

**MATERIAL SAFETY DATA SHEET: DYLEK PS AEROSOL**

**Section I - General Information**

(000000-000000- - 5185)

**Date of Issue:**  
8/22/2007 12:00:00 AM

**Chemical Name & Synonyms:**  
N/A

**Chemical Family:**  
Solvent mixture

**Manufacturer Name:**  
CERTIFIED LABS, DIV. OF NCH CORP.

**Manufacturer Address:**  
BOX 152170  
IRVING, TEXAS 75015

**Prepared By:**  
M MCDOWELL/CHEMIST

**Supercedes:**  
5/7/2003 12:00:00 AM

**Trade Name & Synonyms:**  
DYLEK PS AEROSOL

**Formula is a mixture:** [v]

**Product Code Number:** 5185      **Emergency Phone Number:** 800-424-9300

**Section II - Hazardous Ingredients**

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

<u>Chemical Name (Ingredients)</u>	<u>Hazard</u>	<u>TLV</u>	<u>PEL</u>	<u>STEL</u>	<u>CAS #</u>
ETHANOL	\$	1000 ppm 1	1000 ppm 2	N/E	64-17-5
METHANOL	\$\$	200 ppm 1	200 ppm 2	250 ppm 1	67-56-1
N-HEXANE	FLAM/IRR	50 ppm 1	500 ppm 2	N/E	110-54-3
ETHYL ACETATE	FLAM/IRR	400 ppm 1	400 ppm 2	N/E	141-78-6
N-HEPTANE	FLAM/IRR	400 ppm 1	500 ppm 2	500 ppm 1	142-82-5
CYCLOHEXANE	FLAM/IRR	100 ppm 1	300 ppm 2	N/E	110-82-7
CARBON DIOXIDE	ASPHY	5000 ppm 1	5000 ppm 2	3000ppm 1	124-38-9
\$ CARC/FLAM/IRR					
\$\$ TOX/FLAM/IRR					

**Section III - Physical Data**

<b>Boiling Point (?F):</b> 155	<b>Specific Gravity (H<sub>2</sub>O=1):</b> 0.584
<b>Vapor Pressure (mm Hg):</b> 4755	<b>Color:</b> Colorless
<b>Vapor Density (Air=1):</b> 1.5	<b>Odor:</b> Alcohol/Solvent
<b>pH @ 100% :</b> 6.0	<b>Clarity:</b> Transparent
<b>% Volatile by Volume:</b> 100	<b>Evaporation Rate (BuAc=1):</b> 126.9
<b>H<sub>2</sub>O Solubility:</b> Appreciable	<b>Viscosity:</b> Non-viscous

**Section IV - Fire and Explosion Hazard**

**Flash Point:**38°F      **Method Used:** Seta-Flash

**Flammable Limits:**Product mixture      **UEL:**36%

**LEL:**1.1%      **Aerosol Level (NFPA 30B):**2

**Extinguishing Media:**

[v] Foam	[v] Alcohol Foam	[v] CO2
[v] Dry Chemical	[v] Water Spray	[ ] Other

**NFPA 704 Hazard Rating:**

4-Extreme	Health: 2
3-High	Flammability: 4
2-Moderate	Instability: 0
1-Slight	Special:
0-Insignificant	

**Special Fire Fighting Procedures:**

Firefighters should wear a self-contained breathing apparatus and full protective gear. Extinguishing media should be chosen based on the nature of the surrounding fire. Cool fire-exposed containers with water spray to prevent bursting.

**Unusual Fire and Explosion Hazards:**

Vapors are heavier than air and may travel to distant and/or low-lying sources of ignition and flashback. Flame extension is 30 inches, burnback is 6 inches. The use of water spray (fog), while effective, may cause frothing and foaming. Never use a water jet as this will just spread the fire. Use care as spills may be slippery.

**Section V - Health and Hazard Data**

**Threshold Limit Value:**  
Not Established for Mixture. See Section II.

**Effects of Overexposure:**

**Acute: (Short Term Exposure)**

**EYE CONTACT:** Causes irritation seen as stinging, tearing, redness, and a burning sensation. May cause conjunctivitis or corneal opacity.

