



Light Aliphatic Naphtha	64742-89-8	0-10%	OSHA (TWA)- 400 ppm ACGIH (TLV)- N/E
*Xylene	1330-20-7	5-25%	OSHA (TWA)- 100 ppm ACGIH (TLV)- 100 ppm
Butanol	71-36-3	0-10%	OSHA (TWA)- 100 ppm ACGIH (ceiling)- 20 ppm
Butyl Acetate	123-86-4	0-10%	OSHA (TWA)- 150 ppm ACGIH (TWA)- 150 ppm
*2-Butoxy Ethanol	111-76-2	0-10%	OSHA (TWA)- 50 ppm ACGIH (TLV)- 20 ppm
*Ethyl Benzene	100-41-4	0-10%	OSHA (TWA)- 100 ppm ACGIH (TLV)- 100 ppm
Ethyl Acetate	141-78-6	0-10%	OSHA (TWA)- 400 ppm ACGIH (TWA)- 400 ppm
1-Methoxy-2-Propanol Acetate	108-65-6	0-10%	OSHA (TWA)- N/E ACGIH (TWA)- N/E
Aromatic Petroleum Distillates**	64742-95-6	0-10 %	OSHA (TWA)- 50 ppm ACGIH (TLV)- N/A
METHYL ACETATE	79-20-9	0-20%	OSHA (TWA)- 200 ppm ACGIH (TLV)- 200 ppm

\*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.

\*\*Aromatic Distillates may contains 7% Xylene (1330-20-7), 3% cumene (98-82-8), 20% 1,2,4 Trimethylbenzene (95-63-6) which are subject to the reporting requirements of SARA 313.

**NOTE: This is a recycled product. The ingredients and their amounts may change from batch to batch.**

### 3. Hazards Identification

#### **WARNING! FLAMMABLE LIQUID AND VAPOR**

**CAUTION! May cause respiratory tract, skin and eye irritation**

**Odor/Appearance:** Clear liquid

#### **Potential health effects**

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

#### **Eye Contact:**

This material can cause eye irritation with tearing, redness, or a stinging or burning feeling. Further, it can cause swelling of the eyes with blurred vision. Effects may become more serious with repeated or prolonged contact.

#### **Skin Contact:**

May cause mild skin irritation with redness and/or an itching or burning feeling. Effects may become more serious with repeated or prolonged contact. It is likely that this material is able to pass into the body through the skin and may cause similar effects as from breathing or swallowing it.

**Inhalation:**

Breathing high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Breathing this material may cause central nervous system depression with symptoms including nausea, headache, dizziness, fatigue, drowsiness, or unconsciousness. Breathing high concentrations of this material, for example, in an enclosed space or by intentional abuse, can cause irregular heartbeats which can cause death.

**Ingestion:**

Swallowing this material may be harmful. Swallowing this material may cause stomach or intestinal upset with pain, nausea, and/or diarrhea. This material can get into the lungs during swallowing or vomiting. Small amounts in the lungs can cause lung damage, possibly leading to chronic lung dysfunction or death. Swallowing this material may cause effects similar to those described in the inhalation section (see "inhalation" above).

**Chronic Health Effects**

**Summary**

Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction. Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage (sometimes referred to as "Solvent or Painter's Syndrome"). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal. This material (or a component) may cause harm to the human fetus based on tests with laboratory animals. This material, or a component of this material, has been shown to cause cancer in laboratory animals. The relevance of this to humans is not clear. Repeated overexposure may cause injury to bone marrow, blood cells, kidney, and liver. Prolonged or repeated overexposure to xylene, a component of this product, has been associated with hearing damage in laboratory animals.

**Conditions Aggravated by Exposure**

Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Liver, Kidneys, Central Nervous System (CNS), Heart (Cardiac)

**Target Organs**

May cause damage to the following organs: blood, kidneys, lungs, liver, mucous membranes, heart, upper respiratory tract, skin, auditory system, central nervous system (CNS), eye, lens or cornea

**4. First Aid Measures**

**Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid.**

**Eye Contact:**

Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Do not use eye ointment. Seek medical attention immediately.

