

33520-1007 -1009
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## MATERIAL SAFETY DATA SHEET

PRODUCT NAME: CASTIN<sup>®</sup> CRAFT CLEAR CASTING RESIN 1 of 6 pages  
 PRODUCT NUMBER: 00175, 00183, 00191, 34016, 34032, 34128, 01600

**SECTION 1 - MANUFACTURER IDENTIFICATION**

ENVIRONMENTAL TECHNOLOGY, INC.  
 300 SOUTH BAY DEPOT ROAD  
 FIELDS LANDING, CA 95537  
 PHONE NUMBER FOR INFORMATION:  
 (707) 443-9323  
 TRANSPORTATION EMERGENCY PHONE NUMBER:  
 CHEMTREC (800) 424-9300  
 DATE PREPARED:  
 May 14, 2009  
 PREPARED BY:  
 TECHNICAL DIRECTOR

**SECTION 2 - HAZARD IDENTIFICATION**

HMS HAZARD RATINGS: HEALTH: 2 FIRE: 3 REACTIVITY: 2 PERSONAL PROTECTION: H

**Emergency Overview:**

**WARNING!** FLAMMABLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY BE HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN. CAUSE IRRITATION AND BURNS.

**Potential Health Effects:**

**Routes of exposure:** Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

**Eye contact:** Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

**Skin contact:** Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, burns and other skin damage. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

**Ingestion:** Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

**Inhalation:** Breathing of vapor or mist is possible. Breathing aerosol and/or mist is possible when material is sprayed. Aerosol and mist may present a greater risk of injury because more material may be present in the air than from vapor alone. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8).

**Aggravated Medical Condition:** Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: respiratory tract, skin, lung (for example, asthma-like conditions), liver, central nervous system, male reproductive system, auditory system.

**Symptoms:** Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: metallic taste, stomach or intestinal upset, nausea, vomiting, diarrhea, irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, loss of coordination, confusion, liver damage.

**Target Organs:** Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible kidney effects, effects on hearing, respiratory tract damage (nose, throat, and airways), testis damage, liver damage. Overexposure to

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this material (or its components) has been suggested as a cause of the following effects in humans:, mild effects on color vision, effects on hearing, respiratory tract damage (nose, throat, and airways), central nervous system effects.

**Carcinogenicity:** There was no increase in cancer in rats exposed to styrene by inhalation. However, there was an increase in lung cancer in styrene-exposed mice. The relevance of the mouse lung cancer to humans is uncertain. Styrene did not cause cancer in mice in studies in which the chemical was placed in the stomachs through a feeding tube, or in a study in which styrene was given by injection. Epidemiological studies do not provide a basis for concluding that styrene causes cancer. Styrene is listed as a possible human carcinogen by the International Agency for Research on Cancer (IARC).

### SECTION 3 – COMPOSITION/INGREDIENTS

HAZARDOUS COMPONENTS	CAS REG.NO.	APPROX WT. %	ACGIH TLV TWA	OSHA PEL-TWA
STYRENE	100-42-5	<35	50ppm	50ppm

### SECTION 4– FIRST AID MEASURES

Route(s) of entry: Inhalation, eye contact, ingestion.

#### **SIGNS AND SYMPTOMS OF OVEREXPOSURE:**

Acute exposure: irritation of the eyes, nose, and throat may occur and be associated with symptoms of burning, itching, runny nose, and nose and throat soreness. At very high concentrations, central nervous system impairment may occur with sleepiness, headache, inability to concentrate, and other central nervous system effects.

Chronic exposure: No signs or symptoms of chronic exposure to dipropylene glycol methyl ether have been reported in humans.

#### **EMERGENCY AND FIRST AID PROCEDURES:**

**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 or sterile eye buffer. Hold eyelids open to assure complete flushing.

**Skin contact:** Wash area thoroughly with soap and water.

**Inhalation:** If overcome by high concentrations, move to a ventilated area. Seek medical attention.

**Ingestion:** Consult a physician.

#### **HEALTH HAZARD, ACUTE:**

**Inhalation:** Inhalation of high concentrations of can result in mild irritation of the respiratory tract.

**Skin contact:** May cause irritation through repeated contact.

**Eye contact:** May cause irritation through contact.

**Ingestion:** Unlikely.

### SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 79.9°F/26.6°C Seta closed cup

Flammable limits in air by volume: N.A.

Auto ignition temperature: N.D

Extinguishing media: Foam, carbon dioxide or other dry chemical.

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**Special fire fighting procedures:** Do not release runoff from fire control methods to sewers or waterways.

**Precautions for fire-fighting:** Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. During a fire, irritating or toxic decomposition products may be generated. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Polymerization will take place under fire conditions. If polymerization occurs in a closed container, there is a possibility it will rupture violently. Cool storage container with water, if exposed to fire.

**SECTION 6 - SPILL, LEAK, AND DISPOSAL PROCEDURES**

**Steps to be taken if material is released or spilled:** Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

**Waste disposal method:** Dispose of waste in accordance with local, state, and federal regulations. Canada: Dispose of waste in accordance with local, provincial and national regulations.

**SECTION 7 - HANDLING AND STORAGE**

**Handling:** Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing impervious protective gloves. As with all products of this nature, good personal hygiene is essential. Hands and other exposed areas should be washed thoroughly with soap and water after contact, especially before eating and/or smoking. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.

**Storage:** Store in closed containers in a dry, well-ventilated area. Do not store near extreme heat, open flame, or sources of ignition.

