

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Entropy Resins® White Caps EC-O-WHITE-4
APPLICABLE PRODUCT CODES: EC-O-WHITE-4
CHEMICAL FAMILY: Plant-based oil and pigment mixture.
INTENDED PRODUCT USES: Opaque white pigment for epoxy resins.
PRODUCT RESTRICTIONS: None identified.
SDS VERSION: EC-O-WHITE-4-2022a

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 classified as a hazardous substance or mixture

Label Elements

Not classified as a hazardous substance or mixture

Other Hazards

None known.

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

INGREDIENT NAME	CAS #	CONCENTRATION (%)
Titanium dioxide (in solution, non-hazardous)	13463-67-7	60-80
Plant-based oil (non-hazardous)	Not applicable	10-30

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: May cause slight irritation. RESPONSE: Flush immediately with water for at least 15 minutes. Remove contact lenses if present and easy to do. Consult a physician as precautionary measure if irritation occurs.

FIRST AID FOR SKIN: SYMPTOMS: No acute adverse health effects expected under normal conditions of use. RESPONSE: Remove contaminated clothing. Wipe excess from skin. Apply waterless skin cleaner and then wash with warm soap and water.

FIRST AID FOR INHALATION: SYMPTOMS: Not a likely route of exposure under normal conditions of use. RESPONSE: Remove to fresh air if respiratory irritation occurs and keep comfortable for breathing.

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 and you feel unwell.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: SUITABLE: Foam, carbon dioxide (CO₂), dry chemical, water fog or haze.
NON-SUITABLE: Direct water stream.

FIRE AND EXPLOSION HAZARDS: During a fire, smoke may contain the original materials in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include, but are not limited to: carbon monoxide, carbon dioxide, and possible nitrogen oxide.

SPECIAL FIRE FIGHTING PROCEDURES: Wear a self-contained breathing apparatus and complete full-body personal protective equipment. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

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: Stop leak without additional risk. Isolate area. Dike and absorb with chalk or other inert binding materials (e.g., sand) and collect in a suitable, closed container. Warm, soapy water or non-flammable, safe solvent may be used to clean residual.

ENVIRONMENTAL PRECAUTIONS: Prevent from entering into soil, ditches, sewers, waterways and groundwater. See Section 12 for environmental impact information.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (min./max.): 40°F (4°C) / 120°F (49°C)

STORAGE: Store at ambient temperature in a dry place. Store in tightly sealed containers away from direct sunlight. Store away from oxidizing agents.

HANDLING PRECAUTIONS: Avoid excessive skin and eye contact. Wash thoroughly after handling. Launder contaminated clothing before reuse. Avoid inhalation of vapors from heated product.

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 chemical splash goggles.

SKIN PROTECTION GUIDELINES: Wear liquid-proof, chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber).

RESPIRATORY PROTECTION GUIDELINES: Respiratory protection typically not required under normal conditions of use with minimal ventilation present.

This product contains Titanium Dioxide (TiO₂), which is listed by IARC as a Group 2B – possibly carcinogenic to humans by IARC. No significant inhalation exposure is expected to occur during use of products in which TiO₂ is present in a liquid dispersion or when bound to other materials, such as in cured epoxies. Risk of overexposure depends on actual concentration in the formula and duration and level of exposure to dust from sanding or similar machining operations of solidified product. When sanding or machining solidified product and creating an airborne dust that may contain TiO₂, consider the use of appropriate respiratory protection, such as a N95 particulate filter or greater.

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 potential for harmful 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
Titanium dioxide (in solution, non-hazardous)	13463-67-7	NIOSH REL 2.4mg/ m3 for fine TiO ₂ and 0.3 mg/ m3 for ultra fine. ACGIH 10mg/ m3; Lower respiratory tract irritation. Not classifiable as a human carcinogen. OSHA 15 mg/ m3 – Table Z-1 Limits for Air Contaminants California PEL 5 mg/ m3 – Title 8, Article 107
Plant-based oil (non-hazardous)	Not applicable	No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Oily viscous liquid.

COLOR: White.

ODOR: Mild.

ODOR THRESHOLD: No data available

pH: No data available

MELTING POINT / FREEZING POINT No data available

BOILING POINT (760mm/Hg): > 400°F (204°C) Estimated based on ingredient data.

FLASH POINT: >200°F (93°C) Based on ASTM D92 test results from similar product.

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) 1.2

BULK DENSITY 16.6 lbs./gal. (1.20 kg/L)

VAPOR DENSITY (air = 1) < 1 mmHg@ 20°C. Estimated based on ingredient data.
 EVAPORATION RATE (Butyl Acetate = 1) No data available
 WATER SOLUBILITY (% BY WT.) Not miscible or difficult to mix
 PARTITION COEFFICIENT, n-OCTANOL/WATER (log Pow)..... No data available
 KINEMATIC VISCOSITY: No data (mm²/s @ 20°C)
 DECOMPOSITION TEMPERATURE: No data available.
 % VOLATILE BY WEIGHT: No data available.

