1. IDENTIFICATION

Product Identifier	**Fused Magnesium-Aluminum Spinel**	
Synonyms:	SPINEL SP67, SPINEL SP78, SPINEL SP90	
CAS Number:	1344-28-1	
EC Number:	215-105-9	
Recommended Use:	Refractories, ceramics, glass and chemical industries, stone, plaster, incinerators, filter, and catalyst carrier.	
Restrictions on Use:	Not known	
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

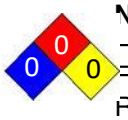
2. HAZARD(S) IDENTIFICATIONS

Classifications of the substance or mixture:	Not a hazardous substance or mixture
Label Elements	
GHS Label Elements:	The product is NOT classified as hazardous according to OSHA Globally Harmonized System (GHS) regulations within the United States.
Hazard Pictograms:	None
Signal Word:	None
Hazard Statements:	None
Precautionary Statements:	P 261: Avoid breathing dust. P280: Wear eye protection. P285: In case of inadequate ventilation wear respiratory protection. P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P302+352: IF ON SKIN: Wash with soap and water

WHMIS- Symbols:
As of 11 February 2015, the current WHMIS system is being replaced by the GHS system. This is the classification under the older system.

Hazards not otherwise classified (HNOC) or not covered by GHS: None

Classification System:



NFPA Ratings (scale 0-4)
Health = 0
Fire = 0
Reactivity = 0

HMIS Ratings (scale 0-4)
Health = 0
Fire = 0
Reactivity = 0

Other Hazards:

Results of PBT and vPvB Assessment	
PBT:	None
vPvB:	None
3. COMPOSITION/INFORMATION ON INGREDIENTS	
Chemical Characterization:	Formula: $MgAl_2O_4$
CAS No. Description:	1302-67-6 - SPINEL
EC-NO.:	215-105-9 - SPINEL
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. Wash with soap and water. If skin irritation is experienced, consult a doctor.
After eye contact:	Remove contacts if possible if worn. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing:	Rinse out mouth and drink plenty of water. Do not induce vomiting; immediately call for medical advice.
Most important symptoms and effects, both acute and delayed:	None
Indication of any immediate medical attention and special treatment needed:	None
Danger:	None
5. FIRE-FIGHTING MEASURES	
	Non-flammable, but in case of other fire, see below
Extinguishing Media: Suitable Extinguishing Agents:	The substance is not inflammable and non-explosive. Fire hazard classification: E. Fire extinguishing method of surrounding areas must be considered. Unsafe extinguishing media: None.
Special Hazards Arising from the Substance or Mixture:	None
Advice for firefighters:	None
Additional Information:	None
6. ACCIDENTAL RELEASE MEASURES	
Personal Precautions, Protective Equipment & Emergency Procedures:	Avoid dust formation. In case of exposure to high level airborne dust, wear a personal respirator in compliance with national legislation. See section 8.
Environmental Precautions:	Avoid dispersal of spilled material and runoff. Avoid creating dusty conditions and prevent wind dispersal. Collect material

	for recycling if possible.
Methods and Material for Containment and Cleaning Up:	Collect the product and recycle it for reuse. Take up mechanically and collect in suitable container and dispose according to current regulations.
Reference to other sections:	See also Sections 7. Handling And Storage; 8. Exposure Controls / Personal Protection; 13. Disposal Considerations.

7. HANDLING AND STORAGE

Precautions for Safe Handling:	Avoid dust formation. No special handling advice required.
Information about protection against explosions and fires:	No possible danger of fire and dust explosion.
Requirements to be met by storerooms and receptacles:	No any special precautions required.
Further information about storage conditions:	Dry storage.
Specific End Use(s):	grits for refractory and ceramics applications, ground chemical, stone, plaster, glass, refractory bricks and castables, incinerators, filter and catalyst carrier**.**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

