



MATERIAL SAFETY DATA

Chemtrec 24-Hour Emergency Telephone

Domestic North America (800) 424-9300

International (800) 527-3887

This MSDS complies with 29 CFR 1910.1200 (Hazard Communications)

1. Product and Supplier Identification

Product Name: Orca 1100 UV Stable Clear Coat Epoxy Resin Part A

Product Number(s): 1031108, 1031109, 10131110, 1031111, 1031113, 1031115

Date of Prep: 01/01/2010

Product Type: Modified Epoxy Resin

Supplier: Fiberlay Inc.
24 S. Idaho S.
Seattle, Wa 98134
(206)782-0660

2. Composition/Information On Ingredients

Ingredients which are hazardous chemicals, according to OSHA (29 CFR 1910.1200), are listed at 1% or above. Carcinogens are listed when at 0.1% or greater. These ingredients are subject to SARA, Title III, Sections 311 and 312.

N.A. = Not Applicable, N.D. = Not Determined (Not Available), N.E. = Not Established, T.S. = Trade Secret
This MSDS is prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200). Proprietary ingredients are considered to be trade secrets of Fiberlay, Inc. Identities of proprietary ingredients will be made available following the procedures specified in the trade secret section of this standard.

Component	% (w/w)	CAS Number	Vapor Pressure
Bisphenol A/Epichlorohydrin Resin	T.S.	25068-38-6	<1 mm Hg@68°F
Aliphatic Glycidyl Ether	T.S.	T.S.	<1 mm Hg@68°F

Notes: No OSHA nor ACGIH Exposure guideline limits have been established for this product or its individual ingredients. Air contaminant concentrations must be maintained at lowest possible levels. 1) (Bisphenol A/Epichlorohydrin) Epoxy Resin is an epoxy resin produced by a condensation reaction of epichlorohydrin and Bishpenol A. These raw materials are consumed in the process. No Toxic Chemicals subject to reporting requirements of SARA Section 313 Title III and 40 CFR Part 372. No Hazardous Substances subject to CERCLA, and SARA, Title III, Section 304 Spill Reporting.

Ingredients known to the State of California to cause cancer or birth defects or other reproductive harm: None.
Cancer Information: See Section 11, CARCINOGENICITY.

3. Hazards Identification

HMIS Hazard Ratings: HEALTH: 2 FIRE: 1 REACTIVITY: 0 PERSONAL PROTECTION: X

Health Hazard Warning Statements

USE ONLY IN ADEQUATE VENTILATED AREAS. AVOID BREATHING VAPORS OR MIST. KEEP AWAY FROM CHILDREN. DO NOT TAKE INTERNALLY. AVOID CONTACT WITH EYES AND SKIN. SKIN IRRITANT. SKIN SENSITIZER. WILL CAUSE EYE AND MUCOUS MEMBRANE IRRITATION. WASH WITH SOAP AND WATER AFTER USE.

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON

4. First Aid Measures

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON

EYE CONTACT: Remove any contact lenses and flush for 15 minutes with potable water. Hold eyelids open to assure complete flushing. **CONTACT A PHYSICIAN IMMEDIATELY.**

SKIN CONTACT: Remove contaminated clothing/shoes and wipe excess from skin. Flush skin with water. Follow by washing with soap and water. **DO NOT USE SOLVENTS TO REMOVE RESIN FROM SKIN.** If irritation occurs, **GET MEDICAL ATTENTION.** Do not reuse clothing until cleaned. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.

INHALATION: Leave the area to obtain fresh air. If breathing has stopped, give artificial respiration then oxygen if needed. If difficulty breathing or other symptoms continue, **CALL A PHYSICIAN IMMEDIATELY.**

INGESTION: **DO NOT INDUCE VOMITING.** If patient is conscious, give 12-16 oz. of water for dilution effect only. Do not induce vomiting. **CALL A PHYSICIAN IMMEDIATELY,** or the Poison Control Center. Do not give anything by mouth to an unconscious or convulsing person.
IF ANY SYMPTOMS PERSIST CONTACT A PHYSICIAN

5. Fire Fighting Measures

Flash point: 480°C (Closed Cup)
Auto ignition Temperature: Not Determined
Lower Explosive Limit: Not Determined
Upper Explosion Limit: Not Determined
Sensitivity to Impact: Not Determined
Sensitivity to Static Discharge: Not Determined
Extinguishing Media: Foam, Alcohol Foam, CO₂, Dry Chemical, Water Spray, Other (Halon)

