

# MATERIAL SAFETY DATA SHEET

## SECTION I

DATE OF PREPARATION

June 2011

**PRODUCT NAME:** ICO Hi Guard Coating Conductive  
**PRODUCT CLASS:** Epoxy Resin Part A  
**PRODUCT TYPE:** Polymers of epichlorohydrin, phenol-formaldehyde novolac  
**D.O.T. CATEGORY:** Chemical, NOIBN  
**ADDRESS:** International Coatings  
Div. of Milamar Coatings, L.L.C.  
311 N.W. 122<sup>nd</sup> St. Ste. 100  
Oklahoma City, OK 73114  
**TELEPHONE:** 405-755-8448  
**EMERGENCY:** CHEM TEL 800-255-3924

## SECTION II - HAZARDOUS INGREDIENTS

**NFPA Hazard Ratings** Health 1, Flammability 1, Reactivity 0

Listed below are the hazardous component(s) as defined in 49 CFR 172 and 29 CFR 1910 which are present in this product and all components which appear on the hazardous substance list of any state:

**NONE**

## SECTION III - PHYSICAL DATA

**PHYSICAL STATE:** Moderate viscosity, amber liquid  
**SPECIFIC GRAVITY:** 1.44 at 77°F  
**DENSITY:** 12 lbs./gal.  
**SOLUBILITY:** Negligible  
**ODOR:** Slight Aromatic  
**PERCENT VOLATILES:** 0 AT 70 °F  
**pH:** N.A.

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

**FLASH POINT:** 480°F (Pensky Martens Closed Cup)  
**EXTINGUISHING DATA:** Foam, Dry chemical, Carbon Dioxide (CO<sub>2</sub>)  
**FLAMMABILITY CLASSIFICATION:** Combustible Liquid, Class IIIB  
**LOWER EXPLOSIVE LIMITS:** N.A.  
**FIRE FIGHTING INSTRUCTIONS:** Use self-contained breathing apparatus and full protective equipment  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Fumes, CO, CO<sub>2</sub>, acrid smoke, phenolics, aldehydes

## SECTION V - HEALTH HAZARD DATA

### EFFECTS OF OVEREXPOSURE:

**ACUTE:** High concentrations of vapor cause irritation of eyes and respiratory tract.  
**CHRONIC:** Prolonged or repeated exposure may cause asthma and skin sensitization or other allergic response.  
**EYE:** Will cause moderate eye irritation  
**INHALATION:** Unlikely except at elevated temperature; may cause allergic reaction  
**SKIN ABSORPTION:** Not likely  
**SKIN CONTACT:** Possible skin irritant  
**INGESTION:** Will cause illness  
**EMERGENCY AND FIRST AID PROCEDURES:**  
**EYES:** Flush with water for at least 15 minutes, holding eyelids open. **GET MEDICAL ATTENTION.**  
**SKIN:** Wash thoroughly with water while removing contaminated clothing and shoes. Wash clothing before re-use and discard contaminated leather articles. **GET MEDICAL ATTENTION** if effects such as swelling or reddening occur.

**INHALATION:** Remove to fresh air if effects occur and administer oxygen if necessary. **GET MEDICAL ATTENTION** if effects persist.

**INGESTION:** **GET MEDICAL ATTENTION IMMEDIATELY** Do not induce vomiting.

## SECTION VI - REACTIVITY DATA

**STABILITY:** Stable under normal storage conditions.

**INCOMPATIBILITY:** Avoid bringing into contact with strong oxidizing agents, bases and acids

**HAZARDOUS DECOMPOSITION PRODUCTS:** See Section IV

## SECTION VII - SPILL OR LEAK PROCEDURE

**IF MATERIAL IS SPILLED:** Avoid contact with material. Persons not wearing appropriate protective equipment (see below) should be excluded from the area of spill until clean-up is complete. Stop spill at source, dike area to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on clay, diatomaceous earth or other absorbent and shoveled into disposal containers.

