

## SECTION 1 - IDENTIFICATION

### 1.1 Product Identifier

Product Name : *Per-Fix™ for Nylon*  
 Manufacturer Product Number : *5205AA, 5205A, 5205B, 5205C*

### 1.2 Other Means Of Identification

Other Identifiers : *Flaw Repair*

### 1.3 Relevant Identified Uses Of The Substance Or Mixture And Uses Advised Against

Recommended Use : *Touch-up coating for molded plastic parts*  
 Restrictions On Use : *None Identified*

### 1.4 Supplier Details

	Manufacturer Details	Supplier Details
Company Name	<i>Chem-Pak Inc</i>	<i>Chem-Pak Inc</i>
Address	<i>242 Corning Way, Martinsburg, WV 25405 - United States</i>	<i>242 Corning Way, Martinsburg, WV 25405 - United States</i>
Phone Number	<i>304-262-1880</i>	<i>304-262-1880</i>
Fax Number	<i>302-262-9643</i>	<i>302-262-9643</i>
Email	<i>msds@chem-pak.com</i>	
Website	<i>http://www.chem-pak.com</i>	

### 1.5 24 Hr Emergency Phone Number

Emergency Number : *800-255-3924 (Chem-Tel)*

## SECTION 2 - HAZARDS IDENTIFICATION

### 2.1 Classification Of The Substance Or Mixture

Flammable Aerosols, Category 1 : *Extremely flammable aerosol*  
 Gases Under Pressure : Dissolved Gas : *Contains gas under pressure; may explode if heated*  
 Serious Eye Damage/Eye Irritation, Category 2 : *Causes serious eye irritation*  
 Carcinogenicity, Category 2 : *Suspected of causing cancer*  
 Reproductive Toxicity, Category 2 : *Suspected of damaging fertility or the unborn child*  
 Specific Target Organ Toxicity — Single Exposure, Category 3, Narcosis : *May cause drowsiness or dizziness*  
 Specific Target Organ Toxicity — Repeated Exposure, Category 2 : *May cause damage to organs through prolonged or repeated exposure*  
 Hazardous To The Aquatic Environment — Acute Hazard, Category 3 : *Harmful to aquatic life*

### 2.2 Label Elements

Hazard Pictograms :    

Signal Word : *Danger*

Hazard Statements : *Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life.*



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### Precautionary Statements

: Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not breathe spray. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves and eye protection. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call physician if you feel unwell. If eye irritation persists: Get medical advice/attention. Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Dispose of contents/container to local regulations.

### 2.3 Other Hazards Which Do Not Result In Classification

#### Hazards Not Otherwise Classified

: None Identified.

### 2.4 Unknown Acute Toxicity

42.77% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)

43.97% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)

10.65% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

## SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substance

Not Applicable

### 3.2 Mixture

Ingredient	Cas Number	%	Classification*
Dimethyl Ether	115-10-6	30 - 60	Flam. Gas 1, H220 Press. Gas (Diss.), H280
Methyl Ethyl Ketone	78-93-3	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Xylene	1330-20-7	10 - 30	Flam. Liq. 2, H225 Aquatic Acute 2, H401
Toluene	108-88-3	5 - 10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401
N-Butyl Acetate	123-86-4	5 - 10	Flam. Liq. 2, H225 STOT SE 3, H336
Propane	74-98-6	5 - 10	Flam. Gas 1, H220 Press. Gas (Diss.), H280
Ethyl Benzene	100-41-4	1 - 5	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401
Ethyl 3-Ethoxypropionate	763-69-9	1 - 5	Flam. Liq. 3, H226
Ethyl Acetate	141-78-6	1 - 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Methyl Acetate	79-20-9	1 - 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336



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\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

## SECTION 4 - FIRST-AID MEASURES

### 4.1 Description Of First-Aid Measures

General Measures	: IF exposed or concerned: Get medical advice/attention.
Eye Contact	: Rinse eyes with water as a precaution.
Skin Contact	: Wash skin with plenty of water.
Ingestion	: Call a poison center or a doctor if you feel unwell.
Inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-Aid Responder Protection	: Wear adequate personal protective equipment based on the nature and severity of the emergency.

### 4.2 Most Important Symptoms And Effects, Both Acute And Delayed

Eye Contact	:
Skin Contact	: Prolonged or repeated exposure may cause skin irritation. Repeated contact may cause drying or flaking skin. May cause more severe response if confined to skin.
Ingestion	: Due to being an aerosol, the product does not lend itself to ingestion. Should ingestion occur, it may cause irritation to membranes of the mouth, throat, and gastrointestinal tract resulting in vomiting and/or cramps. Aspiration of vomit into the lungs may cause inflammation, and possible chemical pneumonitis, bronchopneumonia, or pulmonary edema.
Inhalation	: Prolonged or repeated overexposure is anesthetic. May cause irritation of the respiratory tract, or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion or death. Irritation of the mucous membranes, coughing, and dyspnea are also possible.