SPECIAL FIRE FIGHTING PROCEDURES: If product is present in the fire and the threat of decomposition exist, wear self contained positive pressure breathing apparatus with full face piece. Water spray may be ineffective. However, water spray may be used to cool containers exposed to heat or fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture when exposed to extreme heat or fire. Some curing agents when mixed with epoxy resins in large masses can produce vigorous exothermic reactions with considerable heat which may char the reactants, and release fumes and vapors from the thermal decomposition.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Evacuate area. Eliminate sources of ignition. May burn although not readily ignitable. Use protective equipment and respiratory protection as stated in Section 8. Contain liquid or contaminated wash water spills using a barrier of inert material such as sand or by diking the area. Absorb spilled or contaminated wash water with an inert material. Scoop or shovel absorbed material into containers for disposal. Prevent spilled product or contaminated wash water from entering drinking water supplies, streams, or sewers. Certain releases of any substance to the environment are prohibited by law and may require reporting to an environmental agency.

7. Handling and Storage

PRECAUTIONS: **USE ONLY IN VENTILATED AREAS.** This material should be confined as far as possible within sealed or covered equipment in which case normal ventilation should be adequate to avoid breathing vapors during mixing, application and the drying process use local exhaust ventilation or other means to provide fresh air, opening windows and doors to achieve cross-ventilation. Air contaminant concentrations must be maintained at lowest possible levels. Close container after use, and store in upright position in a cool, dry, and well ventilated area.
OTHER PRECAUTIONS: "Empty" containers contain product residue (liquid and/or vapor). Dispose of properly. Dust from sanding dry films should be treated as nuisance dust.

8. Exposure Controls, Personal Protection

MECHANICAL (GENERAL) VENTILATION: Provide sufficient mechanical ventilation to remove vapors. Since no limits have been established for this product or its individual ingredients, air contaminant concentrations must be maintained at lowest possible levels. The need for fume hoods, local exhaust, or spray booths should be considered for commercial operations.

SPECIAL VENTILATION: Local exhaust, if necessary to ventilate spill area, or where product is heated.

RESPIRATORY PROTECTION: Respiratory protection is not ordinarily required in ventilated areas. Respiratory protection is required in the absence of proper environmental control. Use an approved air purifying ORGANIC

VAPOR RESPIRATOR, (type NIOSH/MSHA TC-23C), or positive pressure self-contained breathing apparatus, SCBA, when products are used in confined or poorly ventilated areas, or at elevated temperatures.

PROTECTIVE GLOVES: Chemical impervious rubber or nitrile gloves are recommended. Avoid ALL skin contact.

EYE PROTECTION: Avoid contact with eyes. Approved safety glasses with splash guards or goggles are required.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Impervious clothing, foot ware and synthetic apron to prevent skin contact are recommended. Provide nearby safety showers and eye washing (preferably full face) facilities.

WORK/HYGIENIC PRACTICES: Wash thoroughly after handling. Clean up spills. Wash contaminated clothes before reuse. Launder work clothes separate from family clothes. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse. Check protective equipment and clothing before use.

9. Physical and Chemical Properties

Appearance:	Clear viscous liquid	Boiling Point:	IBP >500°F (>260°C) (IBP=Initial Boiling Point)
Odour:	slight odor	Freezing Point:	Not available.
Solubility:	Insoluble	Percent Solids by Volume:	100
Vapour Density:	(AIR = 1): >1	Specific Gravity:	1.15 (H2O = 1)
Melting Point:	Not available.	Evaporation Rte:	Not available.

10. Stability and Reactivity

STABILITY: Unstable Stable

CONDITIONS TO AVOID: Strong oxidizing chemicals, strong Lewis or mineral acids and strong mineral and organic bases, especially primary and secondary aliphatic amines. Sustained direct open flames and hot surfaces. Heating this resin above 300°F in the presence of air may cause slow oxidative decomposition. When product is mixed with hardener and left in a large mass a vigorous exothermic reaction may occur and may result in charring of the reactants. Read and follow all instructions.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon monoxide, carbon dioxide, aldehydes, organic acids, and other organic substances may be formed during combustion or elevated temperature degradation.

HAZARDOUS POLYMERIZATION: May Occur May Not Occur

CONDITIONS TO AVOID UNCONTROLLED POLYMERIZATION: N.A.

HAZARDOUS DECOMPOSITION PRODUCTS: Styrene oxide.

11. Toxicological Information

TOXICITY DATA:

Acute Toxicity: TEST
 LD50 Dermal Low Toxicity, >2000 mg/kg.
 LD50 Oral Low Toxicity, >2000 mg/kg.

ROUTE(S) OF ENTRY: INHALATION, SKIN CONTACT, EYE CONTACT, INGESTION

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

INHALATION: Irritation. After sensitization allergy type systems with possible breathing difficulties. May cause Central Nervous System (CNS) depression. Evident by headache, dizziness, or nausea.

