

G&H® Wire Company 2165 Earlywood Drive Franklin, IN 46131 (317) 346-6655 International

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MATERIAL SAFETY DATA SHEET DIRECTIVE 91/155/EEC

1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

Chemical Nature, Sales Name, Use: Epoxy #CS737 Electrocoat, Epoxy Wire Coating

- 1.1 Company Identification: G&H Wire Company P.O. Box 248 Greenwood, Indiana 46142 Telephone: 317-346-6655 Facsimile: 317-346-6663
- 1.2 Emergency Contact: 317-346-6655

2. COMPOSITION/INFORMATION ON INGREDIENTS

2.1	Diethylene Glycol Monobutyl Ether	1 - <5%	CAS 112-34-5
2.2	Titanium Dioxide	1 -<5%	CAS 13463-67-7
2.3	Ethylene Glycol m-2-Ethylhexyl Ether	1 -<5%	CAS1559-35-9
2.4	Methyl Ethyl Ketone	0.1-1.0%	CAS 78-93-3
2.4	(As Glycol ethers)	0.1-1.0%	CAS 78-95-5
2.5		*	CAS 112-34-5

3. HAZARDS IDENTIFICATION OF RAW MATERIAL

Acute Overexposure Effects

- 3.1 Inhalation: Vapor and spray mist may be harmful if inhaled.
- 3.2 Skin Irritation: May cause moderate skin irritation. Not expected to be absorbed through the skin.
- 3.3 Sensitization: Not defined
- 3.4 Eye Irritation: Causes sever eye irritation.
- 3.5 Further Details:
- 3.6 Chronic Overexposure: Dryness, itching, cracking, burning, redness and swelling are conditions associated with excessive skin contact of the raw material before curing.

4. FIRST-AID MEASURES

- 4.1 Inhalation: If affected by inhalation of vapor or spray mist, remove to fresh air. IF symptomatic, contact a poison control center, emergency room or physician for treatment information.
- 4.2 Skin Contact: In case of skin contact, flush immediately with plenty of water for 15 minutes followed by washing with soap and water.
- 4.3 Eye Contact: In case of eye contact, flush eyes immediately with plenty of water for at least 15 minutes. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact of the liquid material.

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4.4 Ingestion of liquid material: Gently wipe or rinse the inside of the mouth with water. Sips of water may be given to a conscious person. Never give anything by mouth to an unconscious person. Contact a poison control center or emergency room or physician immediately as further treatment will be necessary.

4.5 Other: The effects of long term exposure have not been determined.

5. FIRE-FIGHTING MEASURES

- 5.1 Suitable Extinguishing Media: Use national fire protection association class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA class II combustible liquid fires.
- 5.2 Unsuitable Extinguishing Media: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat. If water is sued, fox nozzles are preferable.
- 5.3 Particular Hazards: Closed containers may explode or burst (due to the build-up of steam pressure) when exposed to extreme heat. Keep away from heat, sparks, flame and other sources of ignition. Extreme heat includes, but is not limited to, flame cutting, brazing and welding.
- 5.4 Protective Equipment for Fire-Fighters: Fire fighters should wear self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 <u>Personal Precautions</u>:

Inhalation: Where ventilation is inadequate, use a suitable respirator.

Skin Contact: Wear protective clothing and gloves constructed of impermeable material. Eye Contact: Wear chemical type splash goggles.

Other equipment: Clean or discard contaminated clothing and shoes.

Ventilation Requirements:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed below the lowest suggested exposure limits, LEL limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

6.2 Environmental Precautions:

Steps to be taken in case material is released or spilled:

Provide maximum ventilation and general dilution. Only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sawdust, vermiculite, or other absorbent material and place into container for disposal.

6.3 Cleaning Methods: See step 6.2

7. HANDLING AND STORAGE

- 7.1 Handling: Do not store above 120 degrees F (48C). Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.
- 7.2 Storage: Do not store above 120 degrees F. Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.
- 7.3 Storage Conditions: Do not store above 120 degrees F. Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.