**Skin Contact:**

Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.

**Inhalation:**

Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.

**Ingestion:**

Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

**Note to Physician:**

INHALATION: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required.

This material (or a component) sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

INGESTION: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

## **5. Fire Fighting Measures**

**Flash Point:** 0 F (TCC) lowest component

**Flammable limits in air, % by volume:**

**Upper:** No Information

**Lower:** No Information

**Extinguishing Media:**

SMALL FIRE: Use dry chemicals, carbon dioxide, foam, water fog, or inert gas (nitrogen).

LARGE FIRE: Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frothing and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.

**Unusual Fire & Explosion Hazards:**

Flammable Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. If container is not properly cooled, it can rupture in the heat of a fire.

### **Special Fire Fighting Procedures:**

Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities if liquid enter sewers or waterways.

## **6. Accidental Release Measures**

**Take proper precautions to ensure your own health and safety before attempting spill control or clean-up.**

### **Spill or Leak Instructions**

Contain spill with dikes of soil or nonflammable absorbent to minimize contaminated area. 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. 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.

## **7. Handling and Storage**

**Handling: FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN**

A spill or leak can cause an immediate fire or explosion hazard. Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Do not contact with oxidizable materials. Do not breathe vapor. Use only with adequate ventilation and personal protection. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Prevent contact with food and tobacco products. Do not take internally.

When performing repairs and maintenance on contaminated equipment, keep unnecessary persons away from the area. Eliminate all potential ignition sources. Drain and purge equipment, as necessary, to remove material residues. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide ventilation to maintain exposure potential below applicable exposure limits. Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

Empty containers may contain material residues which can ignite with explosive force. Misuse of empty containers can be dangerous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers can cause fire, explosion, or release of toxic fumes from residues. Do not pressurize or expose empty containers to open flame, sparks, or heat. Keep container closed and drum bungs in place. All label warnings and precautions must be observed. Return empty drums to a qualified reconditioner. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this material.

### **Storage:**

Store and transport in accordance with all applicable laws. Keep containers tightly closed and store in a cool, dry, well-ventilated place, plainly labeled, and out of closed vehicles. Keep away from all ignition sources. Ground all equipment containing this material. Containers should be able to withstand pressures expected from warming and cooling in storage. This flammable liquid should be stored in a separate safety cabinet or room. All electrical equipment in areas where this material is stored or handled should be installed in accordance with applicable regulatory requirements and the National Electrical Code.

## **8. Exposure Controls / Personal Protection**

### **Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. All electrical equipment should comply with the National Electric Code. An emergency eye wash station and safety shower should be located near the work-station.

### **Personal Protective Equipment**

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations.

### **Eye Protection**

Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. Suitable eye wash water should be readily available.

### **Hand Protection**

Avoid skin contact. Use chemical resistant gloves. Wash hands with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners.

### **Body Protection**

Avoid skin contact. Wear long-sleeved fire-retardant garments (e.g., Nomex®) while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, boots and additional facial protection. If product comes in contact with clothing, immediately remove soaked clothing and shower. Promptly remove and discarded contaminated leather goods.

### **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.

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.

**General Comments**

Warning! Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of combustion products and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

**Other Suggested Equipment:**

Eye wash station and emergency showers should be available. Spill containment equipment should be available.