### 4.3 Indication Of Immediate Medical Attention And Special Treatment

Notes To Physician	: Treat symptomatically.
Specific Treatments/Antidotes	: No Information Available.
Immediate Medical Attention	: No Information Available.

## SECTION 5 - FIRE-FIGHTING MEASURES

### 5.1 Suitable Extinguishing Media

Extinguishing Media	: Water, carbon dioxide, dry chemical, universal aqueous film forming foam.
Unsuitable Media	: Water jet.

### 5.2 Specific Hazards Arising From The Chemical Or Mixture

Decomposition Products	: Decomposition products may include: oxides of carbon, smoke, vapors.
Hazards From The Product	: Extremely flammable. Contents under pressure. In a fire or if heated, a pressure increase will occur which may result in container bursting. Vapors heavier than air may spread along the ground and travel to ignition source.

### 5.3 Special Protective Actions For Fire-Fighters

Protective Actions	: Use water spray to cool fire exposed aerosol containers, as contents can rupture violently from heat developed pressure.
Protective Equipment	: Firemen should wear self-contained breathing apparatus with full face-piece operated in positive pressure mode.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment And Emergency Procedures

For Non-Emergency Personnel	: No action should be taken involving any personnel without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spill. Remove ignition sources and provide adequate ventilation only if it is safe to do so.
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**For Emergency Responders** : Use personal protection as recommended in Section 8. Observe precautions provided for non-emergency personnel above.

### 6.2 Environmental Precautions

**Precautions** : Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

### 6.3 Methods And Materials For Containment And Cleaning Up

**Containment Procedures** : Product is an aerosol, therefore spills and leaks are unlikely. In case of rupture, released content may be contained with oil/solvent absorbent pads, socks, and/or absorbents.

**Cleanup Procedures** : Spills from aerosol cans are unlikely and are generally of small volume. Large spills are therefore not normally considered a problem. In case of actual rupture, avoid breathing vapors and ventilate area well. Remove sources of ignition and use non-sparking equipment. Soak up material with inert absorbent and place in safety containers for proper disposal.

**Other Information** : Aerosol products represent a limited hazard and will not spill or leak unless ruptured. In case of rupture contents are generally evacuated from the can rapidly. Area should be ventilated immediately and continuous ventilation provided until all fumes and vapors have been removed. Aerosol cans should never be incinerated or burned.

**Prohibited Materials** : Combustible absorbent material such as sawdust. Use of equipment that may cause sparking.

## SECTION 7 - HANDLING AND STORAGE

### 7.1 Precautions For Safe Handling

**General Handling Precautions** : KEEP OUT OF THE REACH OF CHILDREN. Avoid prolonged or repeated skin contact. Avoid breathing of vapors. Do not incinerate (burn) containers. Always replace overcap when not in use. Avoid use around open flames or other sources of ignition. Exposure to heat or prolonged exposure to sun may cause can to burst. Use only with adequate ventilation, opening doors or windows to achieve cross-ventilation.

**Hygiene Recommendations** : Do not eat, drink or smoke when using this product. Wash hands thoroughly after use. Remove contaminated clothing and protective equipment before entering eating or smoking areas.

### 7.2 Conditions For Safe Storage Including Any Incompatibilities

**Storage Requirements** : Storage of individual cans should be done in an area below 55°C (120 °F), and away from heat sources. Ensure can is in a secure place to prevent knocking over and accidental rupture. For storage of pallet quantities, compliance with NFPA 30B (Manufacture and Storage of Aerosol Products) is recommended.

**Incompatibilities** : Segregate storage away from materials indicated in Section 10.

**NFPA 30B Classification** : This product is classified as a Level 3 Aerosol per NFPA 30B.

## SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control Parameters

<b>Propane (74-98-6)</b>		
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
NIOSH	US IDLH (ppm)	2100 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	1000 ppm
<b>Dimethyl Ether (115-10-6)</b>		
AIHA	WEEL TWA (ppm)	1000 ppm
Manufacturer Recommended	Recommended PEL (TWA) (ppm)	1000 ppm (Dupont AEL)
<b>Xylene (1330-20-7)</b>		
ACGIH	ACGIH TWA (ppm)	100 ppm



