>Formulation of preparations (inclusion into/onto matrix).</i>	Mixing or blending of substances, which will be physically or chemically bound into or onto a matrix (material) such as plastics.	E.g. Plastics formulation, mortars ...	ERC 2	Mixing of raw materials, castables, mortars at customers' sites.
ERC d	ERC 5	<i>Industrial use resulting in inclusion into or onto a matrix.</i>	Industrial use of substances as such or in preparations (non-processing aids), which will be physically or chemically bound into or onto a matrix (material) such as binding. The category covers substances in articles with a particular function and <u>also substances remaining in the article after having been used as processing aid in an earlier life cycle stage.</u>	E.g. use of reclaims such as MgO/C bricks, or Al ₂ O ₃ /C/SiC products.	ERC 5	Handling scraps at customers' sites.
ERC e					ERC 10a	<i>Wide dispersive outdoor use of long-life articles and materials with low release. Low release of substances included into or onto articles and materials during their service life.</i>
ERC f					ERC 11a	<i>Wide dispersive indoor use of long-life articles and materials with low release. Low release of substances included into or onto articles and materials during their service life.</i>



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Article categories for articles with no intended release						
AC a	AC 12-1	<i>Constructional articles and building material: insulating material (without indoor flooring).</i>			AC 12-1	
AC b	AC 12-2	<i>Constructional articles and building material: wall construction material ceramic</i>			AC 12-2	<i>For consumers</i>
TARIC 3801	Artificial graphite; colloidal or semi-colloidal graphite; preparations based on graphite or other carbon in the form of pastes, blocks, plates or other semi-manufactures					
TARIC 3816	Refractory cements, mortars, concretes and similar compositions, other than products of heading 3801					
TARIC 6901	Bricks, blocks, tiles and other ceramic goods of siliceous fossil meals (for example, kieselguhr, tripolite or diatomite) or of similar siliceous earths					
TARIC 6902	Refractory bricks, blocks, tiles and similar refractory ceramic constructional goods, other than those of siliceous fossil meals or similar siliceous earths					