



WONDERSTONE LTD.

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT

Product Name	Wonderstone
Product Use	Raw material for the ceramics, chemical, refractory, and electrical industries.
Company Identification	WONDERSTONE LTD. Assore House 15 Fricker road Illovo Boulevard Johannesburg 2196 South Africa
Emergency Tel. No.	Tel +27-011-770-6800
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MATERIAL SAFETY DATA SHEET

Product name: Wonderstone

2

Date of issue: 19 January 2004

2. COMPOSITION INFORMATION ON INGREDIENTS

Chemical Family Aluminium Silicate
Chemical Formula $\text{Al}_2 \text{Si}_4 \text{O}_{10} (\text{OH})_2$
Cas Number

Two forms:

- a) Grey
- b) Black

Typical analytical results:

Compound	Grey Wonderstone	Black Wonderstone	Theoretical pyrophyllite
Al_2O_3	29.2	32.5	28.30
SiO_2^*	59.0 (58.1)	58.2 (56.1)	66.70
Fe_2O_3	2.97	0.79	
MnO	<0.1	<0.1	
MgO	<0.5	<0.5	
CaO	<0.1	<0.1	
TiO_2	1.43	1.84	
K_2O	1.17	0.89	
Na_2O	0.26	0.22	
P_2O_5	0.14	0.2	
C	0.06	0.8	
S	<0.01	0.01	
CO_2	<0.1	0.1	
Loss on Ignition H_2O (1000°C)	5.50	6.57	5.0
Li_2O in ppm	17	150	Nil
TOTAL	99.67	102.01	100

MATERIAL SAFETY DATA SHEET

Product name: Wonderstone

3

Date of issue: 19 January 2004

Typical Trace Elements:

Element	Grey Wonderstone	Black Wonderstone
Zn	<10	10
B	20	15
Cu	<10	10
Cr	40	150
Ni	20	30
V	25	10
Rb	35	30
Y	30	40
Ba	150	130
Cc	115	140
Nd	45	60
Sr	50	60
Zr	360	390
La	50	60
Pr	10	10
Sm	10	10
Gd	10	10
Hf	10	10
Pb	10	10
Th	10	10

3. HAZARDS IDENTIFICATION

- A) Human Health Effect
B) Environmental Effects *
C) Other Effects *

A) Human Health Effects

Immediate medical assistance:	No
Skin Contact:	No known harmful effect.
Eye contact:	In case of contact with eyes wash out immediately with plenty of fresh water. Avoid rubbing the eyes.
Inhalation:	No known adverse effects, but with dust inhalation it is advisable to get into an open area for fresh air.
Ingestion:	Rinse mouth out with fresh water.
Emergency Equipment:	Provide wash facilities for eyes, skin and mouth close to the work area.

* There is no information available at present on these sections. When information is obtained, a revision of the MSDS will be made.

4. FIRST AID MEASURES

Immediate medical assistance required – No.

5. FIRE FIGHTING MEASURES

Exposure hazards:	None, material is non flammable.
Protective equipment for fire fighters:	Self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	If dust is formed, use water spray to settle the dust and sweep or shovel product into designated areas or containers.
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Alternatively store in 25kg
3-ply paper sacks – stitch
closed.

7. HANDLING AND STORAGE

Handling:	In solid form, stack as required.
	In powder form, store in 1 ton bulk bags sealed (closed) to avoid product contamination.

8. EXPOSURE CONTROLS

Skin protection:	Not required.
Eye Protection:	Safety glasses or goggles when exposed to dust.
Hands Protection:	None required.
Respiratory Protection:	If in confined space and dust is prevalent then a suitable respiratory helmet is to be worn.
Occupational exposure limit values:	These have not been determined for pyrophyllite (Wonderstone) but the levels would be similar to other aluminium silicates of the non-fibrous types.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Solid piece or dust.
Colour:	Varies from pale grey to black.
Odour:	None
Boiling Point:	decomposes on melting at 1630°C.
Melting point:	approximately 1630°C.
Density:	2.68 – 2.72g./c.c.

MATERIAL SAFETY DATA SHEET

Product name: Wonderstone

6

Date of issue: 19 January 2004

Vapour pressure:	no data
Solubility water:	insoluble
Organic solvents:	insoluble
Flammability:	non flammable
Flash point:	not applicable
Freezing point:	not applicable
PH:	+/- 7.5
Explosive risk:	zero

10. STABILITY AND REACTIVITY

Stability:	Completely stable under normal conditions.
Conditions to avoid:	NONE
Hazardous thermal decomposition products:	NONE

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	None (solid material passed by FDA for use in food applications).
Sensitisation:	No Information
Mutagenicity:	None recorded
Chronic effects due to overexposure:	None recorded
Other toxicological information:	Can cause mechanical irritation to the eyes.

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Mobility:	
Persistence/degradability:	
Bioaccumulative potential:	

Other adverse effects:

13. DISPOSAL CONSIDERATIONS

No major problems with the material for disposal. Treat in accordance with the local authority regulations.

14. TRANSPORT INFORMATION

Regulated

Sea:	No
Road/Rail:	No
Air:	No

15. REGULATORY INFORMATION

Label Information: Wonderstone mineral.

16. REGULATORY INFORMATION

* Indicated a revision over previous version.

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