MATERIAL SAFETY DATA SHEET

Copps Industries, Incorporated
10600 N. Industrial Drive
Mequon, WI 53092-4473
Telephone: (262) 238-1700

Date Prepared: **01/28/10**
Revision Number: **3**

Section 1 - Material Identification

Product Name: **A-541**
Product Type: Epoxy Resin Compound

Manufacturer: Copps Industries, Incorporated
10600 N. Industrial Drive
Mequon, WI 53092-4473

Telephone Number: (262) 238-1700

Emergency Number (s): (800) 255-3924 24 hrs. (Continental U.S.)
(813) 248-0585 24 hrs. (Outside Continental U.S.)

Revision Notes: Annual Updating

Section 2 - Hazardous Ingredients

#	wt %	CAS Number	Chemical Name
1.	> 20 %	Trade Secret	Epoxy Resin

OSHA & ACGIH EXPOSURE LIMITS

		TWA		STEL		CEILING	
		ppm	mg/m3	ppm	mg/m3	ppm	mg/m3
1.	OSHA	N/E	N/E	N/E	N/E	N/E	N/E
	ACGIH	N/E	N/E	N/E	N/E	N/E	N/E

N/E = Not Established

Section 3 - Health Hazards

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EMERGENCY OVERVIEW

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HMIS HEALTH RATING: 2 **FLAMMABILITY:** 1 **REACTIVITY:** 0

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HMIS Hazard Rating ➡ Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

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A white, thixotropic liquid with a slight “sweet” odor. Causes eye and skin irritation. Can burn in fire, releasing possible hazardous vapors, gases and fumes. Do not torch or weld on cured epoxy. Hazardous fumes and vapors may be released.

Routes of Exposure: Eye Contact, Skin Contact, Ingestion.
Health Hazards: May cause eye irritation. May cause skin sensitization. Moderate skin irritant.
Target Organs: Eyes, Skin.
Signs and Symptoms of Exposure (Acute Effects): Contact with skin or eyes causes irritation, redness and discomfort.
Signs and Symptoms of Exposure (Possible Longer Term Effects): Repeated and/or prolonged exposure may cause allergic reaction/ sensitization. Repeated and/or prolonged exposure may result in adverse eye effects (such as conjunctivitis or corneal damage), adverse skin effects (such as rash, irritation or corrosion).
Medical Conditions Generally Aggravated by Exposure: Eye disease, skin disorders and allergies.
Carcinogens under OSHA, ACGIH, NTP, IARC, other: This product contains no carcinogens in concentrations of 0.1 percent or greater.

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Section 4 - First Aid

Eye Contact: Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention.
Skin Contact: Remove contaminated clothing/shoes and wipe excess from skin. Flush skin with water. Follow by washing with soap and water. If irritation occurs, seek medical attention. If contact with hot product occurs, immediately flush with cool water for 15 minutes. Carefully remove clothing; if clothing is stuck to a burn area do not pull it off, but cut around it. Cover burn area with a clean material. Get medical attention immediately.
Inhalation: Remove victim to fresh air and provide oxygen. If breathing is difficult, seek medical attention.
Ingestion: If swallowed, call physician immediately. Induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5 - Fire and Explosion Data

Flash Point (closed cup):	> 200 °F	**Upper Explosion Limit (UEL):**	No data
Auto Ignition Temperature:	No data	**Lower Explosion Limit (LEL):**	No data

Fire Hazard Classification (OSHA/NFPA): This product is not considered flammable nor combustible, but will burn if involved in a fire.
Extinguishing Media: Foam, Carbon Dioxide (CO_2), or dry chemical.
Special Fire Fighting Procedures: Keep personnel removed from area and upwind of fire. Wear full fire-fighting turn-out gear (full bunker gear) and respiratory protection (SCBA). Cool fire exposed containers with water spray.
Unusual Fire and Explosion Hazards: Hazardous combustion products may be present. Combustion may form aldehydes, nitrous oxides, carbon monoxide (CO), and carbon dioxide (CO_2).

Section 6 - Accidental Release Measures

Containment Techniques (Removal of ignition sources, diking, etc.) Stop the leak, if possible. Shut off or remove all ignition sources. Construct a dike to prevent spreading.
Clean-Up Procedures: Spread absorbent material over area. Wipe or scrape up material. Dispose of material in accordance with local, state and federal regulations. Wash area with soap and water. Prevent washings from entering sewers or waterways.
Other Emergency Advice: Wear protective clothing, boots, gloves, respirator, and eye protection.

