

C-E Minerals: MSDS for Fused Spinel

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Fused Spinel
FORMULA: $MgAl_2O_4$
SUPPLIER: C-E Minerals
ADDRESS: 901 E. Eighth Avenue
King of Prussia, PA 19406
PHONE: (610)265-6880
EMERGENCY PHONE: (229)924-7170, After 5PM weekdays, Weekends, and Holidays: (229) 924-2175
DESCRIPTION: Fused Spinel typically contains 65-75% aluminum oxide and 25-35% magnesium oxide.

MANUFACTURER: C-E Minerals
ADDRESS: P.O. Box 37
Andersonville, GA 31711
PHONE: (229)924-7170

2. INGREDIENTS: COMPOSITION/INFORMATION

INGREDIENT	% WEIGHT	PEL-OSHA	TLV-ACGIH	LD 50/LC 50 ROUTE/SPECIES
Spinel CAS No.: 1302-67-6 RTECS No.: No Data	100	15 mg/m ³ (total) 5 mg/m ³ (resp.) (PNOR)	None Established*	No Data

* ACGIH has provided a "recommended guideline" of 10 mg/m³ (inhalable) and 3 mg/m³ (respirable for particles that have low toxicity, are insoluble or poorly soluble in water, and do not have an applicable TLV (For further information, consult Appendix E, 2003 TLVs and BEIs, ACGIH).

OSHA Regulatory Status: This material is not classified hazardous under OSHA regulations.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Non-combustible odorless off-white to tan coarse or powdery material. Inhalation of high dust concentrations may cause transient upper respiratory irritation. Particulate matter may scratch the eyes.

POTENTIAL HEALTH EFFECTS

EYE: Particulate matter may scratch the cornea or cause other mechanical injury to the eye.

SKIN: Irritation is not anticipated

INGESTION: Relatively non-toxic. Ingestion is not anticipated under normal working conditions.

INHALATION: Product will act as a nuisance dust. Inhalation of high concentrations of dust may cause coughing and mild, transitory respiratory irritation.

SIGNS AND SYMPTOMS: Scratching or physical damage to the eyes can cause irritation, redness, pain, tear formation, blurred vision, and light sensitivity.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Repeated inhalation of dusts over time may aggravate pre-existing respiratory disease.

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POTENTIAL HEALTH EFFECTS (continued)

CHRONIC: Long-term dust inhalation may decrease the ability of the lungs to clear particulate matter which may cause shortness of breath and increased susceptibility to respiratory disease.

TARGET ORGAN: Lungs

CARCINOGENICITY: NTP: No IARC: No OSHA: No

4. FIRST AID MEASURES

EYE: Flush eyes with lukewarm water for 15 minutes opening and closing eyelids to ensure adequate rinsing. If redness, irritation, pain, or tearing occurs, seek medical attention.

SKIN: Exposure not anticipated.

INHALATION: Not anticipated. If large amounts of dusts are inhaled, remove to fresh air. If breathing problems occur, a certified professional should administer oxygen or CPR if indicated. Seek immediate medical attention.

INGESTION: None required.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: Not Applicable

FLAMMABLE LIMITS: LEL: Not Applicable UEL: Not Applicable

NFPA CLASSIFICATION:

HEALTH: 0

FLAMMABILITY: 0

INSTABILITY: 0

EXTINGUISHING MEDIA: Any. Use media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARDS: Non-flammable, non-combustible. Product will not burn.

HAZARDOUS DECOMPOSITION PRODUCTS: None known. May give off small amounts of aluminum and magnesium oxides at high temperatures.

FIRE FIGHTING INSTRUCTIONS: Firefighters should wear a NIOSH approved full-facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear.

6. ACCIDENTAL RELEASE MEASURES

Isolate hazard area and deny entry to unauthorized and/or unprotected personnel. Do not walk through or otherwise scatter spilled material. Vacuum small spills. Gently shovel or scoop larger amounts into clean dry container for later recycle or disposal. Water mist may be added as necessary to control the level of airborne dusts. Wear appropriate protective equipment (See Section 8).

