

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Entropy Resins® Shimmering Metallics EC-M-K1
APPLICABLE PRODUCT CODES: EC-M-K1 (EC-M-K1 kit includes: Golden Goose, Proper Copper and Star Dust)
CHEMICAL FAMILY: Mineral-metallic compound
INTENDED PRODUCT USES: Additive for liquid epoxy resins
PRODUCT RESTRICTIONS: None identified
SDS VERSION: EC-M-K1-2022a

MANUFACTURER:
Gougeon Brothers, Inc.
100 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 310-882-2120 or 989-684-7286
www.entropyresins.com

EMERGENCY TELEPHONE NUMBERS (24 HRS):
Transportation
CHEMTREC: 800-424-9300 (U.S.)
703-527-3887 (International)
Non-transportation
Poison Hotline: 800-222-1222

2. HAZARDS IDENTIFICATION

Classification of Substance or Mixture

Not a hazardous substance or mixture

Label Elements

Not a hazardous substance or mixture

Other Hazards

May cause slight mechanical irritation to the eye

3. COMPOSITION/INFORMATION ON HAZARDOUS/NON-HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS #	CONCENTRATION (%)
Mica (agglomerate)	12001-26-2	60-90
Titanium dioxide (encapsulated, agglomerate)	13463-67-7	10-40
Iron (III) oxide (agglomerate)	1309-37-1	1-10

The exact chemical identity and/or exact percentage (concentration) of each ingredient may be held as confidential business information (CBI). Any ingredient not disclosed in this section may have been determined not to be hazardous to health or the environment, or it may be present at a level below its disclosure threshold.

4. FIRST AID MEASURES

FIRST AID FOR EYES: SYMPTOMS: Excessive exposure may cause mechanical irritation and tearing. RESPONSE: Flush with water for at least 15 minutes. Remove contact lenses if present and easy to do. Consult a physician if symptoms develop and persist.

FIRST AID FOR SKIN: SYMPTOMS: May cause mild skin irritation. RESPONSE: Wash with mild soap and water. Consult a physician if symptoms develop and persist.

FIRST AID FOR INHALATION: SYMPTOMS: Excessive inhalation exposure may cause slight temporary respiratory irritation. RESPONSE: Remove to fresh air if symptoms develop and keep comfortable for breathing. Seek medical advice if symptoms develop and persist.

FIRST AID FOR INGESTION: SYMPTOMS: No acute adverse health effects expected from amounts ingested under normal conditions of use. RESPONSE: Seek medical attention if a significant amount is ingested.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: SUITABLE: Use extinguisher suitable for materials and circumstances in the surrounding environment. NON-SUITABLE: No limitations known for extinguishing agent or extinguisher type.

FIRE AND EXPLOSION HAZARDS: Materials will not support combustion.

SPECIAL FIRE FIGHTING PROCEDURES: In the event of a fire, do not breathe fumes. Wear a self-contained breathing apparatus and complete full-body personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Shimmering Metallics EC-M-K1

EMERGENCY PROCEDURES: Keep unnecessary and unprotected personnel from entering area. Use appropriate safety and personal protective equipment as indicated in Section 8.

MITIGATION AND CLEAN UP PROCEDURES: Use methods that avoid generating airborne dust. Use a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Avoid creating a dust cloud by brushing or sweeping, or using compressed air.

ENVIRONMENTAL PRECAUTIONS: Contain spilled product to the extent practical and feasible.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (min./max.): No special requirements.

STORAGE: Store in cool, dry place. Keep container tightly closed in a dry area. Avoid storing near incompatible materials identified in Section 10.

HANDLING PRECAUTIONS: Avoid breathing dust. Wash hands and face after handling. Provide appropriate exhaust ventilation at points of operation where dust can be generated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use with adequate general ventilation and/or local ventilation to keep exposures below established limits.

EYE PROTECTION GUIDELINES: Safety glasses with side shields, or goggles, if material is airborne and necessary to protect eyes.

