

1. IDENTIFICATION

Product Identifier:	Alumina Zirconia 25%	
Synonyms:	AZ, Fused Zirconia Alundum, ZF Alundum, ZS Alundum, Stoneblast, MCA1360, AZ-25	
Formula:	Al ₂ O ₃ (70-80%) / ZrO ₂ (20-30%)	
Recommended Use:	Abrasives, Refractories, Ceramics	
Restrictions on Use:	Contact manufacturer	
Manufacturer/Supplier:	GNP Graystar 37 John Glenn Dr. Amherst, NY 14228	GNP Graystar 9 Simmonsville Road Bluffton, SC 29910
Emergency telephone number:	716-759-6600	843-815-5600

2. HAZARD(S) IDENTIFICATIONS

Classifications of the substance or mixture:

The substance is not classified as hazardous according to the Globally Harmonized System (GHS).
The substance is not classified as hazardous according to the CLP regulation.

Label Elements

GHS Label Elements:	The product is NOT classified as hazardous according to OSHA Globally Harmonized System (GHS) regulations within the United States. The substance is not classified as hazardous according to the CLP regulation.
Signal Word:	NOT REGULATED
Hazard-determining components of labeling:	None
Hazard Statements:	Not Regulated
Precautionary Statement:	Not Regulated
Hazard Description:	
WHMIS- Symbols:	Not hazardous under WHMIS
Classification System:	NFPA Ratings (scale 0-4) Health = 0 Fire = 0 Reactivity = 0



HMIS-Ratings (scale 0 - 4):

HEALTH	0
FIRE	0
REACTIVITY	0

HMIS Ratings (scale 0-4)

Health = 0

Fire = 0

Reactivity = 0

*Indicates a long term health hazard from repeated or prolonged exposures

Other Hazards:

Results of PBT and vPvB Assessment

PBT: Not applicable

vPvB: Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization: Substances

CAS No.:	EC No.:	Ingredient:	Weight %
1344-28-1	215-691-6	Aluminum Oxide	70 – 80%
1314-23-4	215-227-2	Zirconia Dioxide	20 – 30%
12055-23-1	235-013-2	Hafnium Dioxide	< 1%

4. FIRST-AID MEASURES

General Information: No special measures required

After inhalation: Supply fresh air, consult doctor in case of complaints

After skin contact: Brush off loose particles from skin.
Clean with water and soap
If skin irritation is experienced, consult a doctor.

After eye contact: Immediately remove contact lenses if worn.
Rinse opened eye for several minutes under running water.
If symptoms persist, consult a doctor.

After swallowing: Rinse out mouth and then drink plenty of water. Do not induce vomiting; immediately call for medical help.

Most important symptoms and effects, both acute and delayed: Slight irritant effect on eyes

Indication of any immediate medical attention and special treatment needed No further relevant information available

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not Applicable

FLAMMABLE LIMITS: LEL: Not Applicable **UEL:** Not Applicable

AUTO IGNITION TEMPERATURES: Not Applicable

EXTINGUISHING MEDIA:	Use media appropriate for surrounding fire
FIRE AND EXPLOSION HAZARDS:	Non-flammable, non-combustible. Product will not burn.
HAZARDOUS DECOMPOSITION PRODUCTS:	None
FIRE FIGHTING INSTRUCTIONS:	Wear self-containing respiratory protective device. Wear fully protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment & Emergency Procedures:	Avoid formation of dust. Ensure adequate ventilation. For large spills, wear protective clothing. For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
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Environmental Precautions: Avoid release to the environment.

Methods and Material for Containment and Cleaning Up: Pick up mechanically.
Send for recovery or disposal in suitable receptacles.

Reference to other sections: See section 7 for information on safe handling.
See section 8 for information on personal protection equipment.
See section 13 for disposal information

7. HANDLING AND STORAGE

Precautions for Safe Handling: Use only in well ventilated areas.
Prevent formation of dust.
Any avoidable deposit of dust must be regularly removed.
Avoid breathing dust.

Information about protection against explosions and fires: No special measures required

Conditions for safe storage, including incompatibilities:

Requirements to be met by storerooms and receptacles: Storage area should be dry & well ventilated

Information about storage in one common storage facility: Store away from foodstuffs.

Specific End Use(s): No further information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Additional information about design of technical system: No further data, see item 7

Control Parameters

Components with limit values that require monitoring at the workplace:

1344-28-1 aluminum oxide

PEL (USA) Long-term value: 15*; 5** mg/m³ *Total dust; ** Respirable fraction

REL (USA) Long-term value: 10* 5** mg/m³ as Al*Total dust**Respirable/pyro powd./welding f.

TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
1314-23-4 Zirconium Dioxide	
PEL (USA)	Long-term value: 5 mg/m ³ as Zr
REL (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
TLV (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
12055-23-1 Hafnium Dioxide	
PEL (USA)	Long-term value: 0.5 mg/m ³ as Hf
REL (USA)	Long-term value: 0.5 mg/m ³ as Hf
TLV (USA)	Long-term value: 0.5 mg/m ³ as Hf
DNELs:	No further relevant information available
PNECs:	No further relevant information available
Additional Information:	The lists that were valid during the creation were used as basis
Exposure Controls:	
Personal Protective Equipment:	
General Protective and Hygienic Measures:	The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Avoid contact with the eyes. Avoid close or long-term contact with the skin. Do not inhale dust / smoke / mist.
Engineering Controls:	No further relevant information available
Breathing Equipment:	Use suitable respiratory protective device in case of insufficient ventilation. For spills, respiratory protection may be advisable. Wear appropriate NIOSH approved respirator when ventilation is inadequate and occupational exposure limits are exceeded.
Protection of Hands:	Wear gloves for the protection against mechanical hazards according to OSHA and NIOSH rules. Gloves are advised for repeated or prolonged contact. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Eye Protection: Follow relevant national guidelines concerning the use of protective eyewear

Body Protection: Not required under normal conditions of use. Protection may be required for spills

Risk Management Measures: No special requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Granulate

Color Grey

Odor Odorless

Order threshold Not determined

pH Not applicable

Melting/Freezing point 1900 °C (3452 °F)

Initial Boiling point/Boiling Range Undetermined

Flash point Not applicable

Flammability Product is not flammable

Auto-ignition temperature Not determined

Decomposition temperature Not determined

Evaporation rate Not applicable

Upper/Lower flammability explosive limit Not determined

Oxidizing Properties: Non-oxidizing

Vapor Pressure Not applicable

Relative Density at 20 °C (68 °F): 4.2 – 4.3

Vapor density Not applicable

Solubility Insoluble

Partition coefficient Not determined

Viscosity - Dynamic Not applicable

Viscosity - Kinematic Not applicable

10. STABILITY AND REACTIVITY

Reactivity: The product is non-reactive under normal conditions of use, storage and transport

Thermal Decomposition / Conditions to be Avoided: No decomposition if used and stored according to specifications

Possibility of Hazardous Reactions: No dangerous reactions known.

Incompatible Materials: No further relevant information available

Hazardous Decomposition: No dangerous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Information on Taxological Effects

Acute toxicity:	Based on available data, the classification criteria are not met
LD/LC50 values that are relevant for classification:	None
Primary irritant effect:	
On the skin:	Based on available data, the classification criteria are not met
On the eye:	Slight irritant effect on eyes
Respiratory or Skin Sensitization:	Based on available data, the classification criteria are not met
Carcinogenic Categories:	
IARC (International Agency for Research on Cancer):	None of the ingredients are listed
NTP (National Toxicology Program):	None of the ingredients are listed
OSHA-Ca (Occupational Safety & Health Administration):	None of the ingredients are listed
Probable Routes of Exposure:	Ingestion, Inhalation, Eye contact or Skin Contact
Repeated Dose Toxicity:	Long term inhalation of product dust may be harmful.
Germ cell mutagenicity:	Based on available data, the classification criteria are not met
Carcinogenicity:	Based on available data, the classification criteria are not met
Reproductive toxicity:	Based on available data, the classification criteria are not met
STOT-single exposure:	Based on available data, the classification criteria are not met
STOT-repeated exposure:	Based on available data, the classification criteria are not met
Aspiration hazard:	Based on available data, the classification criteria are not met

12. ECOLOGICAL INFORMATION

Aquatic Toxicity:	No further relevant information available
Persistence and degradability:	No further relevant information available
Other Adverse Effects:	
Bio accumulative Potential:	No further relevant information available
Mobility in soil:	No further relevant information available.
Other Adverse Effects:	Generally not hazardous for water

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods:	Smaller quantities can be disposed of with household waste. Contact waste processors for recycling information. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous
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and nonhazardous wastes. Residual materials should be treated as hazardous.

Contaminated Packaging: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

Note: Not classified as a dangerous according to transport regulations.

UN-Number
DOT, ADR, IMDG, IATA: Not regulated

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DOT, ADR, IMDG, IATA: Not regulated

Transport hazard class(s)
DOT, ADR, IMDG, IATA class: Not regulated

Packing group
DOT, ADR, IMDG, IATA: Not regulated

Environmental hazards:
Marine pollutant No

Special precautions for user: Not regulated

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not regulated

15. REGULATORY INFORMATION

SARA 355 Components: None of the ingredients are listed

TSCA All ingredients are listed

California Proposition 65 Chemicals known to cause cancer: None of the ingredients are listed

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed

Chemicals known to cause developmental toxicity: None of the ingredients are listed

Carcinogenic Categories

EPA (Environmental Protection Agency) None of the ingredients are listed

IARC (International Agency for Research on Cancer: None of the ingredients are listed

NIOSH (National Institute for Occupational Safety and Health) None of the ingredients are listed

Canadian Substance Listings:

Canadian Domestic Substances List (DSL)	All ingredients are listed
National Regulations:	
Water hazard class:	Generally not hazardous for water
Other regulations and limitations and prohibitive regulations	
Substances of Very High Concern (SVHC) according to REACH, Article 57:	None of the ingredients are listed.
Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

16. FURTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviation and Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
DOT	Department of Transportation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
HMIS	Hazardous Materials Identification System (USA)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
SARA	Superfund Amendment and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act

NOTICE:

This material safety data sheet complements the technical data sheets but does not replace them. The information it contains is based on our present knowledge of the product on the date indicated. It is given in good faith. Users should be warned about the risks associated with using the product for a different purpose than that for which it was developed, and particularly for uses for which we are not qualified to give advice.

These regulatory prescriptions are provided with a view to helping users meet their obligations when using this product. This list should not be considered exhaustive and does not exempt users from ensuring that they are not required to comply with any further prescriptions other than those mentioned above concerning product possession and handling for which they are solely responsible.