**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.

**Exposure guidelines:**

<b>Ingredients</b>	<b>CAS #</b>	<b>Percent</b>	<b>Exposure Limits</b>
*Methanol	67-56-1	0-15%	OSHA (PEL)- 200 ppm (skin) OSHA (PEL)- 250 ppm (skin) STEL ACGIH (TWA)- 200 ppm (skin) ACGIH (TWA)- 200 ppm (skin)
Acetone	67-64-1	0-20%	OSHA (TWA)- 1000 ppm ACGIH (TLV)- 500 ppm
*Toluene	108-88-3	0-20%	OSHA (TWA)- 200 ppm ACGIH (TLV)- 50 ppm
*Methyl Ethyl Ketone	78-93-3	0-20%	OSHA (TWA)- 200 ppm ACGIH (TLV)- 200 ppm
*Methyl Isobutyl Ketone	108-10-1	0-15%	OSHA (TWA)- 100 ppm ACGIH (TLV)- 50 ppm
Light Aliphatic Naphtha	64742-89-8	0-10%	OSHA (TWA)- 400 ppm ACGIH (TLV)- N/E
*Xylene	1330-20-7	5-25%	OSHA (TWA)- 100 ppm ACGIH (TLV)- 100 ppm
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Ethyl Acetate	141-78-6	0-10%	OSHA (TWA)- 400 ppm ACGIH (TWA)- 400 ppm
1-Methoxy-2-Propanol Acetate	108-65-6	0-10%	OSHA (TWA)- N/E ACGIH (TWA)- N/E
Aromatic Petroleum Distillates**	64742-95-6	0-10 %	OSHA (TWA)- 50 ppm ACGIH (TLV)- N/A
METHYL ACETATE	79-20-9	0-20%	OSHA (TWA)- 200 ppm ACGIH (TLV)- 200 ppm

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## 9. Physical and Chemical Properties

**Boiling Point:** 180 F  
**Vapor Density:** >1 (Air=1)  
**Odor/Appearance:** Clear liquid

**Specific Gravity:** 0.815  
**Water Solubility:** Slight  
**Evaporation Rate:** >1 (NBA=1)

## 10. Stability and Reactivity

**Stability:** Stable  
**Conditions to Avoid:** Heat, spark, and open flame  
**Incompatibility:** Strong Oxidizing Agents  
**Hazardous Decomposition:** Combustion will produce Carbon Monoxide, Carbon Dioxide and nitrogen-oxygen compounds.  
**Hazardous Polymerization:** Will not occur

## 11. Toxicological Information

Inhalation. LC50:	<b>Acetone</b> >50000 mg/m <sup>3</sup> – rats – 8 hrs.
Oral LD50:	5.8 g/kg – rats
Skin absorption LD50:	20000 mg/kg – rabbits

**Methanol**  
**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.

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

### Toluene

Toluene contains small amounts of benzene a known carcinogen which may produce blood changes which include reduced platelets, reduced red blood cells, reduced white blood cells, aplastic anemia, and acute nonlymphocytic anemia. Toluene contains small amounts of Ethylbenzene and Xylene, both have been related to fetotoxicity, liver and kidney injury. Exposure of pregnant rats during gestation to toluene at levels of 250 ppm or higher has produced some maternal toxicity and embryo/fetotoxicity. A lifetime inhalation study in rats did not show any toxic effects even at a high dose of 300 ppm. Behavioral signs of hearing loss were observed in rats exposed to toluene subchronically at levels of 1000 ppm or more. Toluene has an IARC rating of 3.

Chemical Name: **BENZENE** CAS: 71-43-2 < 1.0%  
0.5 ppm ACGIH TWA  
2.5 ppm ACGIH STEL  
1 ppm OSHA PEL  
5 ppm OSHA CEILING  
10 LBS CERCLA 302.4 RQ

Chemical Name: **BENZENE, ETHYL** CAS: 100-41-4 < 1.0%  
100 ppm ACGIH TWA  
125 ppm ACGIH STEL  
100 ppm OSHA PEL  
1,000 LBS CERCLA 302.4 RQ

Chemical Name: **Xylene, all isomers** traces  
**ACGIH (United States).**  
TWA: 100 ppm 8 hour(s).  
STEL: 150 ppm 15 minute(s).  
**OSHA (United States).**  
TWA: 100 ppm 8 hour(s).

	<b>Aromatic Petroleum Distillates</b>
Inhalation. LC50:	No Data
Oral LD50:	No Data
Dermal LD50:	No Data

Hours of exposure to high concentrations of cumene, a minor component of Aromatic Petroleum Distillates, has produced kidney, spleen and liver damage in laboratory animals.

