MATERIAL SAFETY DATA SHEET

Product Name: SP-185
Product Code: SP185 **Chemical Type: Solvent Blend**
Product Use: Clean-up and dilution of solvent based paint and ink.

WARNING! FLAMMABLE LIQUID AND VAPOR

Section 1: Manufacturer Information

Manufacturer: Chemical Solvents Inc.
Address: 3751 Jennings Rd.
Cleveland, Ohio 44109

Revision Date: 10/31/2003
Emergency: Chemtrec (800) 424-9300
Phone: (800) 362-0693

Section 2: Hazardous Ingredients

Component & CAS Number	Weight %	OSHA hazard category:
METHYL ACETATE 79-20-9	98	Hazardous
METHANOL 67-56-1	<2	Hazardous

*Denotes chemical is subject to the reporting requirements of SECTION 313 of Title III of the 1986 Super fund Amendments and Reauthorization Act (SARA) and 40 CFR PART 372.

Section 3: Physical & Chemical Properties

Appearance: Colorless liquid.
Odor: Ester-like odor.
Vapor Pressure: 216.2 mm Hg @ 25 deg C
Boiling Point (760 mmHgA): 56 C(133 F) to 58 C(136 F)
Freezing Point: - 98 C (- 144 F)
Solubility in Water @ 20 C: 250 g/l
Specific Gravity: 0.93 at 20 deg C

Section 4: Fire & Explosion Data

Flammable properties
Flash point (test method): - 10 C (14 F) (Closed Cup)

Flammable limits in air, % by volume:

Upper: 16 %
Lower: 3.1 %

Autoignition temperature: 455 C (851 F)

Products of combustion: Carbon Monoxide.

Extinguishing Media: Use CO_2 or dry chemical for small fires. Use aqueous film forming foam for large fires.

Fire Fighting Environmental Concerns Vapors and combustion gases can be controlled using a water fog stream. Thoroughly decontaminate bunker gear and other fire-fighting equipment before re-use.

Fire Fighting Instructions Water may be ineffective but should be used to cool fire-exposed structures and vessels. Use water spray for large fires. Keep personnel removed from and upwind of fire. If potential for exposure to vapors or products of combustion exists, wear full fire fighting turnout gear and NIOSH approved self-contained breathing apparatus. Oxidizing chemicals may accelerate the burning rate in a fire situation. Vapor is heavier than air and can travel considerable distance to a source of ignition and flashback.

Section 5: Physical Hazards

Stability: Stable.

Conditions to Avoid: Avoid heat , flames, sparks, and other sources of ignition.

Incompatibility: Keep away from peroxides and other polymerization initiators, oxidizing agents such as nitric acid, perchloric acid, chromium trioxide, chlorosulfonic acid, silica gel, alumina, strong acids or amines.

Hazardous combustion or decomposition products: Thermal decomposition products may include oxides of carbon.

Hazardous Polymerization: Hazardous polymerization will not occur.

Section 6: Potential health Effects

Routes of exposure: Skin, eyes, inhalation, ingestion.

Immediate effects:

Skin: May cause skin irritation. May cause allergic skin reaction. May be harmful if absorbed through skin. Symptoms of exposure may include: Crusting, scaling, weeping and itching of skin. Drying, cracking or inflammation of skin. Prolonged and /or repeated skin contact with methanol-soaked material has produced toxic effects including vision effects and death.

Eyes: Exposure to vapors and liquid Causes eye irritation. Symptoms of exposure may include: Eye irritation, burning sensation, pain, watering, and/or change of vision.

Inhalation: Causes respiratory tract irritation. Harmful if inhaled. Symptoms of exposure may include: Central nervous system depression with nausea, dizziness, headache, stupor, uncoordinated or strange behavior or unconsciousness. Nasal discharge, hoarseness, coughing, chest pain and breathing difficulty. Adverse effects on vision.

Ingestion: May be harmful if swallowed. Symptoms of exposure may include: Nausea, vomiting, loss of appetite, gastrointestinal irritation and/or diarrhea. Inflammation of mouth, throat, esophagus and/or stomach. A small amount of Methanol (usually two or more ounces) can cause mental sluggishness, nausea and vomiting leading to severe illness, and may produce adverse effects on vision with possible blindness or death if treatment is not received. Central nervous system depression with nausea, headache and mental sluggishness.