Section 7 - Handling and Storage

Storage: Store in a cool (60-80 °F), dry, ventilated place. Crystallization may occur if storage temperature drops below 55 °F for a prolonged period of time. Store in closed containers.
Handling: Avoid contact with skin, eyes, or clothing. When handling, do not eat, drink, or smoke.
Other Precautions: Wash thoroughly after handling. Remove contaminated clothing and gear. Decontaminate. Destroy leather or any articles which can not be decontaminated.

Section 8 - Personal Protection/Exposure Controls

Eye Protection: Chemical safety goggles recommended. Contact lenses should not be worn while using this product.
Hand Protection: Chemical resistant gloves recommended, such as neoprene or nitrite rubber.
Respiratory Protection: Not necessary under most operating conditions. NIOSH approved organic vapor respirator should be used in confined areas, or when conditions cause high vapor concentrations. If the percent oxygen is below normal then use self-contained breathing apparatus.
Protective Clothing: Clean, body covering clothing should be utilized.
Work and Hygienic Practices: Eye wash stations and safety showers should be easily accessible.

Section 9 - Typical Physical and Chemical Properties

Physical Form:	Viscous Liquid	**Vapor Density:**	Heavier than air
Color:	White	**Boiling Point:**	> 200 °F
Odor:	Slight Sweet	**Melting Point:**	Not Applicable
pH:	No Data	**Solubility in Water:**	Negligible
Vapor Pressure:	No Data	**Specific Gravity:**	0.98

Section 10 - Stability and Reactivity

Chemical Stability: Stable
Conditions to Avoid (if unstable): None

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Section 10 - Stability and Reactivity (con't.)

Incompatibility (Materials to Avoid): Acids, strong oxidizing agents.
Hazardous Decomposition Products: None
Hazardous Polymerization: Contact with epoxy hardeners under uncontrolled conditions. May release excess heat and vapors.

Section 11 - Toxicological Properties

Acute Oral Toxicity (LD50, RAT): No data available.
Acute Dermal Toxicity (LD50, RABBIT): No data available.
Acute Inhalation Toxicity (LC50, RAT): No data available.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Waste Disposal: This material does not contain any VOC's (volatile organic compounds). Dispose of material in accordance with applicable, local, state, and federal laws and regulations. The state and local regulations and laws may differ from federal regulations, and laws may change or be reinterpreted. This information only applies to the material as manufactured. Processing, use, or contamination may make the information in appropriate, inaccurate, or incomplete. Responsibility for proper waste disposal is with the owner of the waste.

Section 14 - Transport Information

DOT Non-Bulk Shipping Name:	Resin compound - not regulated	**UN#:**	Not regulated
DOT Bulk Shipping Name:	Resin compound - not regulated	**Packing Group:**	Not regulated
Technical Shipping Name:	NMFC Item 46030, Class 55	**IMO Shipping Data:**	Resin compound - not regulated
DOT Hazard Class:	Not regulated	**ICAO/IATA Shipping Data:**	Resin compound - not regulated

Section 15 - Regulatory Information

US FEDERAL REGULATIONS:

Toxic Substances Control Act (TSCA): All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory or are not required to be listed on the TSCA Inventory.
OSHA (29CFR1910.1200) Hazard Class(es): Irritant. Sensitizer
EPCRA Section 312 (40CFR370) Hazard Classes: Immediate Health Hazard. Delayed Health Hazard.
EPCRA Section 313 (40CFR372): Toxic chemicals above "de minimus" level (% by weight): Ethylene glycol (<1%)

STATE REGULATIONS:

California Proposition 65 Substances: (components known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986"). None

INTERNATIONAL REGULATIONS

Canada: **WHMIS Hazard Classification:** Class D, division 2B
WHMIS Risk Phrases: Eye or skin irritant. Skin sensitizer.
WHMIS Symbols: Stylized T

Section 16 - Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither Copps Industries nor any of its agents assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

MATERIAL SAFETY DATA SHEET

Copps Industries, Incorporated
10600 N. Industrial Drive
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Telephone: (262) 238-1700

Date Prepared: 01/28/10
Revision Number: 2

Section 1 - Material Identification

Product Name: **B-542**

Product Type: Epoxy Hardener Compound

Manufacturer: Copps Industries, Incorporated
10600 N. Industrial Drive
Mequon, WI 53092-4473

Telephone Number: (262) 238-1700

Emergency Number (s): (800) 255-3924 24 hrs. (Continental U.S.)
(813) 248-0585 24 hrs. (Outside Continental U.S.)

