

# VPI 165 ACRYLIC CONDUCTIVE ADHESIVE

PAGE: 1

## MATERIAL SAFETY DATA SHEET

DATE: June 25, 2009

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**MANUFACTURER: VPI Corporation**

3123 South 9<sup>th</sup> Street  
Sheboygan, WI 53082  
920-458-4664

**EMERGENCY PHONE:**

800-424-9300 (CHEMTREC)

613-996-6666 (CANUTEC)

**TRADE NAME AND SYNONYMS:... VPI 165**

**CHEMICAL NAME AND SYNONYMS:...** Adhesive blend based on vinyl acetate ethylene copolymer emulsions

**CHEMICAL FAMILY:** .....Polyvinyl acetate homopolymer blend

**MOLECULAR FORMULA:** .....Not applicable

**PRODUCT DESCRIPTION:** .....Blend based on ethylene vinyl acetate copolymer emulsion.

### SECTION 2 - HAZARDOUS INGREDIENTS

MATERIAL	% BY WEIGHT	CAS NUMBER	EXPOSURE GUIDELINES		
			ACGIH TLV	OSHA TLV-TWA	OSHA PEL-STEL
This product does not contain any hazardous components.					

### SECTION 3 – HAZARDOUS IDENTIFICATIONS

**EMERGENCY OVERVIEW:** Can cause eye irritation. Can cause severe respiratory irritation. Can cause severe central nervous system depression. Smoking and/or consumption of alcoholic beverages may increase toxic effects of this material.

**POTENTIAL HEALTH EFFECTS:**

**EYE CONTACT:** May cause severe irritation. May damage eyes.

**SKIN CONTACT:** Prolonged exposure may cause skin irritation May cause drying or flaking of skin. Skin absorption of material may cause systemic toxicity.

**INGESTION:** Ingestion may cause severe injury to intestinal tract, liver, kidneys, stomach, throat, lungs, mouth and mucous membranes. Harmful or fatal if swallowed. Do not ingest.

**INHALATION:** Overexposure may cause severe respiratory tract irritation. Prolonged overexposure may cause central nervous system depression with narcotic effects (headaches, dizziness, unconsciousness). Keep exposure below OSHA exposure limits.

# VPI 165 ACRYLIC CONDUCTIVE ADHESIVE

## SECTION 4 - FIRST AID MEASURES

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**SKIN:** Wash with soap and water. Get medical attention if irritation develops or persists. Immediately remove contaminated clothing.

**INGESTION:** If swallowed, seek medical attention immediately. Do not induce vomiting. Can enter lungs and cause damage.

**INHALATION:** Remove to fresh air. Restore breathing if necessary. Get medical attention. This material can cause lung damage.

DO NOT LEAVE VICTIM UNATTENDED.

## SECTION 5 - FIRE FIGHTING MEASURES AND FIRE HAZARDS

**OSHA FLAMMABILITY CLASS:**..... IIIB

**FLASHPOINT:** .....Not applicable

**LOWER EXPLOSIVE LIMIT:** .....Not available

**UPPER EXPLOSIVE LIMIT:** .....Not available

**GENERAL HAZARD:** Toxic gases will form upon combustion. Closed containers may explode when exposed to extreme heat. Vapours are heavier than air and may travel a considerable distance.

**FIRE FIGHTING EQUIPMENT:** Respiratory and eye protection required for firefighting personnel. Full protective equipment and a self-contained breathing apparatus (SCBA) should be used in all indoor fires and any large outdoor fires.

**HAZARDOUS COMBUSTION PRODUCTS:** Carbon monoxide, carbon dioxide, smoke and fumes, hydrocarbon fragments.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES (SPILLS OR LEAKS)

**GENERAL INSTRUCTIONS:** Keep all sources of ignition and hot metal surfaces away from spill. Isolate the danger area and keep out unauthorized personnel. Stop spill if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see section 8). Prevent additional discharge of material. Notify the appropriate authorities immediately. Contain spilled liquid with sand, earth or other non-combustible inert absorbent material. Prevent run-off from entering storm sewers, ditches or waterways. Transfer absorbed waste material into properly identified drums. Treat waste material with same precautions as the adhesive.

Do not use solvent or flammable liquid to help clean up an accidental release.

Release to the environment may be reportable under environmental regulations.

# VPI 165 ACRYLIC CONDUCTIVE ADHESIVE

## SECTION 7 – HANDLING AND STORAGE

**HANDLING:** Open container slowly to relieve any pressure. Do not enter confined spaces such as tanks without following proper entry procedures as described in OSHA regulations at 29 CFR 1910.146. Do not breathe vapours. The use of respiratory protection is recommended when airborne concentrations of vapour exceed exposure guidelines. Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Wear appropriate protective gloves and clothing to prevent prolonged or repeated skin contact. Avoid contact with eyes.