### XYLENE

### PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: skin, eye, liver, kidney, nervous system, respiratory system, lung (asthma-like conditions),

### INHALATION

High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness and even death). Repeated overexposure has caused a hearing loss in laboratory animals. Repeated overexposure has produced toxic effects in developing and young laboratory animals. Solvent "huffing/sniffing" (abuse) or intentional prolonged overexposure to high levels of vapors can produce abnormal behavior, convulsions, hallucinations, delirium, nervous system damage, serious disturbances of heart rhythm and sudden death. Prolonged or repeated exposure may cause liver and kidney damage.

**LC50 (ppm):** 26800

### SKIN

May be absorbed through the skin in harmful amounts. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Prolonged or repeated skin contact may cause irritation.

**Draize Skin Score:** no data Out of 8.0  
**LD50 (mg/kg):** 2000

### EYES

Causes eye irritation.

### INGESTION

Moderately toxic. Irritating to mouth, throat, and stomach. May produce central nervous system effects, which may include dizziness, loss of balance and coordination, unconsciousness, coma and even death. Product may be harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage.

**LD50 (g/kg):** 4.3

Xylene contains small amounts of benzene a known carcinogen which may produce blood changes which include reduced platelets, reduced red blood cells, reduced white blood cells, aplastic anemia, and acute nonlymphocytic anemia. Xylene contains Ethylbenzene, both have been related to fetotoxicity, liver and kidney injury. Exposure of pregnant rats during gestation to toluene at levels of 250 ppm or higher has produced some maternal toxicity and embryo/fetotoxicity. A lifetime inhalation study in rats did not show any toxic effects even at a high dose of 300 ppm. Behavioral signs of hearing loss were observed in rats exposed to toluene subchronically at levels of 1000 ppm or more. IARC has rated Xylene as a class 3 carcinogen

**COMPONENT TOXICITY:** Ethylbenzene, a component of this product, has been designated by the International Agency for Research on Cancer as "possibly carcinogenic to humans", based on increased tumor incidence in laboratory animals. Overexposure may lead to nervous system effects, including drowsiness, dizziness, nausea, headaches, paralysis, loss of consciousness and even death. Repeated overexposure has caused a hearing loss in laboratory animals.

### Xylene, all isomers

#### ACGIH (United States).

TWA: 100 ppm 8 hour(s).

STEL: 150 ppm 15 minute(s).

#### OSHA (United States).

TWA: 100 ppm 8 hour(s).

### **Ethylbenzene**

#### **ACGIH (United States).**

TWA: 100 ppm 8 hour(s).

STEL: 125 ppm 15 minute(s).

#### **OSHA (United States).**

TWA: 100 ppm 8 hour(s).

### **Toluene**

#### **ACGIH (United States). Skin**

TWA: 50 ppm 8 hour(s).

#### **OSHA (United States).**

TWA: 200 ppm 8 hour(s).

CEIL: 300 ppm

PEAK: 500 ppm

**BENZENE** CAS: 71-43-2 < 1.0%

0.5 ppm ACGIH TWA

2.5 ppm ACGIH STEL

1 ppm OSHA PEL

5 ppm OSHA CEILING

10 LBS CERCLA 302.4 RQ

#### **Butyl Acetate**

Inhalation. LC50: 9.6->29.2 mg/kg – rats – 4 hrs

Oral LD50: 10700-14130 mg/kg – rats

Skin absorption LD50: >17600 mg/kg - rabbits

#### **Ethyl Acetate**

**Oral LD50:** 5620 to 10170 mg/kg (rats); ethyl acetate is practically nontoxic to animals by ingestion.

**Inhalation:** LC50: 200 mg/l (rats, 1 hr.); Inhalation LC50: >29.3 mg/l (rats, 4 hrs.); ethyl acetate is practically nontoxic to animals by inhalation. Sedative effects (CNS depression typical of many solvents) have been observed in animals. Mild nose and throat irritation have been reported in humans at 400 ppm.

**Skin:** Ethyl acetate was not irritating to rabbit skin. There was no evidence of cumulative skin irritation in human tests. It was not a skin sensitizer in the guinea pig maximization test. Human patch testing and epicutaneous testing was in general negative. Practically nontoxic dermally to animals (Dermal LD50, rabbits: >5000 mg/kg).