**SKIN CONTACT:** Causes irritation seen as itching and redness. Prolonged or repeated contact as from clothing wet with material may cause drying, defatting, and cracking of the skin. Product may be absorbed through the skin in harmful amounts.

**INHALATION:** May cause respiratory irritation seen as coughing, sneezing, a burning sensation of the nose and throat, and difficulty breathing. May cause central nervous system effects such as headache, dizziness, drowsiness, weakness, unconsciousness, possible anesthetic effects from central nervous system depression, and may be fatal.

**INGESTION:** May cause irritation with possible nausea, vomiting, and diarrhea. Swallowing as little as 1 to 2 ounces can result in metabolic acidosis leading to optic nerve damage ranging from diminished visual capacity to complete blindness and death. Transient visual abnormalities that develop during acute intoxication may include blurred or double vision, changes in color perception, constricted visual fields, spots before the eyes, and sharply reduced visual acuity. Ingestion and subsequent vomiting of this product can lead to aspiration of the product into the lungs which can cause damage and may be fatal.

**Chronic: (Long Term Exposure)**

Chronic inhalation of solvents like Hexane have caused heartbeat irregularity, heartbeat increase, and permanent central and peripheral nervous system damage, resulting in decreased learning ability, loss of memory, personality changes, and disturbances in gait. A condition known as "Painter's Syndrome" can occur causing a loss of sensation in the arms and hands (peripheral neuropathy). Prolonged or repeated exposure may cause cardiac sensitization. This product has a narcotic and central nervous system depressive effect. May cause kidney and liver congestion in high concentrations. May cause anemia, edema, leukocytosis and a degeneration of the viscera fats. Prolonged exposure is associated to bronchitis, hepatic, renal and cardiac damages and blood alterations. Long-term ingestion of ethanol may result in the development of progressive liver injury with fibrosis, sleep disorders, hallucinations, convulsions, ataxia and pulmonary changes. Additionally, repeated ingestion by pregnant women has been shown to adversely affect the central nervous system of the fetus known as fetal alcohol syndrome. Iarc has also determined that chronic ingestion of ethanol can cause cancer of the liver, larynx, oesophagus, stomach, large bowel, pancreas, breast, and lung. Methanol is slowly eliminated from the body, therefore it can have cumulative toxicity effects with repeated exposures. Exposure to this material may aggravate any pre-existing condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease, or anemia.

Medical conditions aggravated by exposure are pre-existing liver diseases, respiratory and skin conditions such as asthma, emphysema and dermatitis. Target organs: central and peripheral nervous system, liver, kidneys, blood-forming organs, heart, optic nerves, and male reproductive system. The primary route of exposure is inhalation.

**Primary Routes of Entry**

[v] Inhalation	[v] Ingestion	[v] Absorption
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**Emergency First Aid Procedures:**

**Inhalation:**

Remove from the area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

**Eye Contact:**

Rinse the eyes with water. Remove any contact lenses and continue flushing with plenty of water for several minutes. Seek medical attention if irritation develops.

**Skin Contact:**

Wash affected areas with large amounts of soap and water for 15 minutes. Remove contaminated clothing and shoes. Seek medical attention if irritation persists. Wash clothing and clean shoes before re-use.

**Ingestion:**

Give 3 to 4 glasses of water, but DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

**Notes to Physician:**

Ingestion and subsequent vomiting of this product can lead to aspiration of the product into the lungs which can cause damage and may be fatal. Depending on the amount ingested and retained as well as the toxicity of the product, gastric lavage should be considered. Keep patient's head below hips to prevent pulmonary aspiration. If comatose, a cuffed endotracheal tube will prevent aspiration.

**Section VI - Toxicity Information**

**Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:**

IARC                       NTP                       OSHA                       ACGIH                       Other

VOC CONTENT: 94.9% by weight.

**ETHANOL**

ORL-HMN LD<sub>50</sub>: 1400 mg/kg 4.  
 ORL-RAT LD<sub>50</sub>: 7060 mg/kg 4.  
 IHL-RAT LC<sub>50</sub>: 20,000 ppm/10h 4.  
 SKN-RBT-SDT: 20 mg/24h moderate 4.  
 EYE-RBT-SDT: 500 mg/24h mild 4.