**STORAGE:** Keep containers tightly closed. Use and store this material in a cool, dry, well-ventilated area away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area “No Smoking or Open Flames”. Store only in approved containers. Protect containers against physical damage. Indoor storage should meet OSHA standards and appropriate fire codes.

**EMPTY CONTAINERS:** May contain liquid and vapour residue and may be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and death. “Empty” drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in accordance with governmental regulations. Wash with soap and water before eating, drinking, smoking or using toilet facilities. Consult NFPA and OSHA codes.

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

**RESPIRATORY PROTECTION:** A NIOSH/MSHA approved air purifying respirator with an organic vapour cartridge may be used under conditions where airborne concentrations are expected to exceed exposure guidelines. Protection provided by air purifying respirators is limited. Refer to respirator manufacturer’s selection guide for appropriate respirator for conditions encountered. If in doubt, seek the advice of an industrial hygienist or safety professional for appropriate air purifying respiratory equipment.

Use positive pressure air supplied respirator if there is potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection. When respiratory protection is used, a respiratory protection program meeting OSHA regulations at 29 CFR 1910.134 must be followed.

**SKIN PROTECTION:** The use of gloves impermeable to the specific material handled is advised to prevent prolonged or repeated skin contact. Where splashing is likely to occur, aprons impermeable to the specific material may be worn. Refer to the glove and protective clothing manufacturer’s selection guide for appropriate material.

**EYE PROTECTION:** Approved chemical splash goggles should be worn to safeguard against potential eye contact, irritation or injury. Where splashing is likely to occur, hard hats and face shields may be used to provide additional protection. Eye wash facilities should be available in the work area.

**ENGINEERING CONTROLS:** Provide sufficient mechanical ventilation to maintain exposure below TLV(s). The use of local exhaust ventilation is recommended. Provide mechanical ventilation of confined spaces. If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure guidelines, additional ventilation or exhaust systems may be required.

# VPI 165 ACRYLIC CONDUCTIVE ADHESIVE

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE AND ODOR:** .....Milky-white or green liquid, mild odor  
**SPECIFIC GRAVITY:** ..... 1.10 (68°F – 20°C)  
**pH:** ..... 4-6  
**BOILING POINT:** ..... 212°F, 100°C @ 760 mm Hg (Aqueous phase)  
**FREEZING POINT:** ..... <32°F, <0°C  
**SOLUBILITY IN WATER:** .....Miscible  
**% SOLIDS (BY WEIGHT):** ..... 55 ± 2%  
**% VOLATILE (BY WEIGHT):** ..... 45 ± 2%  
**VAPOUR PRESSURE (MM OF MERCURY):** ..... Same as water  
**VAPOUR DENSITY (AIR = 1):** ..... Same as water  
**EVAPORATION RATE (BUTYL ACETATE = 1):**... Same as water  
**EVAPORATION RATE (ETHYL ETHER = 1):** ..... Same as water

## SECTION 10 – STABILITY AND REACTIVITY

**CHEMICAL STABILITY:** Keep away from flames and spark producing equipment. Not dangerously unstable.  
**INCOMPATIBLE MATERIALS:** Strong oxidizing agents, strong reducing agents, acids, bases, or unstable chemicals, chloroform, nitric compounds, peroxides, sulfur dichloride, strong alkalis.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition is unlikely to occur, but under fire or extreme heat conditions, carbon monoxide, carbon dioxide, smoke and fumes, and hydrocarbon fragments can be released.  
**HAZARDOUS POLYMERIZATION:** Will not occur.

## SECTION 11 – TOXICOLOGICAL INFORMATION

<b>MATERIAL:</b> This product does not contain any hazardous components.	<b>SKIN (Dermal LD50):</b> Not available	<b>INGESTION (Oral LD50):</b> Not available
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**CHRONIC:** Liver and kidney damage FROM OVEREXPOSURE. May cause central nervous system depression.

### CHRONIC / CARCINOGENICITY (CANCER CAUSING):

IARC: .....Not suspected as a human carcinogen.

OSHA: .....Not suspected as a human carcinogen.

NTP: .....Not suspected as a human carcinogen.

OTHER: ..This product contains the following chemicals known to the state of California (Proposition 65) to cause cancer or reproductive toxicity: Trace amounts of acetaldehyde (75-07-0) and ethylene oxide (75-21-8).

**OTHER:** None known.

# VPI 165 ACRYLIC CONDUCTIVE ADHESIVE

## SECTION 12 – ECOLOGICAL INFORMATION

No data available.

