

MATERIAL SAFETY DATA SHEET

FM-AFD-48-BK: Conductive Diamond Plate Anti-Fatigue

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Ground Zero Electrostatics, Inc. 4916 26 th Street West Suite 100 Bradenton, FL 34207 Tel: 877/463-9376	EMERGENCY TELEPHONE NO: CHEMTREC: 800/424-9300
TRADE NAME: Conductive Diamond Plate Anti - Fatigue	MSDS NUMBER: AN#5032 Revision 1 See Section 16 for Ground Zero formulations covered by this document
CHEMICAL NAME: Polyvinylchloride	SYNONYMS: PVC Sheet
PREPARED BY: Clayton Environmental Consultants, Inc.	DATE OF ISSUE/REVISION: Issue: 11/6/91 Revised: April 15, 1996

2. INGREDIENTS

<u>Component</u>	<u>CAS#</u>	<u>Percent</u>	<u>ACGIH (TLV)</u>	<u>OSHA (PEL)</u>	<u>Units</u>
Calcium Carbonate	1317-65-3	20-60	10 (T)	15 (T) 5 (R)	mg/M ³ mg/M ³
Polyvinylchloride Resin	9002-86-2	10-60	Not. Est	Not. Est	Not. Est
Phthalate Plasticizer	68515-48-0	10-30	Not. Est	Not. Est	Not. Est
Alumina Trihydrate	21645-51-2	0-22	Not. Est	Not. Est	Not. Est
Antimony Trioxide	1309-64-4	0-4	0.5 (T)	0.5 (T)	mg/M ³
Complex Stabilizer	Not. Est.	0-3	Not Est.	Not Est.	Not Est.
Carbon Black	133-86-4	0-1	3.5 (T)	3.5 (T)	mg/M ³

T = Total Particulate Matter

R = Respirable Fraction of Total Particulate Matter

1. The manufacturer has recommended an eight hour time weighted average exposure limit for this material of 5 mg/M³

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

In its manufactured and chipped state the product is considered non-hazardous. The product is black, blue, or brown sheets With no odor. Pick up released materials and place in appropriate containers for reuse or disposal. The products contain carbon black which has been identified as a potential carcinogen. If significant amounts of product dusts are present wear appropriate personal protective equipment. Product involved in fire situation may release toxic combustion products including hydrochloric acid and organic and

inorganic materials of unknown composition and toxicity. Wear appropriate personal protective equipment and keep unnecessary individuals up wind of the area. Cool product in or near fires with a water spray or fog. Any wastes generated during cleanup operations should be evaluated with respect to hazardous and solid waste regulations and disposed of in a properly permitted facility in accordance with all local, state and federal regulations.

POTENTIAL HEALTH EFFECTS

In its manufactured and shipped state the product is considered non-hazardous. Dusts and/or particulate matter may be general during mechanical handling: whale fumes and vapors may be generated during high temperature processing operations.

Eye: Particulate matter and fumes and vapors may cause irritation.

Skin Contact: Particulate matter and fumes and vapors may cause irritation.

Skin Absorption: Not expected to be a route of entry into the body.

Ingestion: Not expected to be a major route of entry. Ingestion of large quantities of particulate matter may cause gastrointestinal distress.

Inhalation: Particulate matter and fumes and vapors may cause irritation of the mouth, throat, mucous membranes, and respiratory tract.

Chronic & Carcinogenicity: Prolonged contact with dusts and particulate matter that may be generated by mechanical abrasion may cause dermatitis. Prolonged exposure to high concentrations of product dusts may cause a benign pneumoconiosis with resultant decrease in lung function. Carbon black has been listed a material that is potentially carcinogenic (2B) to humans by the International Agency for Research on Cancer. See section 11.

Prolonged exposures to high concentrations of particulate matter and fumes and vapors may possibly aggravate preexisting skin, nervous system and lung disorders.

4. FIRST AID MEASURES

Inhalation: Remove exposed person to fresh air. If breathing is difficult, oxygen may be administered. If breathing has stopped, artificial respiration should be started immediately. Seek medical attention.

Eyes: Flush with tepid water for at least 20 minutes holding the eyelids wide open. Seek medical attention if irritation develops.

Skin: Wash thoroughly with mild soap and water. Seek medical attention if irritation develops. Remove any contaminated clothing and launder thoroughly before reuse.