10. STABILITY AND REACTIVITY

STABILITY: Product is stable at normal temperatures and pressures.
REACTIVITY/HAZARDOUS REACTIONS: Product will not react by itself.
INCOMPATIBILITIES: Reacts with strong oxidizing agents. External heating could result in rapid temperature increase and pressure build up
CONDITIONS TO AVOID: Avoid excessive heat or storage in direct sunlight.
DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and oxides of nitrogen may be produced burned or heated to decomposition.

11. TOXICOLOGICAL AND HAZARD ENDPOINT INFORMATION

Component Name	CAS#	LD ₅₀ Oral	LD ₅₀ Dermal	LC ₅₀ Inhalation
Titanium dioxide (in solution, non-hazardous)	13463-67-7	>5000 mg/kg	No data	>6.82 gm/l 4h; rat
Plant-based oil (non-hazardous)	Not applicable	No data available	No data available	No data available

ACUTE TOXICITY: No specific toxicity data exists for this mixture. Classification is based on acute toxicity estimation methods using ingredient data.
 Oral: Not classified. Does not meet acute oral toxicity criteria.
 Dermal: Not classified. Does not meet acute dermal toxicity criteria.
 Inhalation: Not classified. Does not meet acute inhalation toxicity criteria. If product is heated, vapors generated can cause respiratory irritation if inhaled in high concentrations.

SKIN CORROSION / IRRITATION: Not classified. Does not meet skin irritation / corrosion criteria.

SERIOUS EYE DAMAGE / IRRITATION: Not classified. Does not meet serious eye damage / irritation criteria.

RESPIRATORY SENSITIZATION: Not classified. Does not meet criteria for respiratory sensitizer.

SKIN SENSITIZATION: Not classified. Does not meet skin sensitization criteria.

REPRODUCTIVE TOXICITY: Not classified. Does not meet criteria for reproductive toxicity.

MUTAGENICITY: Not classified. Does not meet criteria for mutagenic toxicity.

CARCINOGENICITY: Not classified. Does not meet criteria for carcinogenicity.

This product contains Titanium Dioxide, which is listed by IARC as a Group 2B – possibly carcinogenic to humans. No significant inhalation exposure is expected to occur during use of products in which Titanium Dioxide is present in a liquid dispersion or bound to other materials. Risk of overexposure depends on actual concentration in the formula and duration and level of exposure to dust from sanding or similar machining operations. 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.

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure): Not classified. Does not meet STOT SE criteria.

SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure): Not classified. Does not meet STOT RE criteria.

ASPIRATION HAZARD: Not classified. Does not meet aspiration toxicity criteria.

OTHER HEALTH HAZARD INFORMATION: None known.

12. ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY:..... No specific test data available for the mixture. Calculated Estimate: Does not meet acute aquatic toxicity requirements.

CHRONIC AQUATIC TOXICITY:..... No specific test data available for the mixture. Calculated Estimate: Does not meet chronic aquatic toxicity requirements.

PERSISTENCE AND BIODEGRADABILITY: No specific test data available for the mixture.

MOBILITY IN SOIL: No specific test data available for the mixture.

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

Ingredient	CAS#	Ecotoxicity Classification Information
Titanium dioxide (in solution, non-hazardous)	13463-67-7	Not classified.
Plant-based oil (non-hazardous)	Not applicable	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.

Incinerate, recycle (fuel blending) or reclaim 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.
 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/NDSL)	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

STATE CODE

Titanium dioxide	
13463-67-7	^{1,2} CA, NJ, PA
Acetaldehyde (trace level impurity)	
75-07-0	¹ CA, NJ, MA, PA
1,4-Dioxane (trace level impurity)	
123-91-1	¹ CA, NJ, MA, PA
Formaldehyde (trace level impurity)	
50-00-0	¹ CA, NJ, MA, PA
Ethylene oxide (trace level impurity)	
75-21-8	¹ CA, NJ, MA, PA
Propylene oxide (trace level impurity)	
75-56-9	¹ CA, NJ, MA, 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 both bound in a liquid dispersion and therefore not respirable.

16. OTHER INFORMATION

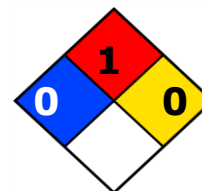
REASON FOR ISSUE:..... Approval date change.
 PREPARED BY:..... Gougeon Brothers, Inc.
 SDS CONTACT:..... safety@gougeon.com
 TITLE: Health, Safety & Environmental Manager
 APPROVAL DATE: January 3, 2022
 SUPERSEDES DATE:..... June 24, 2021
 SDS VERSION: EC-O-WHITE-4-2022a

OTHER HAZARD INFORMATION AND RATING SYSTEMS:

HMIS® RATING

HEALTH:	0
FLAMMABILITY:	1
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

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