Coating for Nickel Titanium and Stainless Steel Archwires Page 3 of 6 8. EXPOSURE CONTROLS/PERSONAL PROTECTION _____ Inhalation: Where ventilation is inadequate, use a suitable respirator. Skin Contact: Wear protective clothing and gloves constructed of impermeable material. Eye Contact: Wear chemical type splash goggles. Other equipment: Clean or discard contaminated clothing and shoes. Ventilation Requirements: rovide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed below the lowest suggested exposure limits, LEL limit, and to remove decomposition products during welding or flame cutting on surfaces coated with this product. PHYSICAL AND CHEMICAL PROPERTIES 9. 9.1 Form: Viscous liquid Color: Beige liquid Odor: Viscous liquid with an odor characteristic of the chemical family and any solvents listed in this document. 9.2 Change of State: N/A Melting Point/Range: N/A Boiling Point: 169 to 527 degrees F 9.3 Flash Point: 106 deg. F (41 C) 9.4 Ignition Point: Combustible 9.5 Vapor Pressure (20°C): 17.6 mm Hg 9.6 Density (20°C): specific gravity 1.05; Vapor Density: heavier than air 9.7 Solubility in: Water (20°C): 79.3% Organic Solvent (20°C): 9.8 PH-Value (at 10g/1H₂0): U/I 9.10 Viscosity $(20^{\circ}C)$: STABILITY AND REACTIVITY 10. This material is normally stable and will not undergo hazardous reactions. 10.1 Thermal Decomposition: May produce hazardous decomposition product when heated. Welding, brazing, or flame cutting on surfaces coated with this product may produce fumes including: carbon monoxide, oxides of nitrogen Conditions to Avoid: None known 10.2 10.3 Materials to Avoid: Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents. 10.4 Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, lower molecular weight polymer fractions. 11. TOXICOLOGICAL INFORMATION Oral Toxicity: Harmful if swallowed. 11.1 11.2 Inhalation: Vapor and spray mist may be harmful if inhaled. Skin Irritation: May cause moderate skin irritation. 11.3 Sensitization: Not defined 11.4 Eye Irritation: Causes eye irritation. 11.5 Further Details: 11.6 11.7 Chronic Overexposure: Avoid long term and repeated contact.

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This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure.

Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposure is not expected, there is no significant hazard for man.

This product contains diethylene glycol monobutyl ether (DEGBE). DEGBE consumed in drinking water at low levels by rats for 30 days caused injury to the liver, kidney, spleen, or testes.

11.8 Signs & symptoms of overexposure:

Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

12. ECOLOGICAL INFORMATION

- 12.1 Acute Toxicity in Fish (LC-50/48h) No information available
- 12.2 Bacteria Toxicity (EC-0): No information available
- 12.3 Biodegradability: No information available
- 12.4 Further Details: No information available

13. DISPOSAL CONSIDERATIONS

- 13.1 Product: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.
- 13.2 Packaging: No information available
- 13.3 Waste Disposal Code: No information available

14. TRANSPORT INFORMATION

- 14.1 Overland Transport ADR/RID/GGVS/GGVE: No information available
- 14.2 Sea Transport GGVSEA/IMDG-Code: No information available
- 14.3 Air Transport ICAO/IATA-DGR: No information available
- 14.4 Inland Waterway Transport ADNR: No information available
- 14.5 Further Details: None known.

15. REGULATORY INFORMATION

Preparation as defined by the (German) Chemicals Act (dated 4/03/1990).

15.1 Labeling:

Product Contains: Danger Symbol: R-Sentences R36/37/38: S-Sentences S26: S-Sentences S28: 15.2 National Regulation:

- VbF:
 - TA-Air:

Water Pollution 1:

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16.	OTHER INFORMATION	

16.1	The information contained herein is based on the present state of our knowledge and is	3
	intended to describe our products from the point of view of safety requirements	•
	Therefore, it should not be construed as guaranteeing specific properties.	

16.2 Revision Date: November 28, 2006