

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name: Flexi-Bond 540, 545 Part A
Product Use: Epoxy Bonding Agent

Company Identification

Edison Coatings, Inc.
3 Northwest Drive
Plainville, CT 06062

Edison Coatings Tech Info Phone: 1-860-747-2220
Emergency Phone: 1-800-535-5053

2. HAZARDS IDENTIFICATION

Primary Routes of Exposure:

Eye contact
Inhalation
Skin Contact

Eye Contact:

- May cause immediate or delayed irritation or inflammation
- Moderate eye irritation

Skin Contact:

- May cause drying of the skin, with consequent mild irritation
- Prolonged exposure may cause allergic reactions, in the form of a mild rash, or severe skin ulcers

Ingestion:

- Ill effects are possible if larger quantities are consumed

Inhalation:

- May cause irritation to nose, throat, and respiratory tract.

Target Organ and Other Health Effects:

- No information is known on relative effects on target organs.

Carcinogens:

- Recent 2-year bioassays in mice exposed by the dermal route to the diglycidyl ether of bisphenol A (DGEBPA), or to other commercial resins which are composed predominantly of DGEBPA have yielded very limited evidence of weak carcinogenicity. DGEBPA is a component of this resin. The authors of this work concluded that the renal tumor evidence “was of no biological significance” and that the resin “is not a systemic carcinogen when applied to the dorsal skin of CF1 mice.” Based upon this and all other available information, the Internal Agency for Research of Cancer (IARC) concluded (1988) that DGEBPA was not classifiable as a carcinogen (IARC Group 3) based upon the following: Human evidence - inadequate; Animal evidence - inadequate.
- This product contains trace (2-3 ppm, typical) residual quantities of epichlorohydrin (ECH), CAS NO. 106-89-8. It is very unlikely that normal work practices with this product could result in measurable ECH concentrations in the workplace atmosphere. Nevertheless, you should be aware that ECH has been reported to produce cancer in laboratory animals and to produce mutagenic changes in bacteria and cultured human cells. It has been classified by IARC as a probable human cancer carcinogen (IARC Group 2A) based upon the following conclusions: Human evidence - inadequate; Animal evidence - sufficient. It has been classified as an anticipated human carcinogen by the National Toxicology Program (NTP).

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Ingredient Name CAS-No.	Approx. Weight%	Chemical Name
Bisphenol A 80-05-7	<75%	4,4'-(propane-2,2-diyl)diphenol
Alkyl Glycidyl Ether 120547-52-6	<10%	Alkyl Glycidyl Ether
Castor Oil-Epichlorohydrin Epoxy Resin 74398-71-3	<15%	-
Epichlorohydrin 106-89-8	<0.05%	Chloromethyloxirane

4. First Aid Measures

Eye Contact:

Flush eyes with plenty of water for 15 min. while holding eyelids open. Get medical attention.

Skin Contact:

Remove contaminated clothing and wipe excess from skin. Flush skin with water. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. Contaminated leather articles cannot be decontaminated and should be destroyed to prevent reuse.

Ingestion:

Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Inhalation:

Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

Medical Conditions Aggravated by Exposure:

Pre-existing eye, skin and respiratory disorders.

5. FIRE FIGHTING MEASURES

Extinguishing Media:

Water fog, Alcohol foam, dry chemical, Carbon Dioxide (CO₂)

Unusual fire and explosion hazards:

None.

Fire Fighting Procedures:

Material will not burn unless preheated. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots) and a positive pressure NIOSH-approved, self-contained breathing apparatus. Cool fire-exposed containers with water.

6. ACCIDENTAL RELEASE MEASURES

Action to be taken if material is released or spilled:

Use cautious judgment when cleaning up large spills. When dealing with large spills, wear respirator and protective clothing as appropriate. Shut off source of leak if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material; dispose of properly. Flush area with water to remove trace residue. When dealing with small spills, take up with an absorbent material and dispose of properly.

7. HANDLING AND STORAGE

Precautions to be taken in handling and storage:

Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures. Handle in accordance with the potential hazard of the curing agent being used. Containers, even those which have been emptied, can contain hazardous product residues. Minimize all contact with material. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Heating this resin above 300°F in the presence of air may cause low oxidative decomposition. Above 500°F, polymerization may occur. Some curing agents, e.g. aliphatic polyamines, can

produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. Do not breath fumes. Use a NIOSH-approved respirator as required to prevent overexposure. In accord with 20 CFR 1910.134, use either an atmosphere-supplying or an air-purifying respirator for organic vapors.