**Eye:** Liquid mildly to moderately irritating to rabbit eyes in several tests. Vapors at 400 ppm have been reported to cause mild eye irritation in humans.

**Repeated Exposure:** Rats received 0, 300, 900, or 3600 mg/kg ethyl acetate daily by gavage for 90 days. The high dose male rats showed significantly depressed body and organ weights and depressed food consumption. The No-Observed-Adverse-Effect Level (NOAEL) was considered to be 900 mg/kg. Rats were exposed to 0, 350, 750, or 1500 ppm ethyl acetate vapor for 6 hours per day, 5 days per week, for 13 weeks. No mortality was observed. Observations noted in the 750 and 1500 ppm groups included diminished alerting response (due to the sedative properties of ethyl acetate) during the daily 6-hour exposure periods which reversed after exposure ended. Decreased body weight and food consumption were also noted. No persistent neurotoxic effects were observed in a battery of tests conducted to assess this endpoint during subchronic inhalation exposure. Microscopic examination of the tissues and organs did not reveal evidence of systemic toxicity at any dose level. The only microscopic finding was irritation of the nasal tissue (nasal olfactory mucosa) at all doses. At 350 ppm, the nasal irritation was graded as "minimal" in severity. Mutagenicity:

In Vitro: Results were equivocal. Ethyl acetate was negative in two Ames tests with *Salmonella typhimurium* and in a recombination assay with *Bacillus subtilis*. In the Sister Chromatid Exchange (SCE) assay with Chinese hamster ovary (CHO) cells, it was positive with activation and negative without activation. In five separate tests for aneuploidy with *Saccharomyces cerevisiae*, it was positive four times. It was negative for chromosomal aberrations in CHO cells, but positive in Chinese hamster lung fibroblasts. In Vivo: Not Mutagenic: Ethyl acetate was negative in three separate micronucleus assays - mouse (i.p.), Chinese hamster (i.p.), and Chinese hamster (gavage).

**Carcinogenicity:** No studies conducted according to established scientific principles.

**Reproductive/Developmental Effects:** In the subchronic inhalation study previously discussed, there were no effects at any dose level on the number of spermatids in the testes, the number of sperm in the epididymides, sperm motility or sperm morphology. No other studies conducted according to established scientific principles were available.

#### **Glycol Ether EB**

Inhalation. LC50:	500 ppm – rats – 4 hrs.
Oral LD50:	2.4 g/kg – rats    320 mg/kg - rabbit
Dermal LD50:	400 mg/kg - rabbit

Glycol Ether EB major effect in acute and subchronic animal studies was intravascular red cell hemolysis. Secondary effects were spleen and liver enlargement and nephropathy. These studies have not been shown relevant to humans. Effects on embryo/fetus were only evident in the presence of maternal toxicity. NTP reported testicular weight changes in rats and mice ingesting 6000 ppm on a 13 week drinking water study.

#### **Methyl Isobutyl Ketone**

Additional Remarks Prolonged chronic exposure may cause kidney damage.

Eyes :Irritating to eyes.

Skin: Acute dermal LD50 (rabbit): 16,000 mg/kg

Inhalation Acute 4 hours LC50 (rat): 2,000 mg/l

Ingestion Acute oral LD50(rat): 2,080 mg/kg

Assessment toxicity to reproduction: Passes through the placental barrier in humans.

CARCINOGENICITY: This product contains no carcinogenic substances.

#### **ISOPROPANOL**

LD/50

5000 MG/KG RAT ORAL

3600 MG/KG MOUSE ORAL

6410 MG/KG RABBIT ORAL

12,800 MG/KG RABBIT DERMAL

LC/50

53,000 MG/M3 MOUSE INHALATION

72,600 MG/M3 RAT INHALATION

16,000 PPM/8H RAT INHALATION

#### **Methyl Ethyl Ketone**

Inhalation. LC50: >5000 ppm – rats – 6 hrs.

Oral LD50: 2.7-5.6 g/kg – rats

Skin absorption LD50: 5.0-13.0 g/kg - rabbits

MEK is not genotoxic, not carcinogenic, rats showed potential for fetal toxicity at levels >3000 ppm, but no teratogenic effects.

