

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Entropy Resins® Black EC-O-ECLIPSE-4
APPLICABLE PRODUCT CODES: EC-O-ECLIPSE-4
CHEMICAL FAMILY: Plant-based oil and pigment mixture.
INTENDED PRODUCT USES: Opaque black pigment for epoxy resins.
PRODUCT RESTRICTIONS: None identified.
SDS VERSION: EC-O-ECLIPSE-4-2023b

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

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

INGREDIENT NAME	CAS #	CONCENTRATION (%)
Plant-based oil (non-hazardous)	Not applicable	60-80
Carbon black (in solution, non-hazardous)	1333-86-4	10-30
Alkylammonium salt	398475-96-2	1-2.5
Polymer	NJTRSN 800963-5256	1-2.5

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: May cause slight irritation. RESPONSE: Remove contaminated clothing. Wipe excess from skin. Apply waterless skin cleaner and then wash with warm soap and water. If skin irritation occurs, get medical attention or advice. Take off contaminated clothing and wash it before re-use.

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 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 Carbon Black, 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 Carbon Black is present in a liquid dispersion or when 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 of solidified product. When sanding or machining solidified product and creating an airborne dust that may contain Carbon Black, 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
Plant-based oil (non-hazardous)	Not applicable	No data available.
Carbon black (in solution, non-hazardous)	1333-86-4	ACGIH TLV 3 mg/m ³ TWA, Inhalable; OSHA PEL 3.5 mg/m ³ , TWA
Alkylolammonium salt	398475-96-2	No data available.
Polymer	NJTRSN 800963-5256	No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Oily viscous liquid.
COLOR: Black.
ODOR: Mild.
ODOR THRESHOLD: No data available
pH: Neutral
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) 1.064
BULK DENSITY 8.88 lbs./gal. (1.06 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: ASTM D 2369-07 was used to determine the Volatile Content of mixed epoxy resin and hardener.

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
Plant-based oil (non-hazardous)	Not applicable	No data available	No data available	No data available
Carbon black (in solution, non-hazardous)	1333-86-4	> 8000 mg/kg	No data available	No data available
Alkylolammonium salt	398475-96-2	No data available	No data available	No data available
Polymer	NJTRSN 800963-5256	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 Carbon Black, 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 Carbon Black 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. Refer to Section 8 respiratory protection information and Section 11 for toxicology information.

Study: Species: Rat, Route: Inhalation, Duration: 2 years, Target Organ: Lungs, Effect: Inflammation, fibrosis, tumors. Note: Tumors in the rat lung are considered to be related to "lung overload" rather than to a specific chemical effect of the carbon black itself in the lung. These effects in rats have been reported in many studies in other poorly soluble inorganic particles and appear to be rat specific (ILSI, 2000). Tumors have not been observed in other species (Ex. mouse, hamster) for carbon black or other poorly soluble particles under similar circumstances and study conditions.

In 2006, IARC re-affirmed its 1995 finding that there is "inadequate evidence" from human health studies to assess whether carbon black causes cancer in humans. IARC concluded that there is "sufficient evidence" in animal studies for the carcinogenicity of carbon black. IARC's overall assessment is that carbon black is "possibly carcinogenic to humans (Group 2B)". This conclusion was based on IARC's guideline's, which generally require such a classification if one species exhibits carcinogenicity in two or more animal studies (IARC, 2010).

ACHIG classifies Carbon Black as a confirmed animal carcinogen with unknown relevance to humans (Category A3).

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: Note: This hazard is applicable to airborne dust particulate only. Carbon Black: Repeated dose toxicity (inhalation, rat), 90 days, NOAEC = 1.1 mg/m3 (respirable). Target organ effects at higher doses are lung inflammation, hyperplasia, and fibrosis.

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 acute 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
Plant-based oil (non-hazardous)	Not applicable	Not classified.
Carbon black (in solution, non-hazardous)	1333-86-4	Not classified.
Alkylolammonium salt	398475-96-2	Aquatic Chronic Toxicity Cat. 1
Polymer	NJTRSN 800963-5256	No data available

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/NDL)	All ingredients are listed or otherwise compliant.
Australia	AICS	All ingredients are listed or otherwise compliant.
Japan	ENCS	No data on CAS# 398475-96-2
South Korea	KECI	All ingredients are listed or otherwise compliant.
China	IECSC	All ingredients are listed or otherwise compliant.
Philippines	PICCS	No data 398475-96-2
New Zealand	NZIoC	No data 398475-96-2

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

Carbon black
1333-86-4
Acetaldehyde (trace level impurity)
75-07-0
1,4-Dioxane (trace level impurity)
123-91-1
Formaldehyde (trace level impurity)
50-00-0
Ethylene oxide (trace level impurity)
75-21-8
Propylene oxide (trace level impurity)
75-56-9

STATE CODE

^{1,2}CA, NJ, MA, PA
¹CA, NJ, MA, PA
¹CA, NJ, MA, PA
¹CA, NJ, MA, PA
¹CA, NJ, MA, PA
¹CA, NJ, MA, PA

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

2. Carbon black, (airborne, unbound particles of respirable size) is a substance listed under California Proposition 65. As present in this product, carbon black does not meet that listing criteria, as it is both bound in a liquid dispersion and therefore not respirable.

16. OTHER INFORMATION

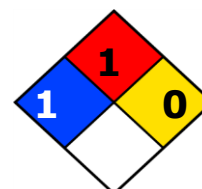
REASON FOR ISSUE:..... Changes to Section 2 and 14.
PREPARED BY:..... Gougeon Brothers, Inc.
SDS CONTACT:..... safety@gougeon.com
TITLE: Health, Safety & Environmental Manager
APPROVAL DATE: May 9, 2023
SUPERSEDES DATE:..... January 3, 2023
SDS VERSION: EC-O-ECLIPSE-4-2023b

OTHER HAZARD INFORMATION AND RATING SYSTEMS:

HMIS® RATING

HEALTH:	1
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

Entropy Resins® Black EC-O-ECLIPSE-4

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