8. PERSONAL PROTECTIVE EQUIPMENT AND EXPOSURE CONTROLS

Personal Protective Equipment

Eye and Face Protection:

Wear chemical goggles if there is a likelihood of contact with eyes.

Skin Protection:

Wear chemical resistant gloves as required to minimize contact. Wear industry appropriate attire.

Other Personal Protection Data:

Eye wash fountains and safety showers should be available for emergency use. Usual industrial work clothes should be worn.

Respiratory Protection:

Avoid breathing vapor or mists. If exposure may or does exceed occupational exposure limits, use a NIOSH-approved respirator to prevent overexposure.

Ventilation:

Use local exhaust or general dilution ventilation to control exposure within applicable limits.

Exposure Guidelines

There is no data available on either OSHA Permissible Exposure Limits (PEL's) or ACGIH Threshold Limit Value (TLV's) for components of product.

9. PHYSICAL PROPERTIES

Odor:	Normal for this product.
Physical State:	Light Yellow Liquid
pH:	Not Determined
Vapor Pressure (mmHg):	<1.0
Vapor Density (Air=1):	>1.0
Boiling Point:	Not Determined
Solubility in Water:	Slight
Coefficient of water/oil distribution:	Not Determined
Density (grams per milliliter):	1.10
Evaporation Rate (Ether=1):	Not Determined
Flash Point (Fahrenheit):	>200°F
Flash Point (Celsius):	>93°C
Lower Explosive Limit (%):	Not Determined
Upper Explosive Limit (%):	Not Determined
Autoignition temperature:	Not Determined

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to Avoid:	Heat, open flame
Incompatibility:	Strong oxidizing agents, polymerization initiators, strong acids, strong bases
Hazardous Polymerization:	None Anticipated.
Hazardous Decomposition Products:	Carbon Monoxide, Carbon Dioxide, Aldehydes, and Acids
Sensitivity to static discharge:	Not determined.

11. TOXICOLOGICAL INFORMATION

Mutagens/Teratogens/Carcinogens:

MUTAGENICITY: DGE BPA, a component of this product, has proved to be inactive when tested by in vivo mutagenicity assays. It has shown activity by in vitro microbial mutagenicity screening and have both produced chromosomal aberrations in cultured rat liver cells. The significance of this information to man is unknown.

12. ECOLOGICAL DATA

No information on ecology is available.

13. DISPOSAL CONSIDERATIONS

Mix with stoichiometric quantities of curing agent and dispose as common waste.

14. TRANSPORTATION INFORMATION

No information on transportation is available.

15. REGULATORY INFORMATION

The components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

Protection of stratospheric ozone (pursuant to section 611 of the Clean Air Act Amendments of 1990): Per 40 CFR Part 82, this product does not contain nor was it directly manufactured with any Class I or Class II ozone-depleting substances. The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

<u>State Listed Component</u>	<u>Percent</u>	<u>State Code</u>
Epichlorohydrin (CAS NO: 106-89-8)	2 ppm	MA, CA65C/R

CA = California Hazardous Substance list; CA65C, CA65C/R = California Safe Drinking water and toxics Enforcement Act of 1986 or Proposition 65 List; CT = Connecticut Toxic Substance List; FL = Florida Substance List; IL = Illinois Toxic Substance List; LA = Louisiana Hazardous Substance List; MA = Massachusetts Substance List; ME = Maine Hazardous Substance List; MN = Minnesota Hazardous Substance List; NJ = New Jersey Substance List; PA = Pennsylvania Hazardous Substance List; RI = Rhode Island Hazardous Substance List.

California Proposition 65 Footnote: CA65C = The chemical identified with this code is known to the state of California to cause cancer. CA65R = The chemical identified with this code is known to the state of California to cause birth defects or other reproductive harm. CA65C/R = The chemical identified with this code is known to the state of California to cause both cancer and birth defects or other reproductive harm.

16. OTHER INFORMATION

Effective Date: 18/Apr/2016
Revision Date: 25/Feb/2014