SKIN CONTACT: Irritation, dryness, flaking. After sensitization, hives or rashes.

EYE CONTACT: Irritation, redness or eye watering.

INGESTION: Irritation, large quantities may cause nausea, and vomiting. May cause Central Nervous System (CNS) depression. Evident by headache, dizziness or nausea.

HEALTH HAZARD, ACUTE:

INHALATION: Inhalation of high concentrations of vapors may cause irritation to the respiratory tract. May cause Central Nervous System (CNS) depression. Prolonged or repeated exposure of high concentrations of vapor may asthma or other allergic responses.

SKIN CONTACT: Irritation, dermatitis. Product is a moderate skin sensitizer.

EYE CONTACT: Severe irritant. High concentrations of vapor may cause irritation of eyes.

INGESTION: Irritation. May cause Central Nervous System (CNS) depression. Large quantities may cause nausea, and vomiting.

HEALTH HAZARDS, CHRONIC (TARGET ORGANS): Skin sensitization from repeated exposures to low molecular weight epoxy resins. Studies show that long term ingestion may cause adverse effects to reproductive systems in animals.

CARCINOGENICITY: For hazard communication purposes under OSHA standard 29 CFR part 1910.1200. None of the products ingredients is found on the following lists.

NTP: No IARC: No Federal OSHA: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Persons with pre-existing lung disorders may be more susceptible to irritating effects. Pre-existing skin and eye disorders may be aggravated by exposure to this product. Pre-existing skin and lung allergies may increase the chance of developing increased allergy symptoms from exposure to this product.

12. Ecological Information

Environmental Toxicity: No data available.

Biodegradability: No data available.

13. Disposal Considerations

Waste Disposal Method: This product does not meet criteria of a hazardous waste under RCRA if discarded as this product is supplied. Under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether product meets including any which would contaminate ground or surface waters. Dispose of waste in accordance with local, state, and federal regulations. **Canada:** Dispose of waste in accordance with local, provincial and national regulations.

14. Transport Information

Department of Transportation Information: Non-Hazardous resin compound, Not D.O.T. regulated.
 Transportation Emergency Phone Number: **CHEMTREC (800) 424-9300**

15. Regulatory Information

United States:

US Federal Regulations: United States Inventory (TSCA 8b): All components are listed or exempt.

CERCLA Hazardous Substances: No reportable quantity

SARA 313: No De minimis concentration

California Prop 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

<u>Ingredient Name</u>	<u>Cancer</u>	<u>Reproductive</u>
Phenyl Glycidyl Ether	Yes	Yes

16. Other Information

Preparation Date: January 1, 2010

Prepared by: Fiberlay Inc

Comments: This Material Safety Data Sheet was prepared using information provided by Environmental Technology Inc., Fiberlay Inc. Date of Issue: 09/29/2009

Revisions: None

HMIS Hazard Ratings: HEALTH: 2 FIRE: 1 REACTIVITY: 0 PERSONAL PROTECTION: X

Disclaimer: All information, recommendations and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity, and suitability for his or her own use of the product described herein. Since the actual use by others is beyond Orca Composites control no guarantee, expressed or implied, is made by Orca Composites as to the effects of such use the results to be obtained, or the safety and toxicity of the product.



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Product Number(s): 1031108, 1031109, 10131110, 1031111, 1031113, 1031115

Date of Prep: 01/01/2010

Product Type: Epoxy Hardener

Supplier: Fiberlay Inc.
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(206)782-0660

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Component	% (w/w)	CAS Number	Vapor Pressure
Nonyl Phenol	T.S.	84852-15-3	<1 mm Hg@68°F
Polyoxyalkyleneamines	T.S.	T.S.	
Isophoronediamine	T.S.	2855-13-2	

Notes: No OSHA nor ACGIH Exposure guideline limits have been established for this product or its individual ingredients. Air contaminant concentrations must be maintained at lowest possible levels. No Toxic Chemicals subject to reporting requirements of SARA Section 313 Title III and 40 CFR Part 372. No Hazardous Substances subject to CERCLA, and SARA, Title III, Section 304 Spill Reporting.

Ingredients known to the State of California to cause cancer or birth defects or other reproductive harm: None.
Cancer Information: See Section 11, CARCINOGENICITY.

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IF ANY SYMPTOMS PERSIST CONTACT A PHYSICIAN

5. Fire Fighting Measures

Flash point: 212°F (Closed Cup)
Auto ignition Temperature: Not Determined
Lower Explosive Limit: Not Determined
Upper Explosion Limit: Not Determined
Sensitivity to Impact: Not Determined
Sensitivity to Static Discharge: Not Determined
Extinguishing Media: Foam, Alcohol Foam, CO₂, Dry Chemical, Water Spray, Other (Halon)

SPECIAL FIRE FIGHTING PROCEDURES: If product is present in the fire and the threat of decomposition exist, wear self contained positive pressure breathing apparatus with full face piece. Water spray may be ineffective. However, water spray may be used to cool containers exposed to heat or fire.