Carcinogenic: Acetaldehyde:
listed as a possible human carcinogen, IARC Group 2B, based on limited evidence in experimental amimals and inadequate evidence in humans
listed as reasonably expected to be a human carcinogen by NTP

Target Organ Effects:

•Overexposure (prolonged or repeated exposure) may cause:
Kidney damage
Central nervous system depression
Liver damage
Injury to the eyes
Irritation of the respiratory tract
Irritation of the digestive tract
Drying of the skin
Local irritation at the site of exposure
Allergic reaction and local irritation of the skin

Medical Conditions which may be Aggravated by Exposure:

Significant exposure to this chemical may adversely affect people with acute or chronic disease of the:
Respiratory Tract
Skin
Liver
Kidneys
Eyes
Central nervous system
Digestive tract

Component & CAS Number	Weight %	Component Toxicological Information:
METHYL ACETATE 79-20-9	98	**Acute Exposure:** **Oral LD50:** 6970 mg/kg (rats); practically nontoxic to animals. **Inhalation:** LC50 (rat, 4 hr.) = >16000 ppm; practically nontoxic to animals. Potential for CNS depression (narcosis), respiratory tract irritation and visual disturbances if inhaled at high concentrations above established workplace exposure levels. **Skin:** Slightly irritating to rabbit skin. Practically nontoxic to animals (LD50, rabbits >5000mg/kg). In a limited study with 25 human volunteers, not a sensitizer when dosed at 10% in petrolatum. **Eye:** Strong irritant. **Mutagenicity:** Not mutagenic in the Ames Test; induced abnormal number of chromosomes in yeast cells *in vitro* . Based on assessment of the bone marrow from treated and control rats from the 4-week inhalation study using the micronucleus method, Methyl Acetate was not mutagenic in vivo. **Repeated Exposure:** In an 8-day study of limited quality, cats exposed to 6600 ppm for 6 hrs./day showed weight loss, CNS depression, pulmonary irritation and reduced survival. A 4-week inhalation study with methyl acetate vapor in male and female rats was conducted according to current scientific guidelines. Animals were exposed to 0, 75, 350 or 2000 ppm of Methyl Acetate for 6 hours per day, 5 days per week for 4 weeks. The LOEL (Lowest Observed Effect Level) for Methyl Acetate is 2000 ppm in air. The major effect was damage to the nasal tissues in 19 of 20 rats tested at 2000 ppm. More specifically, degeneration of the olfactory epithelial tissue of moderate severity was observed on microscopic examination of nasal tissues. The NOAEL (No Observed Adverse Effect Level) is 350 ppm. The NOEL (No Observed Effect Level) is 75 ppm. Systemic toxicity (i.e., toxicity to tissues distant from the site of vapor contact) was not evident at any concentration level. Based on blood analyses taken immediately on cessation of the 4-week exposure period, Methyl Acetate was not measurable in the blood. It is therefore rapidly metabolized and is not persistent.
METHANOL 67-56-1	<2	**Acute Exposure:** Toxicity information on the solution is generally not available. Information on the solution components is listed next. **Oral LD50:** 6.2-12.9g/kg (rats); practically nontoxic to animals. However, based on human exposure reports, a small amount (usually two or more ounces) can cause mental sluggishness, nausea and vomiting leading to severe illness, and may produce adverse effects on vision with possible blindness or death if treatment is not received. **Inhalation LC50:** 64000ppm (rats,4 hrs.); practically nontoxic to animals. Based on human exposure reports, levels substantially above the TLV cause stupor, headache, nausea, dizziness, unconsciousness and may produce adverse effects on vision. **Skin:** Irritating to rabbit skin. Severity depends on the quantity administered and exposure period and is related to the defatting properties of methanol; slightly toxic to animals (minimum lethal dose, monkeys: 1.6g/kg; LD50, rabbits:16g/kg). Based on human exposure reports, prolonged and repeated skin contact with methanol-soaked material has produced toxic effects including vision effects and death.

Component & CAS Number	Weight %	Component Toxicological Information:
		Eye: Severely irritating to rabbit eyes. **Mutagenicity:** Methanol - Not genotoxic in most in vitro assays. Not genotoxic in vivo in mice exposed via inhalation up to 4000ppm (6hrs./day for 5 days) and subsequently examined for cytogenetic effects. **Carcinogenicity:** Methanol - Inhalation-Not carcinogenic in lifetime inhalation studies (reported in limited detail) in rats and mice at concentrations of 10-1000ppm. Dermal-Not carcinogenic in mice exposed dermally to 0.02ml/day, 2 days/week over a lifetime in a study of limited quality. **Reproductive/Developmental Effects:** Methanol - In an inhalation developmental toxicity study, rats were exposed 6hrs./day to 5000, 10000 or 20000ppm vapors. A significant teratogenic response was seen at 20000ppm. Fetotoxicity was noted at 10000ppm, but not at 5000ppm. In an inhalation developmental toxicity study, mice were exposed 7hrs./day to 2000, 5000 or 10000ppm vapors. Methanol caused developmental toxicity at all levels. Oral administration of methanol via gavage at 1.3, 2.6 or 5.2 ml/kg to rats resulted in developmental toxicity at all levels. **Repeated Exposure:** Methanol - Inhalation exposure (6hrs./day; 5days/week) of monkeys to vapor concentrations of 500, 2000 or 5000ppm for 4 weeks did not result in any treatment-related effects. Monkeys exposed to methanol vapors of 10, 100 or 1000ppm for 22hrs./day for up to 2.5yrs. showed changes in the liver, kidney and nervous system at 1000ppm (limited details reported). Rats exposed by oral gavage to 100, 500 or 2500mg/kg/day methanol for 90days exhibited only effects on organ weight (brain) and serum enzymes (SGPT,AP) at the high dose.

