

MATERIAL SAFETY DATA SHEET

Zirconia Silicate Ceramic Beads

FILE NO.: rev.1

MSDS DATE: 4/20/2009

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Zirconia Silicate Ceramic Beads
SYNONYMS: Zirconia Ceramic Beads (ZCB), Peening Media , Ceramic Shot

COMPANY: GNP Ceramics, LLC
ADDRESS: 8500 Roll rd
PO Box 522
Clarence Center, NY 14032

PHONE: 716-406-2222
FAX: 716-406-2226

CHEMICAL NAME: Zirconium Oxide, Silicon Dioxide
CHEMICAL FORMULA: ZrO₂ (68%), SiO₂ (31%)

SECTION 1 NOTES:

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS#	Weight(%)	PEL-OSHA (mg/m ³)	TLV-ACGIH (mg/m ³)	Carcinogen (Y/N)
Zirconium Oxide (ZrO ₂)	1314-23-4	68%			N
Total Dust			10	10	
Respirable Fraction			5	5	
Silicon Dioxide (SiO ₂)	14808-60-7	31%	0.1	0.1	Y**

*Materials are regulated under OSHA 29 CFR 1900.1200, Hazard Communication Standard.

*Source of exposure limit data; ACGIH Threshold Limit Values; (OSHA Tables Z-1-A, Z-2, Z-3)

*All ingredients are listed under TSCA.

** For sizes less than 5 microns.

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

The product is not classified as hazardous and/or harmful under environmental control. It contains no substance classified as hazardous or harmful to health.

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

Eyes: Wash with water or neutral eyewash solution.

Skin: Wash with water and soap.

Inhalation: Move to fresh atmosphere. Give symptomatic treatment if necessary.

Ingestion: Do not induce vomiting; give up to 200 ml water. Material is non-toxic and not retained in intestinal tract.

SECTION 4 NOTES:

Generally no hazards requiring special first aid measures.

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SECTION 5: FIRE-FIGHTING MEASURES

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The product itself and the packing materials are not flammable, explosive and give no reason to be a fire risk. No special preventive action and protection matters/techniques for fire-fighters are necessary.

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

This product is inert. No special personal or environmental precautions are required. Use any feasible mechanical means for cleaning (e.g. shovel, vacuum sweeping) but avoid dusting. Prevent contamination of sewerage and ditches leading to natural waterways.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

The product is typically packed in stainless iron drums. No special handling technique is required, but handling system should be designed and operated to minimize dust escape and/or cracking. No special storage conditions are demanded.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: The use of exhaust ventilation at machinery and places where dust can be generated is recommended. An approved dust respirator must be used if the dust concentration is likely to exceed the occupational exposure limit or when dustiness is over 10 mg/m³.

SKIN PROTECTION: The product is not an irritant. prolonged exposure should be avoided by wearing suitable protective gloves and clothing.

EYE PROTECTION: The use of approved tightly fitting safety goggles is recommended if dust concentrations are likely to exceed the occupational exposure limit of 10mg/m³.

OTHER: No special requirement except keeping basic rules of hygiene.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Fine spherical pellets or beads
Color	White, slightly grayish
Odor	Odorless
Bulk Specific Weight	2.35
Real Specific Weight	3.86
Solubility	Insoluble in fats, water, alkalis, diluted acids and organic solvents. Dissolves slowly in hydrofluoric acid or hot concentrated sulphuric acid.

SECTION 9 NOTES:

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SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal ambient conditions of temperature and pressure.

REACTIVITY/INCOMPATIBILITY: No incompatible materials known.

HAZARDOUS DECOMPOSITION: Not applicable.

HAZARDOUS POLYMERIZATION: Will not occur.

Material is stable under normal conditions (up to 2300C) and inert to most chemical reagents.

SECTION 10 NOTES:

SECTION 11: DISPOSAL CONSIDERATIONS

Spilled material can be disposed as non-toxic waste in accordance with local and national regulations.

SECTION 11 NOTES:

SECTION 12: TRANSPORTATION INFORMATION

Material is not labeled as dangerous. There are no special requirements under national or international regulations for the transportation by road, rail, sea or air.

SECTION 12 NOTES:

SECTION 13: KEY

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
DOT	Department of Transportation
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
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

SECTION 13 NOTES:

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SECTION 14: DISCLAIMER

Although reasonable care has been taken in the preparation of the information contained herein, the originator and **GNP Ceramics, LLC** extends no warranties, makes no representation and assumes no responsibility as to the accuracy of suitability of such information for application to the purchaser's intended purposes or for consequences of its use.

SECTION 14 NOTES:

SECTION 15: OTHER INFORMATION

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