Ingestion: Not expected to be an important route of entry into true body. If large amounts of particulate matter are ingested it may cause gastrointestinal distress. Seek medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT: NA

LEL: NA

UEL: NA

AUTO ING. TEMP.: NA

Use water, dry chemical, or carbon dioxide to extinguish fires involving tile product. Product in or near fires should be cooled with a water spray or fog if compatible with the other materials involved in the fire. A self contained breathing apparatus (SCBA) operating in the positive pressure mode and full fire fighting protective clothing should be worn for combating fires- See Section 1b for decomposition products that might be expected in fire situations.

6. ACCIDENTAL RELEASE MEASURES

Pick up product and return to original packing if reusable. If not reusable, place in DOT approved containers for disposal. Any wastes generated during cleanup operations should be evaluated with respect to hazardous and solid waste regulations and disposed of in a properly permitted facility in accordance with all local state, and federal regulations.

7. HANDLING AND STORAGE

Store product at ambient temperatures out of contact with the elements. Keep from contact with strong mineral acids and oxidizers. Dusts and/or particulate matter that may be generated during handling or processing should be cleaned up by vacuuming with a unit that contains a HEPA filter or by wet mopping.

8. EXPOSURE CONTROL - PERSONAL PROTECTION

ENGINEERING CONTROLS: Not generally required. If significant amounts of dusts are generated during processing or handling, the need for local exhaust ventilation (LEV) should be evaluated by a professional industrial hygienist. Lab should be provided if the fumes and vapors generated by high temperature processing have not been thoroughly characterized. Design details for local exhaust ventilation systems may be found in the latest edition of "Industrial Ventilation: A Manual of recommended Practices" published by the ACGIH committee on Industrial Ventilation, PO Box 16153, Lansing, MI48910. Local exhaust ventilation systems should be designed by a professional engineer.

RESPIRATORY: Respiratory protection is not normally required. If appreciable dusts, fumes, or vapors are generated during handling or processing, the operation should be evaluated by a professional industrial hygienist to determine the need for respiratory protection. If respiratory protection is deemed necessary, use, as a minimum, a NIOSH approved 1/2 facepiece respirator equipped with cartridges approved for organic vapor acid gases and particulate scatter with an exposure limit of not less than 0.05 mg/M³

EYE PROTECTION: Where eye contact is possible with particulate matters safety glasses with side shields are recommended. Where significant amounts of fumes or vapors may be generated, chemical safety goggles are recommended.

PROTECTIVE GLOVES: Polymeric gloves are recommended to prevent irritation.

GENERAL: A polymeric coated apron or other body covering is recommended where there is a possibility of regular work clothing becoming contaminated with the product. All soiled or dirty clothing and personal protective equipment should be thoroughly cleaned before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE & PHYSICAL STATE: Black **MELT POINT:** ND

VAPOR DENSITY (AIR=1): NA

OCTANOL/WATER PARTITION COEFFICIENT: ND

VAPOR PRESSURE: NA

EVAPORATION RATE BuOAC = 1: NA

ODOR: none

SPECIFIC GRAVITY/BULK DENSITY: 1.3 - 1.8

% VOLATILE BY VOLUME: Not Volatile

BOILING POINT: NA

% SOLUBILITY (H₂O): Insoluble

pH: NA **OTHER:** NA

10. STABILITY AND REACTIVITY

STABILITY & POLYMERIZATION: Product is stable. Hazardous polymerization will not occur.

INCOMPATIBILITY (CONDITIONS TO AVOID): Avoid contact with strong mineral acids and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce dense smoke oxides of carbon, hydrochloric acid low molecular weight organic species whose composition and toxicity has not been characterized, and metal oxide fumes.

SPECIAL SENSITIVITY: Polyvinylchloride (PVC) dusts may form weakly explosive mixture: in air. It is, however, highly unlikely that such mixtures can be formed under normal and expected conditions of use and if normal precautions are taken.

11. TOXICOLOGICAL INFORMATION

PVC materials have a very low acute toxicity. PVC materials have an acute LD50, in rats of greater than 10 grams per kilogram of body weight. The product, as with all PVC materials, contains a small amount <5 ppm, of residual vinyl chloride monomer which has been identified as a human carcinogen. OSHA has established the following exposure limits for vinyl chloride: a 1 ppm 8 hour TWA PEL, a 5 ppm STEL (15 minutes) and a 0.5 ppm AL. Industrial hygiene studies have shown that under normal and expected conditions of use of PVC materials, exposures are well below applicable limits.