SKIN PROTECTION GUIDELINES: Liquid-proof gloves (such as neoprene or nitrile) should be used in cases of prolonged or repeated contact to prevent skin irritation. Barrier creams can also be used effectively.

RESPIRATORY PROTECTION GUIDELINES: When ventilation cannot be made adequate enough to keep exposures below established limits, use a NIOSH approved respirator with particulate filter, such as a N95 or greater, depending on specific workplace conditions. Consult with your respirator and cartridge supplier to ensure proper selection of respirator and cartridge based on ingredients listed in Section 3 and specific workplace conditions. Use and select a respirator according the guidelines established in OSHA 1910.134 or other applicable respiratory protection standard.

ADDITIONAL PROTECTIVE MEASURES: Practice good caution and personal cleanliness to avoid skin and eye contact. Wash thoroughly after handling. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the exposure to this product under normal use conditions.

OCCUPATIONAL EXPOSURE LIMITS: Exposure limits may not be established for this product as a whole. For established exposure limits of specific ingredients in this product, or other available exposure limit information, refer to the table below.

Ingredient Name	CAS#	Exposure Limit Information
Muscovite mica (agglomerate)	12001-26-2	OSHA: 20 mppcf, TWA, Appendix C - Mineral Dusts ACGIH: TLV, 3mg/m ³ , TWA, Respirable NIOSH: REL, 3 mg/m ³ , TWA, Respirable
Titanium dioxide (encapsulated, agglomerate)	13463-67-7	NIOSH REL 2.4mg/ m ³ for fine TiO ₂ and 0.3 mg/ m ³ for ultra fine. ACGIH 10mg/ m ³ ; Lower respiratory tract irritation. Not classifiable as a human carcinogen. OSHA 15 mg/ m ³ – Table Z-1 Limits for Air Contaminants California PEL 5 mg/ m ³ – Title 8, Article 107
Iron (III) oxide (agglomerate)	1309-37-1	ACGIH: TLV 10 mg/ m ³ TWA; Remarks: Pneumoconiosis, Not classifiable as a human carcinogen NIOSH: REL 5 mg/ m ³ TWA (dust and fume) OSHA: PEL Table Z-1 – 5 mg/ m ³ (resp); 10 mg/ m ³ (fume); 15 mg/ m ³ (total)

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Powder, solid.
PARTICLE SIZE: 10-200 µm
COLOR: Gold, Silver or Bronze metallic.
ODOR: No distinguishable odor.
ODOR THRESHOLD: No data available
pH: 7-11 (10% aqueous suspension)
MELTING POINT / FREEZING POINT No data available
BOILING POINT (760mm/Hg): No data available
FLASH POINT: No data available
AUTO IGNITION TEMPERATURE No data available

LOWER EXPLOSIVE LIMIT (LEL).....	No data available
UPPER EXPLOSIVE LIMIT (UEL).....	No data available
VAPOR PRESSURE.....	No data available
SPECIFIC GRAVITY/DENSITY (water = 1).....	2.8 – 3.4
BULK DENSITY.....	23.3 – 28.3 lb./gal. (2.8-3.4 kg/L)
VAPOR DENSITY (air = 1).....	No data available
EVAPORATION RATE (Butyl Acetate = 1).....	No data available
WATER SOLUBILITY (% BY WT.).....	Largely insoluble.
PARTITION COEFFICIENT, n-OCTANOL/WATER (log Pow).....	No data available
KINEMATIC VISCOSITY:.....	No data available (mm ² /s @ 20°C)
DECOMPOSITION TEMPERATURE:.....	No data available.
% VOLATILE BY WEIGHT:.....	0.0% VOC
EXPLOSIVE PROPERTIES:.....	No data available.

10. STABILITY AND REACTIVITY

STABILITY:..... Product is stable at normal temperatures and pressures.

REACTIVITY/HAZARDOUS REACTIONS:..... Product will react with water to generate highly flammable hydrogen gas. The rate of gas generation does not meet physical hazard classification criteria.