Revision Notes: Annual Updating

Section 2 - Hazardous Ingredients

#	wt %	CAS Number	Chemical Name
1.	> 1 %	80-05-7	4, 4′-Isopropylidenediphenol
2.	> 1 %	111-40-0	Diethylenetriamine

OSHA & ACGIH EXPOSURE LIMITS

		TWA		STEL		CEILING	
		ppm	mg/m3	ppm	mg/m3	ppm	mg/m3
1.	**OSHA**	N/E	N/E	N/E	N/E	N/E	N/E
	ACGIH	N/E	N/E	N/E	N/E	N/E	N/E
2.	**OSHA**	1.0	4.0	N/E	N/E	N/E	N/E
	ACGIH	1.0	4.2	N/E	N/E	N/E	N/E

N/E = Not Established

Section 3 - Health Hazards

EMERGENCY OVERVIEW

HMIS HEALTH RATING: 3 **FLAMMABILITY:** 1 **REACTIVITY:** 0

HMIS Hazard Rating ➡ Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

A blue liquid with an amine odor. Corrosive to skin. Corrosive to eyes. Severe skin irritant. Severe eye irritant. May cause skin sensitization. May cause respiratory sensitization. Can burn in fire, releasing possible hazardous vapors, gases and fumes.
Do not torch or weld on cured epoxy. Hazardous fumes and vapors may be released.

Routes of Exposure: Eye Contact, Skin Contact, Inhalation, Ingestion.
Health Hazards: Corrosive to skin. Corrosive to eyes. Severe skin irritant. Severe eye irritant. May cause skin sensitization. May cause respiratory sensitization.
Target Organs: Eyes, Skin, and Respiratory System.
Signs and Symptoms of Exposure (Acute Effects): Burns of the eye may cause blindness. Contact of undiluted products with the eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis, and permanent injury. Inhalation of mists may severely damage contacted tissue and produce scarring. Product is readily absorbed through the skin and may cause discomfort, injury or serious health problems unless treated properly.
Signs and Symptoms of Exposure (Possible Longer Term Effects): This substance may cause respiratory sensitization to exposed workers.
Medical Conditions Generally Aggravated by Exposure: Asthma, chronic respiratory disease (e.g. Bronchitis, emphysema). Eye disease, skin disorders and allergies.
Carcinogens under OSHA, ACGIH, NTP, IARC, other: This product contains no carcinogens in concentrations of 0.1 percent or greater.

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Section 4 - First Aid

Eye Contact: Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention.
Skin Contact: Remove contaminated clothing/shoes and wipe excess from skin. Immediately flush affected area with water for at least 15 minutes. Cover the affected area with a sterile dressing or clean sheeting and seek medical attention immediately. DO NOT APPLY GREASES OR OINTMENTS. Control shock if present.
Inhalation: Remove victim to fresh air and provide oxygen. If breathing is difficult, seek medical attention.
Ingestion: In the event of ingestion, administer 3-4 glasses of milk or water. DO NOT INDUCE VOMITING. Seek medical attention immediately.

Section 5 - Fire and Explosion Data

Flash Point (closed cup):	> 200 °F	**Lower Explosion Limit (LEL):**	No data
Upper Explosion Limit (UEL):	No data	**Auto Ignition Temperature:**	No data

Fire Hazard Classification (OSHA/NFPA): This product is considered neither flammable nor combustible, but will burn if involved in a fire.
Extinguishing Media: Foam, Carbon Dioxide (CO2), or dry chemical.
Special Fire Fighting Procedures: Keep personnel removed from area and upwind of fire. Wear full fire-fighting turnout gear (full bunker gear) and respiratory protection (SCBA). Cool fire exposed containers with water spray.
Unusual Fire and Explosion Hazards: Hazardous combustion products may be present. Combustion may form aldehydes, nitrous oxides, carbon monoxide (CO), and carbon dioxide (CO2).

Section 6 - Accidental Release Measures

Containment Techniques (Removal of ignition sources, diking etc.) Reduce vapor spreading with a water spray. Stop the leak, if possible. Shut off or remove all ignition sources. Construct a dike to prevent spreading.
Clean-Up Procedures: Spread absorbent material over area. Transfer to containers by suction. For large spills, recover spilled material with a vacuum truck. Dispose of material in accordance with local, state and federal regulations. Wash area with soap and water. Prevent washings from entering sewers or waterways.
Other Emergency Advice: Wear protective clothing, boots, gloves, respirator, and eye protection.