**SECTION 8- EXPOSURE CONTROL/PERSONAL PROTECTION**

Exposure guidelines:

<u>STYRENE</u>		<u>100-42-5</u>
ACGIH	Time weighted average	20 ppm
ACGIH	Short term exposure limit	40 ppm
NIOSH	Recommended exposure limit (RU):	50 ppm
NIOSH	Recommended exposure limit (REL):	215 mg/m <sup>3</sup>
NIOSH	Short term exposure limit	100 ppm

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NIOSH	Short term exposure limit	425 mg/m <sup>3</sup>
OSHA Z2	Time weighted average	100 ppm
OSHA Z2	Ceiling Limit Value:	200 ppm
OSHA Z2	Maximum concentration:	600 ppm

**Precautions:** These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

**Mechanical (general) ventilation:** Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s). OSHA has formally endorsed a styrene industry proposal for a voluntary 50 ppm workplace limit on styrene. Members of the Styrene Information and Research Council (SIRC), Composites Institute (CI), Composite Fabricators Association (CFA), International Cast Polymers Association (ICPA) and National Marine Manufacturers Association (NMMA) have agreed to use either engineering controls, work practices or respiratory protection to achieve this voluntary limit for styrene.

**Respiratory protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134).

**Protective gloves:** Solvent impervious rubber gloves are recommended. Avoid contact with skin.

**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. Check protective equipment and clothing before use. Do not smoke while using or contaminate tobacco products.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

BOILING POINT: 293.4°F @ 760 mmHg  
 VAPOR PRESSURE: 8.53 hPa @ 77°F/25°C  
 SPECIFIC VAPOR DENSITY: >1 AIR=1  
 SPECIFIC GRAVITY: 1.082 - 1.118 @ 77°F/25°C  
 LIQUID DENSITY: 9.100 - 9.300 LBS/GAL @ 77°F/25°C  
 PERCENT VOLATILES: 31.0 - 37.0 %  
 EVAPORATION RATE: Slower than ethyl ether  
 APPEARANCE: CLEAR, Viscous  
 STATE: Liquid

**SECTION 10 - REACTIVITY DATA**

**Stability:** This material is unstable at elevated temperatures and pressures.

**Conditions to avoid:** Avoid heat, open flame, and prolonged storage at elevated temperatures.

Avoid contact with excessive heat.

**Incompatible products:** Avoid contact with acids, aluminum chloride, halogens, iron chloride, metal salts, peroxides, strong alkalis, strong oxidizing agents.

**Hazardous decomposition products:** May form carbon dioxide and carbon monoxide, toxic fumes, various hydrocarbons.

**Hazardous reactions:** Product can undergo hazardous polymerization. Avoid exposure to excessive heat, peroxides and polymerization catalysts.

**Thermal decomposition:** No data.

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**SECTION 11- TOXICOLOGICAL INFORMATION**

Acute oral toxicity:  
STYRENE LD 50 Rat: 2,650 mg/kg  
Acute inhalation toxicity:  
STYRENE LC 50 Rat: 2800 ppm, 4 h  
Acute dermal toxicity:  
STYRENE no data available

**SECTION 12 – ECOLOGICAL INFORMATION**

Aquatic toxicity:  
Acute and Prolonged Toxicity to Fish  
No data  
Acute Toxicity to Aquatic Invertebrates  
No data  
Environmental fate and pathways:  
No data

**SECTION 13 – DISPOSAL INFORMATION****Waste disposal methods:**

Contaminated absorbent may be deposited in a landfill in accordance with local, state and federal regulations. Destroy by liquid incineration in accordance with applicable regulations. Dispose of in accordance with all applicable local, state and federal regulations. Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**SECTION 14 – TRANSPORT INFORMATION**

IMDG :  
UN1866, RESIN SOLUTION 3, III  
IATA\_P:  
UN1866, RESIN SOLUTION 3, III  
IATA\_C:  
UN1866, RESIN SOLUTION 3, III  
CFR ROAD:  
UN1866, RESIN SOLUTION 3, III  
CFR RAIL:  
UN1866, RESIN SOLUTION 3, III  
IMDG ROAD:  
UN1866, RESIN SOLUTION 3, III  
IMDG RAIL:  
UN1866, RESIN SOLUTION 3, III

**DEPARTMENT OF TRANSPORTATION INFORMATION:**  
PROPER SHIPPING NAME: CONSUMER COMMODITY  
PROPER CLASS: ORM-D

Dangerous goods descriptions (ii indicated above) may not reflect package size, quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

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**SECTION 15 – REGULATORY INFORMATION****California Prop. 65:**

**WARNING!** This product contains a chemical known in the State of California to cause cancer:

BENZENE  
 CATECHOL 1,4-DIOXANE

**WARNING!** This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

BENZENE  
 ETHYLENE GLYCOL MONOETHYL ETHER  
 ETHYLENE GLYCOL MONOMETHYL ETHER  
 TOLUENE

**SARA Hazard Classification:**

Reactivity Hazard  
 Fire Hazard  
 Acute Health Hazard  
 Chronic Health Hazard

**SARA 313 Component(s):**

STYRENE 100-42-5 31.4657%

**Reportable quantity – Product:**

US. EPA CERCLA Hazardous Substances (40 CFR 302) 3178 lbs

**Reportable quantity – Components:**

STYRENE 100-42-5 1000 lbs

	Health	Flammability	Reactivity	Other
HMIS	2*	3	2	
NFPA	2	3	2	

**SECTION 16 – OTHER INFORMATION**

**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/her own use of the product described herein. Since the actual use by others is beyond Environmental Technology, Inc.'s control, no guarantee, expressed or implied, is made by Environmental Technology, Inc. as to the effects of such use, the results to be obtained, or the safety and toxicity of the product.