Please note that manufactured articles are generally outside of the requirements of the REACH and CLP regulations. IPS Ceramics believes that the provision of a safety data sheet is not a legal requirement for alumina shapes and components.

1) IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

Products covered by this document: Alumina tiles and components

Relevant Uses Various – supports for heat-treatment, sub-components, cutting-blades, insulators, seals, bearings, heat-sinks, etc.

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2) HAZARDS IDENTIFICATION

The main hazard associated with alumina articles is personal injury due to impact or abrasion with the article. The material is of low acute toxicity; however long-term exposure to any respirable dust created by careless handling or machining of the articles can be hazardous to health if precautions outlined in section 8 are not observed.

3) COMPOSITION / INFORMATION ON INGREDIENTS

Alumina articles are made from ceramic materials fired (cured) to over 1600^{o}C. The main mineral present in the fired articles is aluminium oxide (corundum).

Component	CAS number	Weight (%)	Danger symbol	Risk phrase	WEL (8hr TWA)
Aluminum Oxide	1344-28-1	≥ 90	None	None	Inhalable 10 mg / m^3 Respirable 4 mg / m^3
Glassy Phase*	60676-86-0	≤ 10	None	None	

(* Consisting of silicon, aluminium and alkaline earth oxides).

4) FIRST AID MEASURES

ROUTE	SYMPTOM	FIRST AID
Ingestion	Coughing	Give clean water to drink.
Inhalation	Coughing	Move away from source.
Contact with skin	Soreness in damaged skin	Wash with soap and water.
Contact with eyes	Soreness	Flush with clean water. Seek medical assistance if soreness persists.

5) FIREFIGHTING MEASURES

The product is heat resistant, non-flammable and does not decompose on heating. Packaging material fires may be extinguished using a general purpose fire extinguisher. No special precautions required.

6) ACCIDENTAL RELEASE MEASURES

Loose articles should be packed in boxes / crates or restacked on pallets. Broken items should be gathered up by any method that avoids the creation of airborne dust.

7) HANDLING AND STORAGE

Unlimited shelf life. Store in a dry place.
Although not essential, gloves may be beneficial in preventing abrasion of the skin while handling the product for long periods.

8) EXPOSURE CONTROLS / PERSONAL PROTECTION

If WELs are exceeded in the working area (see section 3), respirators should be worn.

9) PHYSICAL AND CHEMICAL PROPERTIES

Appearance	-	White solid
Melting point	-	Melts above 1500^{o}C
Bulk Density	-	3.5 – 4.0 g/cm^{3}
Solubility	-	Insoluble in water or organic solvents
Flammability	-	Non-flammable

10) SAFETY AND REACTIVITY

Chemically inert to most acids, alkalis or solvents. **Attacked by hydrofluoric acid.**

11) TOXICOLOGY INFORMATION

Long term exposure to excessive concentrations of airborne dust created by careless handling or machining of articles may be harmful to the lungs.

12) ECOLOGICAL INFORMATION

Inert with respect to the environment. Non-biodegradable.

13) DISPOSAL CONSIDERATIONS

Dispose of as non-toxic material in accordance with local regulations for dry and inert waste.

14) TRANSPORT INFORMATION

The products are not classified as hazardous for transport. No special precautions required.

15) REGULATORY INFORMATION

Dangerous Preparations Directive (88/379/EEC). Hazard Warning Label not required.
Control of Substances Hazardous to Health (COSHH) regulations apply in the UK.

16) OTHER INFORMATION

Bibliography: Workplace Exposure Limits EH40 (UK Health & Safety Executive).