

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: PACE Technologies
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TRADE NAME: CONDUCTOMOUNT™ Copper Conductive Mounting Resin

CHEMICAL FAMILY: Phenolic Molding Compound with two stage resin with copper

CHEMICAL NAME: PHENOL-FORMALDEHYDE POLYMERIC MOLDING
COMPOUND AND COPPER

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

HAZARD RATING:

LEAST: 0 SLIGHT: 1 MODERATE: 2 HIGH: 3 EXTREME: 4

SECTION 2. COMPOSITION, INFORMATION or INGREDIENTS

CHEMICALS MARKED WITH AN ASTERISK (*) ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

HAZARDOUS COMPONENT(S)	CAS #	%	TLV/PEL
*PHENOL	108-95-2	<2.5	ACGIH-TWA/SKIN 5 PPM OSHA-TWA/SKIN 5 PPM
Copper powder	7440-50-8	10-40%	ACGIH-TLV (respirable dust) 1 mg/m ³ OSHA (PEL) 1 mg/m ³ (TWA)
CARBON BLACK	1333-86-4	<5	ACGIH-TWA 3.5 mg/m ³

			OSHA-TWA 3.5 mg/m ³
COAL DUST		<8	ACGIH-TWA 2 mg/m ³ OSHA-TWA <5% SiO ₂ 2.4 mg/m ³ % SiO ₂ + 2 OSHA-TWA >5% SiO ₂ 10 mg/m ³ % SiO ₂ + 2
GRAPHITE	7782-42-5	<20	ACGIH-TWA 2 mg/m ³ OSHA-TWA 15 MPPCF
MICA	12001-26-2	<30	ACGIH-TWA 3 mg/m ³ OSHA-TWA 20 MPPCF
TALC	14307-96-6	<10	ACGIH-TWA 2 mg/m ³ OSHA-TWA 20 MPPCF
PARTICULATES NOT OTHERWISE CLASSIFIED (PNOC)		<35	ACGIH-TWA/INHAL 10 mg/m ³ ACGIH-TWA/RESPIR 3 mg/m ³ OSHA-TWA/TOTAL 15 mg/m ³ OSHA-TWA/RESPIR 5 mg/m ³

Ingredients are listed on the TSCA Inventory of Chemical Substances. Those not identified are non-hazardous.

AS USED:

During polymerization (e.g. curing of the product during normal processing) or decomposition (e.g., overheating or burning of the product) small amounts of gaseous ammonia, phenol and formaldehyde (as well as water vapor, carbon monoxide and carbon dioxide) are evolved. Breathing of the fumes can be harmful. If the odor of ammonia or formaldehyde is noticeable, then the airborne concentration of those chemicals should be carefully monitored and ventilation improvements considered; those chemicals begin to be detectable by odor at concentrations approaching or exceeding the PELs. The odor of phenol begins to be noticeable at a concentration about one-fifth the PEL. In any case, adequacy of ventilation can best be determined by use of instruments to monitor airborne concentrations of ammonia, phenol, and formaldehyde. Grinding or machining of cured molded material may create a dust that poses a respiratory hazard if inhaled and may release small amounts of gaseous ammonia.

SECTION 3. HAZARD IDENTIFICATION

HAZARD STATEMENT: Ordinary use of this product is unlikely to produce significant exposure to hazardous chemicals. PELs for these chemicals are set at levels designed to avoid any significant health risk and are achievable with proper material handling procedures, ventilation and housekeeping. Nevertheless, per OSHA requirement, we list the following possible health hazards if one were exposed to the following chemicals at levels much higher, or in a different form, than expected from ordinary use of this product.

PHENOL	Highly Toxic - Poisoning may occur via skin absorption, vapor inhalation, or ingestion. Inhalation of the vapors may cause severe irritation to the nose, throat, and respiratory tract. May cause liver, kidney and heart damage.
FORMALDEHYDE	Irritant to Eyes, Lungs, and Skin. Has been shown to cause cancer in laboratory animals. Listed as an IARC carcinogen. California law requires the following Statement be included: contains a chemical (formaldehyde) know to the state of California to cause cancer. National cancer institute study finds little evidence to connect formaldehyde exposure with cancer in humans.
AMMONIA	Irritant to eyes, mucous membranes and respiratory tract.