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OTHER PRECAUTIONS: "Empty" containers contain product residue (liquid and/or vapor). Dispose of properly. Dust from sanding dry films should be treated as nuisance dust.

8. Exposure Controls, Personal Protection

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SPECIAL VENTILATION: Local exhaust, if necessary to ventilate spill area, or where product is heated.

RESPIRATORY PROTECTION: Respiratory protection is not ordinarily required in ventilated areas. Respiratory protection is required in the absence of proper environmental control. Use an approved air purifying ORGANIC

VAPOR RESPIRATOR, (type NIOSH/MSHA TC-23C), or positive pressure self-contained breathing apparatus, SCBA, when products are used in confined or poorly ventilated areas, or at elevated temperatures.

PROTECTIVE GLOVES: Chemical impervious rubber or nitrile gloves are recommended. Avoid ALL skin contact.

EYE PROTECTION: Avoid contact with eyes. Approved safety glasses with splash guards or goggles are required.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Impervious clothing, foot ware and synthetic apron to prevent skin contact are recommended. Provide nearby safety showers and eye washing (preferably full face) facilities.

WORK/HYGIENIC PRACTICES: Wash thoroughly after handling. Clean up spills. Wash contaminated clothes before reuse. Launder work clothes separate from family clothes. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse. Check protective equipment and clothing before use.

9. Physical and Chemical Properties

Appearance:	Clear mobile liquid	Boiling Point:	IBP >400°F (>204°C) (IBP=Initial Boiling Point)
Odour:	Amine odor	Freezing Point:	Not available.
Solubility:	Insoluble	Percent Solids by Volume:	100
Vapour Density:	(AIR = 1): >1	Specific Gravity:	0.97 (H2O = 1)
Melting Point:	Not available.	Evaporation Rte:	Not available.

10. Stability and Reactivity

STABILITY: Unstable Stable

CONDITIONS TO AVOID: Strong oxidizing chemicals, strong Lewis or mineral acids and strong mineral and organic bases, especially primary and secondary aliphatic amines. Sustained direct open flames and hot surfaces. Heating this resin above 300°F in the presence of air may cause slow oxidative decomposition. When product is mixed with hardener and left in a large mass a vigorous exothermic reaction may occur and may result in charring of the reactants. Read and follow all instructions.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon monoxide, carbon dioxide, aldehydes, organic acids, and other organic substances may be formed during combustion or elevated temperature degradation.

HAZARDOUS POLYMERIZATION: May Occur May Not Occur

CONDITIONS TO AVOID UNCONTROLLED POLYMERIZATION: N.A.

HAZARDOUS DECOMPOSITION PRODUCTS: Styrene oxide.

Transportation Emergency Phone Number: **CHEMTREC (800) 424-9300**

15. Regulatory Information

United States:

HCS Classification: Toxic material
Corrosive material

US Federal regulations: United States Inventory (TSCA 8b): All components are listed or exempt.

CERCLA Hazardous substances: No ingredients listed.

SARA 313: No ingredients listed.

California Prop 65: **WARNING:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other harm.

Canada:

WHMIS (Canada): Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class E: Corrosive Material.

CEPA (DSL): Canada Inventory: All components are listed or exempt

State Regulations:

New Jersey Right-to-Know: The following is required composition information:

CAS Number: 2855-13-2

Chemical Name: Isophoronediamine

Pennsylvania Right-to-Know: The following is required composition information:

CAS Number: 2855-13-2

Chemical Name: 5-Amino-1, 3,3 3-trimethylcyclohexanemethanamine

Common Name: Isophoronediamine

Comment: Not on Pennsylvania Hazardous Substance List.

16. Other Information

Preparation Date: January 1, 2010

Prepared by: Fiberlay Inc

Comments: This Material Safety Data Sheet was prepared using information provided by Environmental Technology Inc., Fiberlay Inc. Date of Issue: 11/09/2009

Revisions: None

HMIS Hazard Ratings: HEALTH: 2 FIRE: 1 REACTIVITY: 0 PERSONAL PROTECTION: X

Disclaimer: All information, recommendations and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity, and suitability for his or her own use of the product described herein. Since the actual use by others is beyond Orca Composites control no guarantee, expressed or implied, is made by Orca Composites as to the effects of such use the results to be obtained, or the safety and toxicity of the product.