**WASTE DISPOSAL METHOD** This product if disposed as shipped is not a hazardous waste as specified under 40 CFR 261. Controlled incineration or buried landfill disposal should be in accordance with all Federal, State & Local regulations.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

**RESPIRATORY PROTECTION** None, needed, unless applied in a confined space in which case a NIOSH-approved, positive-pressure, supplied air respirator should be used.

**VENTILATION:** Local

**HAND PROTECTION:** Impervious gloves, neoprene or rubber.

**EYE PROTECTION:** Splash proof goggles or safety spectacles with side shields.

**OTHER PROTECTIVE EQUIPMENT:** Clean, body-covering clothing. Further safety equipment (apron, footwear, etc.) should be used as necessary to prevent contact with material.

## SECTION IX - SPECIAL PRECAUTIONS

1. Prevent all skin and eye contact.
2. Re-seal part used containers.
3. Ensure that **all** containers are properly labeled to prevent accidental ingestion.
4. Wash with soap and water before eating, drinking, smoking or using toilet facilities.
5. Observe conditions of good industrial hygiene and safe working practice.

## SECTION X – REGULATORY INFORMATION

**WHMSIS INFORMATION** – D2B – skin sensitizer

**THE INFORMATION HEREIN RELATES TO THE PRODUCT NAMED AND IS BASED UPON INFORMATION INTERNATIONAL COATINGS CONSIDERS TO BE ACCURATE. NO WARRANTY EXPRESSED OR IMPLIED IS INTENDED.**

# MATERIAL SAFETY DATA SHEET

## SECTION I

DATE OF PREPARATION

June 2011

**PRODUCT NAME:** ICO Hi Guard Coating Conductive  
**PRODUCT CLASS:** Epoxy Resin Hardener, Part B  
**PRODUCT TYPE:** Cycloaliphatic/Aliphatic Amine Mixture  
**D.O.T. CATEGORY:** Chemical, NOIBN Not D.O.T. regulated  
**ADDRESS:** International Coatings  
Div. of Milamar Coatings, L.L.C.  
311 N.W. 122<sup>nd</sup> St. Ste. 100  
Oklahoma City, OK 73114  
**TELEPHONE:** 405-755-8448  
**EMERGENCY:** CHEM TEL 800-255-3924

## SECTION II - HAZARDOUS INGREDIENTS

**NFPA HAZARDOUS RATINGS:** Health 2, Flammability 1, Reactivity 0  
< 5% - Phenol, PEL TWA 5 ppm, 19 mg/m<sup>3</sup>, skin, CAS # 108-95-2  
> 10% - Formaldehyde Polymer with Phenol & TETA, PEL N/E, CAS #32610-77-8  
> 30% - Benzyl Alcohol, PEL N/E, CAS #100-51-6  
<3% - Triethylenetetramine, PEL N/E, CAS #112-24-3

## SECTION III - PHYSICAL DATA

**PHYSICAL STATE:** Low viscosity, amber liquid  
**SPECIFIC GRAVITY:** 1.06 at 77°

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

**FLASH POINT:** >200°F (Pensky Martens Closed Cup)  
**EXTINGUISHING MEDIA:** Foam, Dry Chemical, CO<sub>2</sub>  
In case of fire and/or explosion do not breathe fumes. Use water spray to reduce vapors. If water pollution occurs, notify appropriate authorities. Where NIOSH approved self-contained breathing apparatus with independent air supply. Shut off gas supply. Keep container cool with water. Contain runoff water in dikes. Prevent stream contamination. Keep containers cool with water spray. Avoid skin contact. Wear complete body protective butyl rubber clothing.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:**  
May generate toxic, irritating or flammable combustion products.  
May spread on the surface of water.  
May generate carbon monoxide gas. May generate toxic nitrogen oxide gases.