## SECTION 13 – DISPOSAL CONSIDERATIONS

Incinerate at an EPA approved facility or dispose of in accordance with all federal, state/provincial and local regulations.

VPI 165 is a hazardous waste if discarded (CFR., Vol 40, part 261, pgs. 51-114).

See Section 2, Page 1 of this MSDS for hazardous ingredients.

**PROPER WASTE DISPOSAL IS THE RESPONSIBILITY OF THE OWNER OF THE WASTE!**

Call VPI Corporation if additional information is necessary.

## SECTION 14 – TRANSPORTATION INFORMATION

**D.O.T. / T.D.G.:**  
NOT REGULATED

All packaged material must be labeled in accordance with DOT and OSHA standards.

## SECTION 15 – REGULATORY INFORMATION

**OSHA:** Hazardous material by definition of hazard communication standard (29CFR 1910.1200).

**SECTION 313:** This product contains the following substances subject to the reporting requirements of Section 313 of TITLE III of Superfund Amendments and Reauthorization Act of 1986 and CFR Part 372: None known.

**V.O.C.:** 0 Lbs/Gal. (SCAQMD Rule 1168)  
0 G/L

**VHAP:** 0 lb/lb solids

**HAZARD INDEX:**      0: Minimal Hazard              2: Moderate Hazard              4: Severe Hazard  
                                 1: Slight Hazard                      3: Serious Hazard

### HMIS RATINGS:

HEALTH: .....1

FLAMMABILITY: .....0

REACTIVITY: .....0

PERSONAL PROTECTION: ..Depends on application and ventilation.

TSCA: .....Components of this product are listed on the TSCA inventory.

**WHMIS INFORMATION:**  
NOT CONTROLLED

# VPI 165 ACRYLIC CONDUCTIVE ADHESIVE

## SECTION 16 – OTHER INFORMATION

Version No. 3

All employees or contractors, etc., who use this product must have access to this Material Safety Data Sheet.

**PREPARED BY:** (SG)

## SECTION 17 – DEFINITIONS

**ACGIH** : American Conference of Governmental Industrial Hygienists.

**ASPIRATION HAZARD**: The danger of drawing material into the lungs, leading to an inflammatory response that can be fatal.

**CFR**: Code of Federal Regulations (U.S.). A collection of regulations established by law.

**CARCINOGEN**: A material that either causes cancer in humans, or is considered capable of causing cancer in humans.

**COMBUSTIBLE**: A term used to classify certain materials with low flash points that ignite easily. For OSHA it has a flash point greater than 100°F (38°C) but below 200°F (93°C).

**DOT**: U.S. Dept. of Transportation.

**FLAMMABLE**: A material that gives off vapours that readily ignite at room temperatures. OSHA defines flammable as a material with a flash point less than 100°F (38°C).

**FLASH POINT**: The lowest point at which a liquid gives off sufficient vapour to form an ignitable mixture with air.

**HAZARDOUS**: Any substance or mixture of substances having properties capable of producing adverse effects on the health or safety of a human.

**IARC**: International Agency for Research on Cancer.

**IRRITANT**: A substance capable of causing an inflammatory effect on living tissue by chemical action at the site of contact.

**LD50**: Lethal Dose 50. The single dose of a substance that causes death of 50% of an animal population from exposure to the substance from any route other than inhalation.

**LEL**: Lower Explosive Limit. The lowest concentration of vapour that burns or explodes when an ignition source is present at ambient temperatures.

**LFL**: Lower Flammable Limit. See L.E.L.

**MSHA**: Mine Safety and Health Administration (U.S.).

**NFPA**: National Fire Protection Association (U.S.).

**NIOSH**: National Institute of Occupational Safety and Health (U.S.).

**NTP**: National Toxicology Program (U.S.).

**OECD**: Organisation for Economic Co-operation and Development.

**OSHA**: The Occupational Safety and Health Administration (U.S.).

**PEL-STEL**: Permissible Exposure Limit, Short Term Exposure Limit.

**SCBA**: Self-contained breathing apparatus.

**SYSTEMIC TOXICITY**: Adverse effects induced by a substance which affects the body in a general manner rather than locally.

**TDG**: Transportation of Dangerous Goods (Canada).

**TLV-TWA**: Threshold Limit Value, Time Weighted Average.

**TSCA**: Toxic Substance Control Act.

**TOXIC**: Any chemical or material that has evidence of an acute or chronic health hazard and is listed in the NIOSH Registry of Toxic Effects of Chemical Substances.

**VHAP**: Volatile Hazardous Air Pollutant

**V.O.C.**: Volatile Organic Compound.

**WHMIS**: Workplace Hazardous Materials Information System (Canada).