1302-67-6 SPINEL	
PEL (USA)	term value: 15*; 5** mg/m³ *Total dust; ** Respirable fraction
TLV (USA)	Long-term value: 1* mg/m³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1.0 mg/m³ respirable, as Al
EV (Canada)	Long-term value: 10 mg/m³ total dust

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.
Engineering Controls:	No further relevant information available.
Breathing Equipment:	Not needed under normal use and adequate ventilation. In case of insufficient ventilation wear suitable respiratory protection. Mask with dust filter (P2) or FFP2(EN 149). Wear a mask with a filter for dust/aerosols - FFP3 (EN 149). 'High/elevated concentrations'

	means that the occupational exposure limit values have been exceeded.
Skin Protection:	Wear gloves for the protection against mechanical hazards according to OSHA and NIOSH rules. Gloves are advised for repeated or prolonged contact.
Eye protection:	Safety glasses with side shields
Control of Environment Exposure:	Avoid dust formation

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties	
Physical State:	Solid Grains / Powders
Color:	Yellowish-White, Gray
Odor:	Odorless
pH	Not applicable
Melting Point:	2,135 º C
Initial Boiling point	Not applicable
Flash Point	Not applicable
Density	3.55 g/cm³
Solubility	0.01mg/l
Danger of explosion:	Product does not present an explosion hazard

10. STABILITY AND REACTIVITY

Thermal Decomposition / Conditions to be Avoided:	None under normal processing
Possibility of Hazardous Reactions:	None known.
Bio accumulative Potential:	
Incompatible Materials:	No further relevant information available.
Reactivity:	None under normal processing
Chemical Stability:	Stable under normal conditions
Hazardous Decomposition:	None known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	
Primary irritant effect	
On the skin:	No information
On the eye:	No information
Chronic toxicity:	No further relevant information available

Additional Toxicological Information:	The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for the Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us
Acute effects (acute toxicity, irritation and corrosively)	From product as supplied: None
Repeated Dose Toxicity:	No further relevant information available
CMR Effects (carcinogenity, mutagenicity and toxicity for reproduction)	None

12. ECOLOGICAL INFORMATION

Aquatic Toxicity:	Generally, not hazardous for water.
Persistence and degradability:	Inorganic product, is not eliminable from water by means of biological cleaning processes.
Other Adverse Effects:	None known
Bio accumulative Potential:	Does not accumulate in organisms
Mobility in soil:	No information available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Recommendation:	Smaller quantities can be disposed of with household waste. 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 and nonhazardous wastes
Contaminated Packages:	Disposal must be made according to official regulations

14. TRANSPORT INFORMATION

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

DOT, ADR, ADN, IMDG, IATA: Not Regulated UN proper shipping name	Not regulated
DOT, ADR, ADN, IMDG, IATA Not Regulated Transport hazard class(s)	Not regulated
DOT, ADR, ADN, IMDG, IATA Class	Not regulated
Packing group DOT, ADR, IMDG, IATA	Not regulated

15. REGULATORY INFORMATION

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

Note:	Regulations apply to dust
United States Federal Regulations	
SARA	
Section 355 (extremely hazardous substances)	Substance is not listed
Section 313 (Specific toxic chemical listings):	Substance is not listed

TSCA (Toxic Substances Control Act):	All ingredients are listed
Carcinogenic Categories:	
EPA (Environmental Protection Agency):	Substance is not listed
IARC (International Agency for Research on Cancer):	Substance is not listed
TLV (Threshold Limit Value established by ACGIH):	Substance is not listed
NIOSH-Ca (National Institute for Occupational Safety and Health)	Substance is not listed
Canadian Substance Listings	
Canadian Domestic Substances List (DSL):	Substance is not listed
Canadian Ingredient Disclosure list (limit 0.1%):	Substance is not listed
Canadian Ingredient Disclosure list (limit 1%):	Substance is not listed

16. OTHER 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
CAS	Chemical Abstracts Service
DOT	Department of Transportation
IARC	International Agency for Research on Cancer
IMDG	International Maritime Dangerous Goods
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	Permissble 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.