Section 7: First Aid Measures

Skin:
Immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Call a physician if symptoms occur. Wash clothing before reuse. Destroy contaminated shoes.

Eyes:
Immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:
DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Section 8: Accidental Release Measures

Spill or Leak Instructions

Eliminate ignition sources. See Section 8 for appropriate personal protective equipment. Contain spill with dikes of soil or nonflammable absorbent to minimize contaminated area. Water fog stream may reduce vapors. If fire potential exists, blanket spill with alcohol type aqueous film-forming foam or use water fog stream to disperse vapors. Avoid run-off into storm sewers and ditches leading to waterways. If required, notify state and local authorities. Place leaking containers in well-ventilated area. Clean up small spills by using a nonflammable absorbent or flushing sparingly with water. Contain larger spills with nonflammable diking or absorbent. Clean up by vacuuming or sweeping.

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Isolate for 800 meters or 0.5 miles in all directions if tank, rail car, or tank truck in involved in fire. Material creates a special hazard because it floats on water. Assess the spill situation, as the spill may not evolve large amounts of hazardous airborne contaminants in many outdoor spill situations. It may be advisable in some cases to simply monitor the situation until spilled product is removed.

Section 9: Exposure Controls and Personal Protection

Engineering Controls: General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Localventilation is usually preferred. Explosion-proof equipment(for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

Protective Equipment A safety shower and eyebath should be readily available.

Skin Protection: Wear impervious clothing and gloves to prevent contact. Butyl rubber is recommended. Other protective material may be used, depending on the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

Eye/face protection: Wear chemical goggles when there is a reasonable chance of eye contact.

Respiratory Protection: Based on workplace contaminant level and working limits of the respirator, use a respirator approved by NIOSH. The following is the minimum recommended equipment for an occupational exposure level. To estimate an occupational exposure level see Section 3, Section 8 and Section 11.

For concentrations > 1 and < 10 times the occupational exposure level : Use air-purifying respirator with full facepiece and organic vapor cartridge(s) or air-purifying full facepiece respirator with an organic vapor canister or a full facepiece powered air-purifying respirator fitted with organic vapor cartridge(s). The air purifying element must have an end of service life indicator, or a documented change out schedule must be established. Otherwise, use supplied air.

For concentrations more than 10 times the occupational exposure level and less than the lower of either 100 times the occupational exposure level or the IDLH: Use Type C full facepiece supplied-air respirator

operated in positive-pressure or continuous-flow mode.

For concentrations > 100 times the occupational exposure level or greater than the IDLH level or unknown concentrations (such as in emergencies): Use self-contained breathing apparatus with full facepiece in positive-pressure mode or Type C positive-pressure full facepiece supplied-air respirator with an auxiliary positive-pressure self-contained breathing apparatus escape system.

For escape: Use self-contained breathing apparatus with full facepiece or any respirator specifically approved for escape.

Exposure guidelines

Component & CAS Number	Weight %	ACGIH TWA	ACGIH STEL	ACGIH CEILING	OSHA TWA	OSHA STEL	OSHA CEILING
METHYL ACETATE 79-20-9	98	200 PPM	250 PPM	-	200 PPM	250 PPM	-
METHANOL 67-56-1	<2	200 PPM	250 PPM	-	200 PPM	250 PPM	-

Component & CAS Number	Weight %	1990 NIOSH IDLH (Recognized by OSHA)	1994 NIOSH IDLH
METHYL ACETATE 79-20-9	98	10,000 PPM	3100 PPM
METHANOL 67-56-1	<2	25,000 PPM	6000 PPM

Comments:

Celanese has adopted the ACGIH TLVs

Discretion Advised:

Chemical Solvents Inc. takes no responsibility for determining what measures are required for personal protection in any specific application. The general information should be used with discretion.

Section 10: Storage & Handling

Handling: Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Destroy contaminated leather clothing.

This product may generate a static charge. Ground/bond equipment when transferring material to prevent static accumulation. Electrical equipment and circuits in all storage and handling must conform to requirements of National Electric Code (Article 500 and 501) for hazardous location.

Storage: Do not store with incompatible materials. See Section 10. Stability and Reactivity. Keep all containers tightly closed when not in use. Store out of direct sunlight and on an impermeable floor.

Section 11: Disposal Considerations

Dispose of spilled material in accordance with state and local regulations for hazardous waste. Recommended methods are incineration or biological treatment at a federally or state-permitted disposal facility. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste. See Section 9 - Physical and Chemical Properties.

Section 12: Transportation

US Department of Transportation

Shipping name:	METHYL ACETATE SOLUTION
Hazard class:	3 (Flammable Liquid)
UN/NA Number:	UN 1231
Packing Group:	II
Emergency Response Guide:	129

Section 13: Other Information

HMIS RATING: **HEALTH 1** **FLAMMABILITY 3** **REACTIVITY 0**
NFPA RATING: **HEALTH 1** **FLAMMABILITY 3** **REACTIVITY 0**
RATING: 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

All the chemicals used in this product are TSCA listed.
Check with your local regulators to be sure all local regulations are met.

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