IARC has determined that ethanol is a carcinogen affecting the liver based on chronic exposure through human consumption via the drinking of alcoholic beverages over an extended period of time. 4.

**METHANOL**

ORL-RAT LD<sub>50</sub>: 5600 mg/kg 4.  
 IHL-RAT LC<sub>50</sub>: 64,000 ppm/4h 4.  
 SKN-RBT LD<sub>50</sub>: 15,800 mg/kg 4.  
 SKN-RBT SDT: 20 mg/24h moderate 4.  
 EYE-RBT SDT: 100 mg/24h moderate 4.  
 EYE-RBT: severely irritating 3.

Subchronic inhalation studies with laboratory animals (conducted at approximately 30% of the Lc50) has shown specific abnormalities to the cardiovascular, musculoskeletal, and urogenital systems of the developing fetus. Reported effects also included fetotoxicity. 3.

**N-HEXANE**

ORL-RAT LD<sub>50</sub>: 25 gm/kg 4.  
 IHL-HMN TCL<sub>0</sub>: 190 ppm/8w 4.  
 EYE-RBT-SDT: 10 mg mild 4.

This material may adversely affect the male reproductive system (decreased sperm counts and degenerative changes in the testes) based on testing in laboratory animals. 3.

**ETHYL ACETATE**

ORL-RAT LD<sub>50</sub>: 5620 mg/kg 3.  
 IHL-HMN TCL<sub>0</sub>: 400 ppm 3.  
 IHL-RAT LC<sub>50</sub>: 16000 ppm/6h 4.  
 SKN-RBT LD<sub>50</sub>: >20 ml/kg 3.  
 EYE-HMN SDT: 400 ppm 3.

**N-HEPTANE**

IHL-RAT LC<sub>50</sub>: 103 g/m<sup>3</sup>/4h 4.  
 ORL-RAT TDL<sub>0</sub>: 60 g/kg/3w-1 4.

**CYCLOHEXANE**

ORL-RAT LD<sub>50</sub>: 12705 mg/kg 4.  
 SKN-RBT LD: >180 gm/kg 4.  
 SKN-RBT-SDT: 1548 mg/2d (intermittent) 4.  
 IHL-RAT TCL<sub>0</sub>: 300 ppm/6h/2w-i 4.

**CARBON DIOXIDE**

IHL-RAT TCL<sub>0</sub>: 10000 ppm/24(s)-30 days continuous 3.  
 IHL-HMN LCL<sub>0</sub>: 9 ppm/5m 3.

It has been reported that persons may tolerate 1.5% in inhaled air for prolonged periods without adverse effects, but calcium/phosphorus metabolism may be affected with serum levels of Calcium and urinary Phosphorus progressively falling. At 2% concentration, deepened respiration may occur. At 3% impairment of performance has been noted. It has, however, been demonstrated that the development of tolerance may occur during prolonged exposure to low levels. Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals. Exposure of female rats to 60,000 ppm Carbon Dioxide for 24 hours has produces toxic effects to the embryo and fetus in pregnant rats. 3.

**Section VII - Reactivity Data**

**Stability**

Stable                       Unstable

**Conditions to Avoid:**

Avoid heat, hot surfaces, sparks, and open flames.

**Hazardous Polymerization**

Will not occur                       May occur

**Conditions to Avoid:**

N/A

**Incompatibility (Materials to Avoid):**

Strong oxidizing agents such as Chlorine bleach and concentrated Hydrogen Peroxide. Acetyl Chloride, reactive metals, moist Cesium Monoxide, Lithium Acetylene Carbide Diamino, Sodium Peroxide, Aluminum, and Magnesium.

**Hazardous Decomposition Products:**

Oxides of Carbon.

**Section VIII - Spill Or Leak Procedures**

**Steps to be Taken if Material is Released or Spilled:**

Due to the nature of the aerosol packaging, a large spill is unlikely. For a small spill, wear appropriate protective clothing, ventilate the area, absorb with an inert material and transfer all material into a properly labeled container for disposal. Use care as spills may be slippery.