INCOMPATIBILITIES:..... Chloroformates, strong acids, peroxides, strong oxidizing agents.

CONDITIONS TO AVOID:..... Avoid airborne dust formation. Avoid direct heat or excessive sunlight.

DECOMPOSITION PRODUCTS:..... None expected under normal use conditions.

11. TOXICOLOGICAL AND HAZARD ENDPOINT INFORMATION

Component Name	CAS#	LD ₅₀ Oral	LD ₅₀ Dermal	LC ₅₀ Inhalation
Mica (agglomerate)	12001-26-2	> 2000 mg/kg	No data	No data
Titanium dioxide (encapsulated, agglomerate)	13463-67-7	>5000 mg/kg	No data available	>6.82 mg/L
Iron (III) oxide (agglomerate)	1309-37-1	> 5000 mg/kg	No data	4 h > 5.05 mg/l

ACUTE TOXICITY:..... No specific toxicity data exists for this mixture. Classification is based on acute toxicity estimation methods using ingredient data.

Oral:..... Not classified. Based on available data does not meet acute oral toxicity criteria.

Dermal:..... Not classified. Based on available data does not meet acute dermal toxicity criteria.

Inhalation:..... Not classified. Based on available data does not meet acute inhalation toxicity criteria.

SKIN CORROSION / IRRITATION:..... Not classified. Based on available data does not meet criteria for skin corrosion / irritation.

SERIOUS EYE DAMAGE / IRRITATION:..... Not classified. Based on available data does not meet criteria for serious eye damage / irritation.

Eye irritation may occur as a result of mechanical irritation.

RESPIRATORY SENSITIZATION:..... Not classified. Based on available data does not meet criteria for respiratory sensitizer.

SKIN SENSITIZATION:..... Not classified. Based on available data does not meet criteria for skin sensitization.

REPRODUCTIVE TOXICITY:..... Not classified. Based on available data does not meet criteria for reproductive toxicity.

MUTAGENICITY:..... Not classified. Based on available data does not meet criteria for mutagenicity.

CARCINOGENICITY:..... Not classified. Based on available data does not meet criteria for carcinogenicity.

This product contains Titanium Dioxide, which is listed by IARC as a Group 2B – possibly carcinogenic to humans. Studies that have shown tumor developments in rats have shown little or no relevance to tumor development in humans. OSHA or NTP do not classify titanium dioxide as a potential carcinogen. In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have been shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health effects appears to be closely related to the particle size and the amount of the exposed surface area that comes in contact with the lung. However, tests with other laboratory animals, such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung cancer. Epidemiology studies do not suggest an increased risk of cancer in humans from occupational inhalation exposure to pigmentary titanium dioxide.

Shimmering Metallics EC-M-K1

As present in this product, titanium dioxide does not meet carcinogenic criteria, as it is bound to other material in this compound, forming a larger agglomerate particle, and therefore not respirable.

STOT (Single Exposure): Not classified. Based on available data does not meet classification criteria for STOT SE.

STOT (Repeated Exposure): Not classified. Based on available data does not meet classification criteria for STOT RE.

ASPIRATION HAZARD: Not classified. Based on available data does not meet aspiration toxicity criteria.

OTHER HEALTH HAZARD INFORMATION: None known.

12. ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY: No specific test data available for this product. Calculated Estimate: Does not meet acute aquatic toxicity criteria.

CHRONIC AQUATIC TOXICITY: No specific test data available for this product. Calculated Estimate: Does not meet chronic aquatic toxicity criteria.

PERSISTENCE AND BIODEGRADABILITY: No specific test data available for this product.

MOBILITY IN SOIL: No specific test data available for this product.

ADDITIONAL ECOTOXICITY INFORMATION: Prevent release to the environment, sewers and natural waters.

Ingredient	CAS#	Ecotoxicity Classification Information
Mica (agglomerate)	12001-26-2	No data available.
Titanium dioxide (encapsulated, agglomerate)	13463-67-7	Not classified
Iron (III) oxide (agglomerate)	1309-37-1	Not classified

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Reclaim or reuse may be preferred methods when conducted in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

US DOT

UN NUMBER: Not regulated.