## SECTION V - HEALTH HAZARD DATA

**HMIS HEALTH RATING 2    FLAMMABILITY 1    REACTIVITY 0**  
Viscous liquid. Amber. Faint. Phenolic  
Severe eye irritant. Moderate skin irritant. Severe respiratory tract irritant. May cause skin sensitization.  
Ignition will give rise to a Class B fire. In case of fire use: Carbon Dioxide (CO<sub>2</sub>), Dry Chemical, Alcohol Foam, Water Spray.  
**ROUTES OF EXPOSURE:** Ingestion  
Skin Absorption  
Inhalation  
**EXPOSURE STANDARDS:** See Section 2 for exposure standards on ingredients.  
Maintain air contaminant concentrations in the workplace at the lowest feasible levels.  
**HEALTH HAZARDS:** Severe eye irritant. Moderate skin irritant. Severe respiratory tract irritant.  
May cause skin sensitization.  
**TARGET ORGANS:** Eye. Digestive or Gastrointestinal system. Respiratory system. Skin.  
**SIGNS AND SYMPTOMS OF EXPOSURE (Acute effects)** Contact of undiluted product with the eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury. Burns of the eye may cause blindness. Inhalation of vapors may cause irritation in the respiratory tract. Coughing and chest pain may result. Risk of exposure to hazardous concentrations of vapor under normal working conditions in a well ventilated space is minimal.

However conditions such as spraying, or sudden release of hot liquid, which generates an aerosol, mists or fog should be avoided. Product vapor in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorbed into the tissue of the eye from the atmosphere. Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. The effect is transient and has no known residual effect. Ingestion may cause bleeding of the gastrointestinal tract and the vomiting of blood.

**SIGNS AND SYMPTOMS OF EXPOSURE (Possible Longer Term Effects)** Repeated and/or prolonged exposure to low concentrations of vapor may cause: sore throat, eye irritation, nausea. Repeated and/or prolonged exposures may result in: adverse respiratory effects (such as cough, tightness of chest or shortness of breath); adverse eye effects (such as conjunctivitis or corneal damage).

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE** Asthma. Chronic respiratory disease (e.g. Bronchitis, Emphysema). Eye disease. Skin disorders and Allergies.

**IRRITATION EFFECTS DATA:** Moderate irritant to the skin and severe irritant to eyes of a rabbit.

**ACUTE TOXICITY EFFECTS DATA:** Oral LD50 (rat): 620 mg/kg (estimate) Data available on components only.

Dermal LD50 (rabbit): >1000 mg/kg (estimate) Data available on components only.

Inhalation LC50 (rat) No data (estimate) Data available on components only.

**SKIN CONTACT:** Remove product and immediately flush affected area with water for at least 15 minutes.

Call a physician. Except in the most minor, superficial and localized burns, cover the affected area with a sterile dressing or clean sheeting and transport for medical care. **DO NOT APPLY GREASES OR OINTMENTS** Control shock, if present. Launder contaminated clothing prior to reuse. Contaminated leather wear should be discarded. Victims of a major skin area contact should remain under medical observation for at least 24 hours due to possible delayed effects.

**OTHER ACUTE EFFECTS:** No data

**CHRONIC/SUBCHRONIC DATA:** No delayed, sub-chronic or chronic test data are known.

**EYE CONTACT -** Hold eyelids apart immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**SKIN CONTACT -** Wash affected area with soap and water. Remove contaminated clothing and shoes. Wash before reuse.

**INHALATION -** In case of inhalation or suspected inhalation, move the patient at once to fresh air and call a physician. Keep patient absolutely quiet and start oxygen inhalation through suitable equipment. Prevent aspiration of vomit. Turn victims head to the side.

**INGESTION -** If swallowed, **DO NOT INDUCE VOMITING** obtain medical care and hospital treatment immediately. Never give anything by mouth to an unconscious person.

