



MATERIAL SAFETY DATA SHEET

LEADING EDGE COATING SOLUTIONS
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Emergency Assistance

For emergency assistance involving this product call – 614-562-2170

Section 1: Product Identification

Product Name: PVDF-256
Appearance: Milky liquid.
MSDS #: 1003
Date Issued: April 24, 2009
Original **Update**
Reason For Change: NA

Section 2: Hazardous Ingredients

Hazardous Ingredients	CAS Number	OSHA PEL (Permissible exposure limit)	ACGIH TLV (Threshold limit value)	% By Weight
Ethyl Acetate	141-78-6	400 ppm	400 ppm	70-90
N-Methyl-2-pyrrolidone	872-50-4	Not established	Not established	5-10

Note: All health hazard components above 1% composition and all carcinogens above 0.1% (1000 ppm) composition are listed.

Section 3: Hazard Identification

EMERGENCY OVERVIEW: WARNING! This product is HAZARDOUS by OSHA Hazard Communication definition. Flammable liquid and vapor. Vapor may cause flash fire. Harmful if swallowed. Harmful if inhaled or absorbed through the skin. Affects central nervous system. May cause skin, eye and respiratory tract irritation. Risk of effects depends on duration and level of exposure.

Hazard Rating: NFPA **HMIS**
Health: 2*
Flammability: 3
Reactivity: 1
PPE: X

Hazard Rating Scale:
0= Minimal
1= Slight
2= Moderate
3= Serious
4= Severe

Note: NFPA and HMIS ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the specific hazard. To deal adequately with the safe handling of this, or any, material, all the information in the MSDS must be considered and interpreted by a trained professional.

Potential Health Effects:

- This material has **not been** tested as a whole. The data contained below is based on the properties of the individual components.
 This material has been tested as a whole. The data below is based on the properties of the mixture.

Main Routes of Exposure:

- Inhalation Ingestion
 Skin Absorption Skin or Eye Contact

Effects of Acute (Immediate) Exposure:

Eye Contact Vapors may cause eye irritation. Splashes can produce painful irritation and eye damage.

Ingestion..... Swallowing may cause irritation of mouth, throat and gastrointestinal tract. May produce abdominal pain and nausea. Aspiration into lungs can produce lung damage and is a medical emergency. Other symptoms parallel inhalation.

Inhalation..... Can cause irritation to nose, throat and lungs. Inhalation of organic solvents can cause coughing, sore throat, and runny nose, headache, dullness and dizziness. Concentrations above the TLV may cause central nervous system depression and unconsciousness.

Skin Contact..... Skin irritant. Can cause redness, itching and pain. May be absorbed through the skin with possible systemic effects. Prolonged contact can cause de-fatting of skin rendering it susceptible to irritation by other substances.

Effects of Chronic(Long Term) Exposure:

Inhalation..... Chronic exposure to organic solvents has been associated with various nervous system damage including permanent memory loss, loss of intellectual ability and loss of coordination.

Ingestion..... May cause harmful disorders of the liver, heart and gastrointestinal tract.

Skin Contact..... Prolonged contact may cause dermatitis by de-fatting of skin from prolonged or repeated contact.

Medical Conditions Aggravated by Exposure :

Any pre-existing disorders or diseases of the respiratory system, central nervous system, skin, eyes, and liver.

Target Organs Affected:

Central Nervous System, respiratory system, skin and eyes

The components of this material are considered Carcinogenic by:

- None
- National Toxicology Program (NTP)
- The International Agency for Research on Cancer (IARC)
- The Occupational Health and Safety Administration (OSHA)

Section 4: First Aid Measures

Eye Contact.....	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, holding eyelids open to rinse completely. Get medical aid.
Ingestion.....	DO NOT INDUCE VOMITING. Potential for aspiration if swallowed. Give plenty of water to drink. Get medical aid immediately. Never give anything by mouth to an unconscious person. Call physician immediately.
Inhalation.....	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Skin Contact.....	In case of contact, flush skin with plenty of soap and water. Remove contaminated clothing and shoes. Get medical aid if irritation, redness, swelling or skin pain develops and persists. Wash clothing before re-use.
** Note to the Physician:.....	None.