Oral LD50: **1-methoxy -2-propanol**  
5,660 mg/kg rats  
Inhalation LD50: 15000 ppm rats

1-Methoxy-2-propanol contains less than 0.5% of 2-Methoxy-1-propanol. 2-Methoxy-1-propanol has been shown to cause developmental effects in the offspring of female rabbits exposed to 0,145,225,350, and 545 ppm by inhalation during pregnancy. 2-Methoxy-1-propanol damages developing fetus

**1-Methoxy-2-propanol acetate 108-65-6**

**Acute Toxicity - Lethal Doses**

LD50 (Oral) Rat 8,532 MG/KG BWT

LD50 (Skin) Rat > 5,000 MG/KG

**Target Organ Effects** Eye. Skin.

**Repeated Dose Toxicity** No known chronic health effects.

**2-Methoxy-1-propanol acetate 70657-70-4 <0.5%**

**Target Organ Effects** Eye. Damages developing fetus.

**Repeated Dose Toxicity**

2-Methoxy-1-propanol has been shown to cause developmental effects in offspring of female rabbits exposed to 0, 145, 225, 350, and 545 ppm by inhalation during pregnancy. 145 ppm was the no observed effect level (NOEL) in this study. The acetate of 2-methoxy-1-propanol also has been tested for developmental effects. Information for the acetate is pertinent since the acetate portion of this molecule is quickly removed in a living organism to yield 2-methoxy-1-propanol. The offspring of rats exposed to concentrations of 0, 110, 550, or 2,700 ppm developed vertebral incisions at the highest exposure level, in the presence of maternal toxicity. Rabbits exposed to 0, 36, 145, or 550 ppm of 2-methoxy-1-propanol acetate bore offspring that showed malformations of sternum, paws, major blood vessels and the heart at the highest exposure level. A concentration of 145 ppm was the no observed effect level (NOEL) for adverse developmental effects from the acetate of 2-methoxy-1-propanol.

**Reproductive Effects** Damages developing fetus.

**Carcinogenicity** Not listed by IARC, NTP, or OSHA.

**N-BUTANOL**

Eyes No data available

Skin Acute dermal LD50 (rabbit): 3,400 mg/kg

Inhalation Acute 4 hours LC50 (rat): 8 mg/l

Ingestion Acute oral LD50(rat): 750 mg/kg

**CARCINOGENICITY** This product contains no carcinogenic substances.

**Methyl Acetate**

**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.

## 12. Ecological Information

No Data Available.

## 13. Disposal Considerations

Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. 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.

## 14. Transport Information

Paint Related Materials, 3, UN 1263, PGII  
NAERG #: 128

## 15. Regulatory Information

### Environmental Regulations

#### SARA 311:

Acute health:	Yes	
Chronic health:	Yes	
Fire:	Yes	
Sudden release of pressure:		No
Reactive:	No	

**SARA 313:** Title III of the 1986 Super fund Amendments and Reauthorization Act (SARA) and 40 CFR PART 372.

Ingredients	CAS #
*Methanol	67-56-1
Acetone	67-64-1
*Toluene	108-88-3
*Methyl Ethyl Ketone	78-93-3
*Methyl Isobutyl Ketone	108-10-1
*Xylene	1330-20-7
*2-Butoxy Ethanol	111-76-2
*Ethyl Benzene	100-41-4
Aromatic Petroleum Distillates**	64742-95-6

\*\*Aromatic Distillates may contains 7% Xylene (1330-20-7), 3% cumene (98-82-8), 20% 1,2,4 Trimethylbenzene (95-63-6) which are subject to the reporting requirements of SARA 313.

**NOTE: This is a recycled product. The ingredients and their amounts may change from batch to batch.**

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

## 16. Other Information

**Hazard ratings** This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

**NFPA:** Health: 2 Flammability: 3 Reactivity: 0

**HMIS:** Health: \*2 Flammability: 3 Reactivity: 0  
RATING: 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

**Note:**

For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Chemical Solvents Inc makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Possession of an MSDS does not indicate that the possessor of the MSDS was a purchaser or user of the subject product.