SHIPPING NAME: Not applicable.

TECHNICAL SHIPPING NAME: Not applicable.

HAZARD CLASS: Not applicable.

PACKING GROUP: Not applicable.

CANADA TDG

UN NUMBER: Not regulated.

SHIPPING NAME: Not applicable.

TECHNICAL SHIPPING NAME: Not applicable.

HAZARD CLASS: Not applicable.

PACKING GROUP: Not applicable.

ICAO/IATA

UN NUMBER: Not regulated.

SHIPPING NAME: Not applicable.

TECHNICAL SHIPPING NAME: Not applicable.

HAZARD CLASS: Not applicable.

PACKING GROUP: Not applicable.

MARINE POLLUTANT: Not applicable.

IMDG

UN NUMBER: Not regulated.

SHIPPING NAME: Not applicable.

TECHNICAL SHIPPING NAME: Not applicable.

HAZARD CLASS: Not applicable.

PACKING GROUP: Not applicable.

Shimmering Metallics EC-M-K1

EmS Number: Not applicable.
 MARINE POLLUTANT Not applicable.

15. REGULATORY INFORMATION

COUNTRY	INVENTORY LIST	STATUS
United States	TSCA	All ingredients are listed or otherwise compliant.
Europe	EINECS or ELINCS	All ingredients are listed or otherwise compliant.
Canada	CEPA (DSL/NDL)	All ingredients are listed or otherwise compliant.
Australia	AICS	All ingredients are listed or otherwise compliant.
Japan	ENCS	All ingredients are listed or otherwise compliant.
South Korea	KECI	All ingredients are listed or otherwise compliant.
China	IECSC	All ingredients are listed or otherwise compliant.
Philippines	PICCS	All ingredients are listed or otherwise compliant.
New Zealand	NZIoC	All ingredients are listed or otherwise compliant.

US EPA TSCA Requirements:..... No data available.

Canada WHMIS Confidential Business Information (CBI):..... No data available.

US EPA SARA TITLE III Reporting and Notification Requirements:

- Subject to Section 302 (TPQ) No data available.
- Subject to Section 304 (RQ)..... No data available.
- Subject to Section 311 or 312 Refer to the health and physical classifications in section 2.
- Subject to Section 313 No data available.

STATE REGULATORY INFORMATION:

Chemicals listed below may be specifically regulated by individual states. For details on state regulatory requirements you should contact the appropriate state agency.

COMPONENT NAME

CAS NUMBER

Titanium dioxide
13463-67-7

STATE CODE

^{1,2}CA, NJ, PA

¹. These substances are known to the state of California to cause cancer or reproductive harm, or both.

². Titanium dioxide (airborne, unbound particles of respirable size) is a substance listed under California Proposition 65. As present in this product, titanium dioxide does not meet that listing criteria, as it is bound to other material in this compound forming a larger agglomerate particle, and therefore not respirable.

16. OTHER INFORMATION

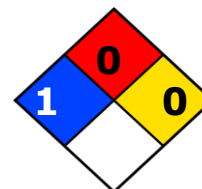
REASON FOR ISSUE:..... Approval date change.
PREPARED BY:..... Gougeon Brothers, Inc.
SDS CONTACT:..... safety@gougeon.com
TITLE:..... Health, Safety & Environmental Manager
APPROVAL DATE:..... January 3, 2022
SUPERSEDES DATE:..... March 24, 2021
SDS VERSION:..... EC-M-K1-2022a

OTHER HAZARD INFORMATION AND RATING SYSTEMS:

HMIS® RATING

HEALTH:	1
FLAMMABILITY:	0
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:
 0 = Low or None; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe

Information in this document is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Gougeon Brothers, Inc. The data on this sheet is related only to the specific material designated herein. Gougeon Brothers, Inc. assumes no legal responsibility for use or reliance upon these data.