POSSIBLE RESPRIABLE DUST COMPONENTS (UP TO 8% MAY GO THRU 100 MESH):

COAL DUST	Irritant to eyes, nose and throat. Can cause respiratory effect such as pneumoconiosis, bronchitis, emphysema and progressive massive fibrosis, with long exposure.
FIBROUS GLASS	Mechanical irritant to eyes, nose and skin. Can cause irritation and inflammation of the nasopharyngeal region and upper respiratory tract.
GRAPHITE	Irritant to eyes and respiratory tracts. Can cause pneumoconiosis, although studies suggest that pneumoconiosis is a mixed dust reaction.
MICA	Irritant to eyes. OSHA believes that the evidence strongly suggests that it is a pneumoconistic agent.
MINERAL WOOL RIBER	Irritant to eyes and skin. Several studies have shown excess risk of non malignant respiratory disease.
TALC	Irritant to eyes, mucous membranes and respiratory tracts. Medical evidence is complicated by the fact that talcs contain amphiboles and other minerals.
WOOD FLOUR (SOFT)	Irritant to eyes, mucous membranes and upper respiratory tracts. Various species of wood dust can elicit allergic contact dermatitis in sensitized individuals. May cause respiratory sensitization.

SECTION 4. FIRST-AID MEASURES

EYES: IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION

SKIN: WASH THOROUGHLY WITH SOAP AND WATER

INHALATION: USE WITH ADEQUATE VENTILATION. IF BREATHING IS AFFECTED, REMOVE TO FRESH AIR. IF BREATHING STOPS, APPLY MOUTH TO MOUTH RESUSCITATION. GET MEDICAL ATTENTION

INGESTION: IF CONSCIOUS, GIVE WATER IMMEDIATELY AND INDUCE VOMITING BY PLACING FINGER DOWN THROAT. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.

SECTION 5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: WATER SPRAY, FOAM, DRY CHEMICAL, CARBON DIOXIDE

SPECIAL FIRE FIGHTING PROCEDURES: MSHA/NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS RECOMMENDED. AVOID INHALATION OF GASES.

UNUSUAL FIRE AND EXPLOSION HAZARDS: ORGANIC DUST/AIR MIXTURES ARE HIGHLY FLAMMABLE (EXPLOSIVE); AVOID DUST ACCUMULATIONS OR DUST-LADEN ATMOSPHERES AND SOURCES OF IGNITION.

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURE: VACUUM OR SWEEP WITH SWEEPING COMPOUND, SAWDUST OR SAND. AVOID GENERATING DUST. VACUUMS WITH EXPLOSION PROOF MOTORS ARE RECOMMENDED. THIS PRODUCT CONTAINS FREE PHENOL WHICH IS SUBJECT TO EFFLUENT LIMITS UNDER THE CLEAN WATER ACT.

WASTE DISPOSAL METHOD: BURY OR INCINERATE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS

SECTION 7. HANDLING STORAGE

HANDLING: AVOID BREATHING FUMES FROM MOLDING OR OTHER PROCESSES INVOLVING HEAT. AVOID BREATHING DUSTS FROM CUTTING, MACHINING OR DEFLASHING OPERATIONS. GUARD AGAINST DUST ACCUMULATION OF THIS MATERIAL. HIGH CONCENTRATIONS OR AIRBORNE DUST MAY FORM EXPLOSIVE MIXTURE WITH AIR. AS WITH ALL CHEMICALS, GOOD INDUSTRIAL HYGIENE PRACTICES SHOULD BE FOLLOWED WHEN HANDLING THIS MATERIAL

STORAGE: STORE IN A COOL, DRY PLACE. KEEP CONTAINERS CLOSED TO AVOID CONTAMINATION. PREVENT ACCUMULATIONS OF DUST. AVOID EXCESSIVE HEAT AND SOURCES OF IGNITION. OBSERVE GOOD HOUSEKEEPING PRACTICES