## SECTION VI - REACTIVITY DATA

**STABILITY:** Stable under normal storage conditions.

**INCOMPATIBILITY (Material to avoid):** Oxidizing agents (i.e. perchlorates, nitrates etc.)

Cleaning solutions, such as chromerge (sulfuric acid/dichromate) and aqua regia.

A reaction accompanied by large heat release occurs when the product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating a hazard due to splashing or splattering of hot material. **CAUTION!** N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrates or atmospheres with high nitrous oxide concentrations.

**HAZARDOUS DECOMPOSITION PRODUCTS** (from burning, heating, or reaction with other materials):

Carbon Monoxide, Carbon Dioxide and Nitrogen Oxides (Nitrogen Oxide can react with water vapors to form nitric acid (TLV=2 ppm) in a fire

Ammonia when heated

Combustion of product under oxygen-starved conditions can be expected to produce numerous toxic products including: nitriles, cyanic acid, isocyanates, cyanogens, nitrosamines, amides, carbamates.

## SECTION VII - SPILL OR LEAK PROCEDURE

**CONTAINMENT TECHNIQUES (Removal of ignition sources, diking etc)** Stop the leak, if possible. Reduce vapor spreading with a water spray. Shut off or remove all ignition sources. Construct a dike to prevent spreading. Collect run-off water and transfer to drums or tanks for later disposal.

**CLEAN-UP PROCEDURES:** If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent. Place in metal containers for recovery or disposal. Absorb residual material on vermiculite and scoop up for disposal. Remove from the spill location. Avoid inhalation of vapors. Use respiratory protection. (See Section 8, Personal Protection/Exposure Controls). Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing.

**OTHER EMERGENCY ADVICE:** Avoid skin contact. Wear protective clothing. Avoid contamination of ground and surface waters. Potential for carbon monoxide and/or nitrous oxides generation in a fire must be recognized.

**WASTE DISPOSAL:** Incinerate in suitable combustion chamber. Dispose in a permitted waste management facility. Comply with all Federal, State and Local regulations.

**ENVIRONMENTAL EFFECTS:** Waste from this product may present long term environmental hazards, thus Landfill disposal must be considered less acceptable than incineration. 108-95-2 PHENOL;  
Biodegradability = 99.5% at 7 days.

### SECTION VIII - SPECIAL PROTECTION INFORMATION

**EYE PROTECTION:** Chemical safety glasses. In emergency situations, use eye goggles with a full face shield.

**HAND PROTECTION:** Wear suitable gloves and eye/face protection.

**RESPIRATORY PROTECTION:** Disposable cartridge respirator. For emergency situations use self-contained Breathing apparatus with pressure demand mode.

**PROTECTIVE CLOTHING:** Wear suitable protective clothing and gloves.

**VENTILATION:** Local, except in confined space where proper respiratory protection required

#### **WORK AND HYGIENIC**

**PRACTICES:** Provide readily accessible eye wash stations, Safety shower. Wash at the end of each work shift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Wash promptly if skin becomes contaminated.

### SECTION IX - SPECIAL PRECAUTIONS

**STORAGE:** Keep away from food, drink and animal feeding stuffs, Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. Keep away from oxidizers, heat or flames; Keep in cool, dry, ventilated storage and in closed containers.

**HANDLING:** When using, do not eat, drink or smoke. Handle and open container with care; Avoid contact with skin, eyes and clothing. Do not empty into drains.

**OTHER PRECAUTIONS:** Adhere to work practice rules established by government regulations (e.g. OSHA).

### SECTION X - TRANSPORTATION

**DOT PROPER SHIPPING NAME:** Not D.O.T regulated

**DOT HAZARD CLASSIFICATION OR DIVISION:** Chemical, NOIBN

**IDENTIFICATION NUMBER:**

**PACKAGING GROUP:**

**LABELS REQUIRED:**

### SECTION X - TRANSPORTATION

**WHMSIS INFORMATION:** Class D2B - Skin sensitizer

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