Section 5: Fire Fighting Measures

Flash Point Deg. C <input type="checkbox"/> F <input checked="" type="checkbox"/>	25°F (-4°C) (Lowest flashing component)
Auto – Ignition Temperature.....	Not available
Upper Flammable Limit (% Vol).....	Not available
Lower Flammable Limit (% Vol).....	Not available
Explosion.....	Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition sources and flash back. Sealed containers may rupture when heated. Sensitive to static discharge.
Extinguishing Media.....	Use dry chemical, carbon dioxide or foam. Cool containers with water spray until well after the fire is out.
Hazardous Combustion Products.....	Oxides of carbon and nitrogen and other toxic vapors

General Information:

Firefighters should wear full protective equipment and positive pressure self-contained breathing apparatus in pressure-demand mode. Vapors may form an explosive mixture with air. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low areas. Use water spray to cool fire-exposed container surfaces.

Section 6: Accidental Release Measures

Spill / Leak.....	Use proper personal protective equipment as indicated in Section 8. Stop flow of material. Absorb with inert material (e.g. “oil dry”, sand, earth or other suitable
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	respirator supplier, whichever is lowest. For emergencies or instances where exposure levels are not known, a full-face positive-pressure air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres .
Gloves / Type.....	Wear chemical resistant gloves such as butyl rubber or nitrile.
Clothing / Type.....	Wear long sleeved garment such as a lab coat to prevent skin exposure.
Other / Type.....	Facilities using or storing this product should be equipped with an eyewash facility and safety shower within 100 feet from work area.
Ventilation Requirements.....	Explosion-proof local and/or general exhaust ventilation is required to keep exposures below TLV. Local exhaust ventilation is preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Refer to the ACGIH document <i>Industrial Ventilation, A Manual of Recommended Practices</i> , most recent edition, for details.

Section 9: Physical and Chemical Properties
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Appearance/Odor.....	Clear liquid
Specific Gravity.....	Not determined
Vapor Pressure (mm Hg).....	Not determined
Vapor Density (Air = 1)	Not determined
Evaporation Rate (BuAC =1)	Not determined
Boiling Point	Not determined
Solubility in Water (%W/W).....	Not determined
Freezing Point (deg. C <input type="checkbox"/> F <input type="checkbox"/>).....	Not determined
Melting Point (deg. C <input type="checkbox"/> F <input type="checkbox"/>).....	Not determined

Section 10: Stability and Reactivity

Hazardous Polymerization.....	Will not occur
Stability.....	Stable
Incompatibility.....	Strong oxidizing agents, strong acids and bases, heat, flame or other sources of ignition. Can attack many plastics, rubber and coatings.

Conditions to Avoid..... Ignition sources, excess heat and incompatibles

Hazardous Products of decomposition..... Oxides of carbon and nitrogen and other toxic vapors

Section 11: Toxicology Information

Irritancy of Material..... May cause skin, eye and respiratory tract irritation.

Toxicological Data..... Not known

Sensitizing Capability of Material..... Not known

Carcinogenicity of Material..... See Section 3

Teratogenicity Not known

Mutagenicity..... Not known

Reproductive Effects..... Not known

Synergistic Materials..... Not known

Section 12: Ecology Information

Environmental Fate..... Not known

Environmental Toxicity..... Not known

Section 13: Disposal Considerations

Waste Disposal (RCRA) Waste generators must consult with federal, state and local hazardous waste regulations to ensure complete and accurate classification.

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14: Transport Information

U. N. # 1866
 D.O.T. Proper Shipping Name Resin Solution
 Hazard Class..... 3
 Packing Group..... II

Section 15: Regulatory Information

TSCA Components of this product are listed on the TSCA

Inventory or are exempt.

CERCLA

Ethyl Acetate (CAS# 141-78-6): 5000 lbs

SARA TITLE III

This product is considered, under applicable definitions,

to meet the following categories:

Section 311/312:

Immediate/acute health hazard, delayed/chronic health hazard, fire hazard

Section 313:

This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under Section 313 (40 CFR 372). This information must be included in all MSDSs copied or distributed for this material:
None

CALIFORNIA PROPOSITION 65

This product contain chemicals listed as carcinogens or reproductive toxins at levels which could be subject to Proposition 65 – N-Methyl-2-Pyrrolidone (CAS# 872-50-4)

CANADA

Domestic Substances List:
Not known

WHMIS Ingredient Disclosure List:
Not known

OTHER INTERNATIONAL INVENTORIES

EC, Japan, Australia, Korea, Phillipines

Section 16: Other Information

Label Hazard Warning:

DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Label Precautions:

Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid breathing vapor. Avoid contact with eyes, skin and clothing.

Label First Aid:

Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In all cases, get medical attention



MATERIAL SAFETY DATA SHEET

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