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

WORK/HYGIENIC PRACTICES: EYE WASH AND SHOWER FACILITY SHOULD BE AVAILABLE. PRACTICE GOOD HYGIENE AND MAINTAIN A CLEAN WORK ENVIRONMENT

VENTILATION: POINT SOURCE EXHAUST RECOMMENDED TO REMOVE DUST AND VAPORS EVOLVED DURING USE (DUST COLLECTION SYSTEM). USE EXPLOSION PROOF MOTORS

RESPIRATORY PROTECTION: NIOSH APPROVED RESPIRATORS RECOMMENDED IF TLV'S ARE EXCEEDED

PROTECTIVE CLOTHING: GLOVES RECOMMENDED

EYE PROTECTION: SAFETY GLASSES WITH SIDE SHIELDS

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

SPECIFIC GRAVITY (H₂O=1): N/A	BOILING POINT (760 MM HG): N/A
VAPOR PRESSURE: N/A (MM HG 20°C)	PERCENT VOLATILE BY WIEGHT: N/A
SOLUBILITY IN WATER: NEGLIGIBLE (% BY WEIGHT)	EVAPORATION RATE (BUTY/ACT=1): N/A
VAPOR DENSITY (Air=1): N/A	HEAT OF VAPORIZATION: N/A (DELTA HV)
APPEARANCE AND ODOR: GRANULAR, NODULAR, PELLET OR BRIQUETTE WITH SLIGHT ODOR OF PHENOL	

SECTION 10. STABILITY AND REACTIVITY

STABILITY: STABLE. AVOID CONTAMINATION, EXPOSURE TO FLAME OR HEAT, OR STORAGE TEMPERATURES IN EXCESS OF 100°F

INCOMPATIBILITY: LIKE MOST ORGANIC MATERIALS, THIS PRODUCT IS SENSITIVE TO STRONG OXIDIZING AGENTS AND MAY EITHER DECOMPOSE OR IGNITE WHEN MIXED WITH THE SAME

HAZARDOUS DECOMPOSITION PRODUCTS: VAPORS EVOLVED DURING POLYMERIZATION MAY CONTAIN - PHENOL, FORMALDEHYDE, OR AMMONIA

HAZARDOUS POLYMERIZATION: SHOULD NOT OCCUR

SECTION 11. TOXICOLOGICAL INFORMATION

CARCINOGENIC HAZARDS: CARBON BLACK IS LISTED UNDER CALIFORNIA'S PROPOSITION 65 AS A HUMAN CARCINOGEN

REPRODUCTIVE HAZARDS: NON KNOWN.

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SECTION 12. ECOLOGICAL INFORMATION

NO DATA AVAILABLE FOR THIS PRODUCT.

SECTION 13. DISPOSAL CONSIDERATIONS

BURY OR INCINERATE ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 14. TRANSPORT INFORMATION

DOT SHIPPING NAME: NOT REGULATED.

DOT HAZARD CLASSIFICATION: NON-HAZARDOUS.

PACKING GROUP: NOT REGULATED

UN/NA CODE: NOT REGULATED.

SECTION 15. REGULATORY INFORMATION

TSCA (TOXIC SUBSTANCES CONTROL ACT) ALL INGREDIENTS ARE TSCA LISTED.

CERCLA (COMPREHENSIVE EMERGENCY RESPONSE, COMPENSATION, AND LIABILITY ACT): RELEASE OF PHENOL ABOVE RQ LEVEL REQUIRES REPORTING.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): RELEASE OF PHENOL ABOVE TPQ LEVEL REQUIRES REPORTING

311/312 HAZARD CATEGORIES: RELEASE OF PHENOL AND CARBON BLACK MAY REQUIRE REPORTING DEPENDING ON THE AMOUNT RELEASED.

SECTION 16. OTHER INFORMATION

PACE Technologies, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. PACE TECHNOLOGIES, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, PACE TECHNOLOGIES, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.

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