Section 7 - Handling and Storage

Storage: Store in a cool (60-80°F), dry ventilated place. Store in closed containers.
Handling: Avoid breathing of vapors. Handle in well-ventilated workspace. Avoid contact with skin, eyes, or clothing. When handling, do not eat, drink, or smoke.
Other Precautions: Emergency showers and eye wash stations should be readily accessible. Wash thoroughly after handling. Remove contaminated clothing and gear. Decontaminate. Destroy leather or any articles, which can not be decontaminated.

Section 8 - Personal Protection/Exposure Controls

Eye Protection: Full-face shield with chemical safety goggles. Contact lenses should not be worn while using this product.
Hand Protection: Neoprene rubber gloves. Cuffed butyl rubber gloves. Nitrile rubber gloves.
Respiratory Protection: Not necessary under most operating conditions. NIOSH approved organic vapor respirator should be used in confined areas, or when conditions cause high vapor concentrations. If the percent oxygen is below normal then use self-contained breathing apparatus.
Protective Clothing: Impervious clothing. Slickersuit. Rubber boots. Full rubber suit (rain gear). Butyl or latex protective clothing.
Work and Hygienic Practices: Eye wash stations and safety showers should be easily accessible.

Section 9 - Typical Physical and Chemical Properties

Physical Form:	Liquid	**Vapor Density:**	Heavier than air
Color:	Blue	**Boiling Point:**	> 200 °F
Odor:	Amine	**Melting Point:**	Not applicable
pH:	No Data	**Solubility in Water:**	Negligible
Vapor Pressure:	No Data	**Specific Gravity:**	1.00

Section 10 - Stability and Reactivity

Chemical Stability: Stable
Conditions to Avoid (if stable): None
Incompatibility (Materials to Avoid): Acids, strong oxidizing agents.
Hazardous Decomposition Products: None
Hazardous Polymerization: Contact with epoxy resins under uncontrolled conditions. May release excess heat and vapors.

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Section 11 - Toxicological Properties

Acute Oral Toxicity (LD50, RAT): No data available.
Acute Dermal Toxicity (LD50, RABBIT): No data available.
Acute Inhalation Toxicity (LC50, RAT): No data available.

Section 12 - Ecological Information

No Data Available

Section 13 - Disposal Considerations

Waste Disposal: This material does not contain any VOC's (volatile organic compounds). Dispose of material in accordance with applicable, local, state, and federal laws and regulations. The state and local regulations and laws may differ from federal regulations, and laws may change or be reinterpreted. This information only applies to the material as manufactured. Processing, use, or contamination may make the information in appropriate, inaccurate, or incomplete. Responsibility for proper waste disposal is with the owner of the waste.

Section 14 - Transport Information

DOT Non-Bulk Shipping Name:	Caustic Alkali Liquids, N.O.S.	**UN#:**	UN1719
DOT Bulk Shipping Name:	Caustic Alkali Liquids, N.O.S.	**Packing Group**:	III
Technical Shipping Name:	Contains Two Aliphatic Amines	**IMO Shipping Data**:	Caustic Alkali Liquid N.O.S.
DOT Hazard Class:	8	**ICAO/IATA Shipping Data**:	Caustic Alkali Liquid N.O.S.

Section 15 - Regulatory Information

US FEDERAL REGULATIONS:

Toxic Substances Control Act (TSCA): All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory or are not required to be listed on the TSCA Inventory.
OSHA (29CFR1910.1200) Hazard Class(es): Corrosive. Sensitizer.
EPCRA Section 312 (40CFR370) Hazard Classes: Immediate Health hazard. Delayed Health Hazard.
EPCRA Section 313 (40CFR372): Toxic chemicals above "de minimus" level (% by weight): 4,4′-Isoproyplidenediphenol (20-40%).

STATE REGULATIONS:

California Proposition 65 Substances: (components known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986"). None

INTERNATIONAL REGULATIONS

Canada: WHMIS Hazard Classification: Class D, Division 2A
Class D, Division 2B
Class E
WHMIS Risk Phrases: Causes burns. Skin Sensitizer. Lung sensitizer.
WHMIS Symbols: Stylized T, test tube/hand

Section 16 - Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither Copps Industries nor any of its agents assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

Revision Date: 01/28/10
Replaces Revision Dated: 10/18/07

Revised By: Bill Simek
Title: Laboratory Manager