7. HANDLING AND STORAGE

Store in dry area in closed containers. Storage and work areas should be periodically cleaned to minimize dust accumulation. Avoid dust inhalation and promulgation. DO NOT use compressed air or dry sweeping to remove dust from work area. Dusts should be removed using an appropriately equipped vacuum. If an appropriate vacuum is unavailable, only wet-clean-up methods should be used (i.e. wet sweeping, misting, etc.). Moisture should be added as necessary to reduce exposure to airborne respirable dust.

Under dusty conditions, employees should wear coveralls or other suitable work clothing. Vacuum grossly contaminated clothing before removal.

Practice good housekeeping. Wash thoroughly after handling. Change contaminated clothing. Do not reuse until laundered.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY: Under normal working conditions, below acceptable exposure guidelines, none is required. For concentrations to 10X above the PEL, a NIOSH approved dust mist respirator should be worn. Appropriate respirator selection will be dependent upon the magnitude of exposure.

SKIN: None required.

EYES: Safety-glasses with side shields or goggles to prevent dust and particles from entering the eye.

ENGINEERING CONTROLS: General ventilation. Local exhaust may be necessary for processes which generate large quantities of airborne dust.

OTHER: None

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Off-white to tan; coarse or powdery
ODOR:	Odorless
SOLUBILITY IN WATER:	Slight
SPECIFIC GRAVITY (H₂O = 1):	3.3-3.5
MELTING POINT:	+3700 °F (+2040 °C)
pH (10% slurry):	No Data
% VOLATILE	0
TYPES:	Sizes range from coarse to powder

10. STABILITY AND REACTIVITY

STABILITY: Stable

REACTIVITY/INCOMPATIBILITY: None known.

DECOMPOSITION PRODUCTS: None known.

10. STABILITY AND REACTIVITY (continued)

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

EYE: Particulate matter may cause physical injury to the eye.

SKIN: Skin irritation is not anticipated.

INHALATION: May cause minor transient respiratory irritation.

INGESTION: None known.

CHRONIC: Physiologic consequence of particulate overload of the respiratory tract involves altered macrophage function, sequestration of particles and increased lung burden. When large numbers of particles reach the interstitium, interstitial macrophage-fibroblast interactions are stimulated which in turn can stimulate fibrosis. Once overloaded, the macrophages can also become sequestrian compartments. As dust concentrations within the lung increase, the retention half-life for particulate matter also increases.

SUBCHRONIC: No Data

OTHER: None known

12. ECOLOGICAL INFORMATION

Fused Spinel does not contain ozone depleting substances. It is not expected to exert an ecotoxic effect or bioconcentrate in the food chain.

13. DISPOSAL CONSIDERATIONS

Dispose of according to applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT): Not Classified

15. REGULATORY INFORMATION

CANADIAN WHMIS: Not Classified

EPCRA Section 302 (EHSs): This product does not contain ingredients subject to reporting requirements of 40 CFR Part 355, Appendices A and B (Extremely Hazardous Substances).

CERCLA, Section 304: This product does not contain ingredients subject to state and local reporting under Section 304 of SARA Title III as listed in 40 CFR Part 302, Table 302.4

15. REGULATORY INFORMATION (continued)

SARA 313 REPORTING REQUIREMENTS: This product does not contain ingredients subject to the reporting requirements of Section 313 SARA, and Section 6607 of the Pollution Prevention Act:

TSCA (Toxic Substances Control Act): All ingredients contained in this product are on the TSCA inventory.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and by definition, does not meet the requirements of any category.

16. OTHER INFORMATION

Revision Date: 5/7/98 added TSCA information.
10/3/00 reissued with no changes.
8/27/01 updated new area code for manufacturing facility.
8/15/03 Health and safety review and update

KEY:

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service
(C): Ceiling Limit
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
PNOC: Particulate Not Otherwise Classified
PNOR: Particulate Not Otherwise Regulated
SARA: Superfund Amendment and Reauthorization Act
TLV: Threshold Limit Value

DISCLAIMER

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