



MATERIAL SAFETY DATA SHEET

LEADING EDGE COATING SOLUTIONS

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www.ledgecs.com

Emergency Assistance

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

Section 1: Product Identification

Product Name: PAP-127 adhesion promoter
Appearance: Clear liquid. Viscosity: 2000 cp @ 21°C
MSDS #: 1002
Date Issued: January 28, 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
PVC/EU Copolymer	Proprietary	Not established	Not established	20%
Methyl ethyl ketone	78-93-3	200 ppm	200 ppm	80%

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 or fatal if swallowed. Harmful if inhaled or absorbed through the skin. Affects central nervous system. May cause skin, eye, gastrointestinal and respiratory tract irritation. May be harmful if swallowed. 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 severe 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:

Not Known

National Toxicology Program (NTP)

The International Agency for Research on Cancer (IARC)

Ethyl acrylate is classified as possibly carcinogenic to humans (Class 2B).

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"/>	16°F (-9°C)
Auto – Ignition Temperature.....	795°F (404°C)
Upper Flammable Limit (% Vol).....	11.4
Lower Flammable Limit (% Vol).....	1.4 (EXTREMELY FLAMMABLE)
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
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material (e.g. “oil dry”, sand, earth or other suitable absorbent), then place into a suitable container. Clean up spills immediately. Provide ventilation. Remove all sources of ignition. Use a spark-proof tool. Prevent from entering floor drains or sewers. Do not release any chemicals of any type to sewers or any waterways without proper authorization from government agencies. If a spill or leak has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. Make appropriate notifications as required. US regulations (CERCLA) require reporting releases to soil, water and air in excess of reportable quantities (800-424-8802). J. T. Baker SOLUSORB® solvent adsorbent is recommended for spills of this product.

Section 7: Handling and Storage

Handling Procedures.....	Maintain good personal hygiene. Wash hands and face thoroughly after handling, and before eating, drinking or using tobacco products. Remove contaminated clothing and wash before re-use. Avoid contact with eyes, skin and clothing. Keep containers tightly closed. Use only with adequate ventilation. Avoid breathing vapor or mist.
Storage Needs.....	Protect against physical damage. Observe local regulations. Store in a cool (<150°F), dry, well-ventilated area away from incompatible materials. Containers should be bonded and grounded for transfers to avoid static sparks. Use non-sparking tools and equipment, including explosion-proof ventilation. Keep containers closed when not in use. Keep away from direct sunlight, heat, sparks or open flames. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid).

Section 8: Exposure Controls / Personal Protection

When selecting personal protective equipment and clothing, follow all manufacturer specifications and recommendations that apply to your specific operations and processing conditions. Take into consideration all working conditions and all chemicals to be handled or processed.

Eye / Type.....	Wear splash-proof chemical safety goggles and/or a full-face shield where splashing is possible. Contact lenses should not be worn when working with chemicals. Maintain an eye wash station and quick-drench facility in work area.
Respiratory /Type.....	A half-face or full-face NIOSH-approved respirator with organic vapor cartridge is recommended where exposures exceed TLV may be worn up to 50 times the exposure limit or the maximum use concentration

specified by the appropriate regulatory agency or 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

Appearance/Odor.....	White liquid, sharp mint-like odor
Specific Gravity.....	0.85@20°C
Vapor Pressure (mm Hg).....	78@20°C
Vapor Density (Air = 1)	2.5
Evaporation Rate (BuAC =1)	2.7 (Ether = 1)
Boiling Point	Not determined
Solubility in Water (%W/W).....	29%
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 and reducing agents, strong acids and bases, amines, ammonia, chloroform, chlorosulfonic

acid, oleum, potassium t-butoxide, heat or flame, hydrogen peroxide, nitric acid. Can attack many plastics, resin and rubber.

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..... Oral LD50: 2737 mg/kg; inhalation rat LC50: 23500 mg/m³/8-hr; skin rabbit LD50: 6480 mg/kg; investigated as a mutagen, reproductive effector

Sensitizing Capability of Material..... Not known

Carcinogenicity of Material..... See Section 3

Teratogenicity Has shown teratogenic effects in laboratory animals

Mutagenicity..... Not known

Reproductive Effects..... Not known

Synergistic Materials..... Not known

Section 12: Ecology Information

Environmental Fate..... When released into the soil, this material may leach into ground water, however this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released into water, this material may evaporate to a moderate extent. When released into water, this material is expected to have a half-life between 10 and 30 days. This material is not expected to significantly bio-accumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Environmental Toxicity..... This material is not expected to be toxic to aquatic life. The LC50/96-hour values for fish are over 100 mg/l.

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

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|--|---|
| <input checked="" type="checkbox"/> TSCA | <input checked="" type="checkbox"/> Components of this product are listed on the TSCA Inventory or are exempt. |
| <input checked="" type="checkbox"/> CERCLA | <input checked="" type="checkbox"/> Methyl Ethyl Ketone (CAS# 78-93-3): 5000 lbs |
| <input checked="" type="checkbox"/> SARA TITLE III | <input checked="" type="checkbox"/> This product is considered, under applicable definitions,
to meet the following categories:
<u>Section 311/312:</u>
Immediate/acute health hazard, delayed/chronic health hazard, fire hazard

<u>Section 313:</u>
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:
Methyl Ethyl Ketone (CAS#78-93-3) |
| <input checked="" type="checkbox"/> CALIFORNIA PROPOSITION 65 | <input checked="" type="checkbox"/> This product contain chemicals listed as carcinogens or reproductive toxins at levels which could be subject to Proposition 65 – Ethyl acrylate (CAS# 140-88-5) |
| <input checked="" type="checkbox"/> CANADA | <input checked="" type="checkbox"/> <u>Domestic Substances List:</u>
All ingredients are on DSL

<u>WHMIS Ingredient Disclosure List:</u>
Not known |
| <input checked="" type="checkbox"/> OTHER INTERNATIONAL INVENTORIES | <input checked="" type="checkbox"/> EC, Japan, Australia, Korea |

Section 16: Other Information

Label Hazard Warning:

DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL OR FATAL 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

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. This information is based on the material as manufactured; it may not be valid for this material if used in combination with any other materials or in any process. Leading Edge Coatings Solutions LLC shall not be held liable for any damage resulting from handling or from contact with the product(s).