**Waste Disposal Method(s):**

Dispose of in accordance with all Federal, state, and local regulations. Typical disposal is to wrap the empty aerosol container in several layers of newspaper and dispose of in the trash. Aerosol recycling programs are available in many areas. Do not puncture or incinerate this container.

**Neutralizing Agent:**

N/A

**Section IX - Special Protection Information**

**Required Ventilation:**

Local ventilation is recommended to control exposure from operations that can generate excessive levels of mists or vapors. Local ventilation is preferred, because it prevents dispersion into work areas by controlling it at its source.

**Respiratory Protection:**

Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in publication No. 87-116 or ANSI Z88.2-1992.

**Glove Protection:**

Neoprene or nitrile rubber gloves should be worn. Ensure compliance with OSHA's personal protective equipment (PPE) standard for hand protection, 29 CFR 1910.138.

**Eye Protection:**

Safety glasses with side shields if the method of application presents the likelihood of eye contact. Ensure compliance with OSHA's Personal Protective Equipment (PPE) standard for eye and face protection, 29 CFR 1910.133.

**Other Protection:**

Wear protective clothing when handling. A safety shower and an eyewash station should be available. Remove soaked clothing and shoes. Wash clothing and clean shoes before re-use.

**Section X - Storage and Handling Information**

<b>Storage Temperature</b>	<b>Storage Conditions</b>
Max: 90°F      Min: 35°F	<input checked="" type="checkbox"/> Indoors <input type="checkbox"/> Outdoors <input type="checkbox"/> Heated <input type="checkbox"/> Refrigerated

**Precautions to be Taken in Handling and Storing:**

Use with caution around heat, sparks, pilot lights, static electricity, and open flame.

**Other Precautions:**

Keep out of reach of children. Read the entire label before using the product. Follow the label directions.

**Section XI - Regulatory Information**

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Upper % Limit</u>
METHANOL	67-56-1	5
N-HEXANE	110-54-3	30
CYCLOHEXANE	110-82-7	5

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

**Section XII - References**

1. Threshold Limit Values for chemical substances and physical agents and biological exposure indices, ACGIH, 2007.
  2. OSHA PEL.
  3. Vendor's MSDS.
  4. Registry of toxic effects of chemical substances, CCINFOWeb, 2007.
  5. European Chemical Substances Information System (ESIS), International Uniform Chemical Information Database (IUCLID) Chemical Data Sheets.
- All the components of this product are in compliance with the Toxic Substances Control Act (TSCA) and are either listed on the TSCA inventory or otherwise exempted from listing.

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 IRR: Irritant, OSHA: Occupational Safety & Health Administration, IARC: International Agency for the Research on Cancer, TOX: Toxic, NFPA: National Fire Protection Association, ppm: Parts Per Million, UEL: Upper Explosion Limit, STEL: Short-term Exposure Limit, SKN: Skin, IHL: Inhalation, COMB: Combustible, CORR: Corrosive, MUT: Mutagenic, CARC: Carcinogenic, N/A: Not Applicable, TLV: Threshold Limit Value, N/E: Not Established, ORL: Oral, FLAM: Flammable, ASPHYX: Asphyxiant, C.O.C.: Cleveland Open Cup, PNOR: Particles Not Otherwise Regulated, LEL: Lower Explosion Limit, mg/L: Milligrams per Liter, PNOS: Particles Not Otherwise Specified, g/L: Grams per Liter, PMCC: Pinsky-Martin Closed Cup, NTP: National Toxicology Program, µg/L: Micrograms per Liter, TCC: Tagliabue Closed Cup, SEV: Severe, RBT: Rabbit, INV: Intravenous, ACGIH: American Conference of Governmental Industrial Hygienists, PEL: Permissible Exposure Limit, MOD: Moderate, IPT: Intraperitoneal, gm/kg: Grams per Kilogram, C.C.C.: Cleveland Closed Cup, HMV: Human, mg/m3: Milligrams per Cubic Meter, mg/kg: Milligrams per Kilogram, VOC: Volatile Organic Compound, SDT: Standard Draize Test, MSE: Mouse, GPG: Guinea Pig.

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