Inhalation studies with rats at concentrations of 6 to 8 times the PEL or TLV for antimony trioxide for 6 hours a day, 5 days a week for a year indicated a significant increase in the number of pulmonary tumors. There is also evidence that antimony compounds can cause birth defects in rats and mice at high dose levels. The National Institute for Occupational Safety and Health has stated that these findings are inconclusive as they relate to human health.

In determining that carbon black is a potential human carcinogen (2B), the IARC cites a number of animal studies that indicate the material causes an increased incidence of lung cancers.

12. ECOLOGICAL INFORMATION

Detailed studies have not been conducted concerning the environmental fate of the product. It is, however, not expected to present a hazard to aquatic and terrestrial flora and fauna.

13. DISPOSAL CONSIDERATIONS

The product is not considered hazardous under current EPA hazardous waste regulations. Disposal by recycling is the preferred method of disposal. Alternatively, the product may be disposed of in an approved landfill. All wastes should be evaluated in conjunction with applicable solid and hazardous waste regulations, Toxicity Characteristic Leaching procedures (TCLP), and disposed of as appropriate. Empty containers will contain product residues. Observe proper safety and handling precautions. Do not allow empty containers to be used for any purpose except to store and ship original product.

It is the user's responsibility to dispose of all wastes in accordance with all local, state, and federal regulations at properly permitted or authorized facilities.

14. TRANSPORTATION INFORMATION

DOT Classification: Not currently regulated under Department of Transportation regulations.

15. REGULATORY INFORMATION

OSHA Hazard Communication Classification for dusts and fumes and vapors: Irritant, Skin Hazard, Lung Hazards Carcinogen.

SARA Title 111 Classification for dusts and fumes and vapors: Acute Health Hazard; Chronic Health Hazard.

The antimony trioxide component of the product has been listed as a Substance Known to Cause Cancer by the State of California.

Antimony compounds are reportable under Section 313 of Title 111 of the Superfund Amendments and Reauthorization Act of 1986. Formulations 64174 and 64212 contain 3.4% and 1.6% antimony trioxide respectively.

The residual vinyl chloride monomer of less than 5 ppm, CAS # 75-01-4, in the product has been listed as a Substance known to Cause Cancer by the State of California and as an Extraordinarily Hazardous Substance by the State of Massachusetts.

Exposure to vinyl chloride is regulated by OSHA under 29 CFR 1910.1017. Uses of the product are urged to obtain and read these standards to determine how their operations may be affected. See Section 11.

The products contain less than 0.1% crystalline silica. Crystalline silica whose particle size is in the repairable range, <10 microns, has been listed by the state of California as a substance that is known to cause cancer. crystalline silica has been listed as an Extraordinarily Hazardous Substance and Carcinogen by the State of Massachusetts.

The calcium carbonate component of the product contains less than 1 ppm each of arsenic and lead compounds. These materials have been listed as Substances Known to cause cancer or Birth Defects by the State of California.

WHMIS Classifications: Non-hazardous

16. OTHER INFORMATION

The following: Ground Zero Electrostatics, Inc. formulations are covered by this document. 64042, 64053, 64086, 64160, 64168: 64174, 64206, 64212 64228 and 64231.

Not Est. - Not Established; N.A. = Not Applicable; N.D. = Not determined

HMIS Classifications: Health = 0; Fire =1; Reactivity =0;

All components of the product are included in the Toxic Substances Control Act (TSCA) inventory.

Notice From Ground Zero Electrostatics: The data in this Material Safety Data sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The opinions expressed herein are those of qualified experts within Ground Zero Electrostatics . We believe that the information contained herein is current as of the date of issue of this Material Safety Data Sheet Since the use on this information and these opinions and the conditions of use of the product are not within the control of Ground Zero Electrostatics, it is the users obligation to determine conditions of safe use of the product.

Ground Zero Electrostatics requests the users of this product study this Material Safety Data Sheet and become aware of product hazards and safety information. To promote safe use of this product, users should notify their employees, agents, and contractors of the information on this Material Safety Data Sheet and any product hazards and safety information.