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<b>Xylene (1330-20-7)</b>		
ACGIH	ACGIH STEL (ppm)	150 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	435 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	435 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	100 ppm
California	California PEL (STEL) (mg/m <sup>3</sup> )	655 mg/m <sup>3</sup>
California	California PEL (STEL) (ppm)	150 ppm
California	California PEL (Ceiling) (ppm)	300 ppm
<b>n-Butyl Acetate (123-86-4)</b>		
ACGIH	ACGIH TWA (ppm)	150 ppm
ACGIH	ACGIH STEL (ppm)	200 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	710 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	150 ppm
NIOSH	US IDLH (ppm)	1700 ppm
NIOSH	NIOSH REL (TWA) (ppm)	150 ppm
NIOSH	NIOSH REL (STEL) (ppm)	200 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	710 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	150 ppm
California	California PEL (STEL) (mg/m <sup>3</sup> )	950 mg/m <sup>3</sup>
California	California PEL (STEL) (ppm)	200 ppm
<b>Ethyl Benzene (100-41-4)</b>		
ACGIH	ACGIH TWA (ppm)	20 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	435 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
NIOSH	US IDLH (ppm)	800 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	435
NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	545 mg/m <sup>3</sup>
NIOSH	NIOSH REL (STEL) (ppm)	125 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	22 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	5 ppm
<b>Ethyl 3-Ethoxypropionate (763-69-9)</b>		
Not applicable		
<b>Toluene (108-88-3)</b>		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	ACGIH STEL (ppm)	150 ppm
OSHA	OSHA PEL (TWA) (ppm)	200
OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm
NIOSH	US IDLH (ppm)	500 ppm
NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
NIOSH	NIOSH REL (STEL) (ppm)	150 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	37 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	10 ppm
California	California PEL (STEL) (mg/m <sup>3</sup> )	560 mg/m <sup>3</sup>
California	California PEL (STEL) (ppm)	150 ppm
California	California PEL (Ceiling) (ppm)	500 ppm
BEI	Toluene in blood, Prior to last shift of workweek	0.02 mg/l



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<b>Toluene (108-88-3)</b>		
BEI	Toluene in urine, End of shift	0.03 mg/l
BEI	o-Cresol in urine (with hydrolysis), End of shift (B)	0.3 mg/g creatinine
<b>Ethyl Acetate (141-78-6)</b>		
ACGIH	ACGIH TWA (ppm)	400 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1400 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
NIOSH	US IDLH (ppm)	2000 ppm
NIOSH	NIOSH REL (TWA) (ppm)	400 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	1400 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	400 ppm
<b>Methyl Acetate (79-20-9)</b>		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	610 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
NIOSH	US IDLH (ppm)	3100 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	610 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	760 mg/m <sup>3</sup>
NIOSH	NIOSH REL (STEL) (ppm)	250 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	610 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	200 ppm
California	California PEL (STEL) (mg/m <sup>3</sup> )	760 mg/m <sup>3</sup>
California	California PEL (STEL) (ppm)	250 ppm
<b>Methyl Ethyl Ketone (78-93-3)</b>		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	300 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	590 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
NIOSH	US IDLH (ppm)	3000 ppm
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	590 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	590 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	200 ppm
California	California PEL (STEL) (mg/m <sup>3</sup> )	885 mg/m <sup>3</sup>
California	California PEL (STEL) (ppm)	300 ppm
BEI	MEK in Urine, End of shift	2 mg/l

## 8.2 Exposure Controls

- Engineering Measures** : Use only with adequate ventilation. General ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Local exhaust ventilation or an enclosed handling system may be necessary to control air contamination below that of the lowest OEL from the table above.
- Respiratory Protection** : An approved respirator with an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed occupational exposure limits. If respirators are needed, in the United States compliance with OSHA standard 29 CFR 1910.134 is necessary.
- Skin Protection** : For brief contact, no precautions other than clean body-covering clothing should be needed. When prolonged or repeated contact could occur, use protective clothing impervious to the ingredients listed in Section 2.



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- Eye/Face Protection** : Safety glasses with side shields are recommended as a minimum for any type of industrial chemical handling. Where eye contact with this material could occur, chemical splash proof goggles are recommended.
- Other Protective Equipment** : Safety showers and eye-wash stations should be available in the workplace near where the material will be used.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Physical Properties

Boiling Point	> 57.00 °C	Melting / Freezing Point	> -98.10 °C
Flash Point, Liquid	> -10.00 °C	Flash Point, Propellant	-104.40 °C
Explosive Limits	LEL: 0.85 UEL: 24.60 vol %	Autoignition Temperature, Liquid	227.80 °C
Flammability	Extremely Flammable Aerosol	Density	0.780 g/cm <sup>3</sup>
Molecular Weight	Not Available	Weight	6.509 lbs/gal
Vapor Pressure	Not Available	pH	Not Available
Vapor Density	Not Available	Evaporation Rate (nBAC=1)	Not Available
Viscosity	Not Available	Partition Coefficient	Not Available
Odor Threshold	Not Available	Refractive Index	Not Available
Physical Form	Pressurized Product	Heat Of Combustion	Not Available
Odor	Paint-like	Water Solubility	Not Available
Appearance / Color	Clear, Colorless	Decomposition Temperature	Not Available

### 9.2 Environmental Properties

Percent Volatile	90.02 % wt	VOC Regulatory	723.49 g/L (6.04 lbs/gal)
Percent VOC	88.28 % wt	VOC Actual	688.57 g/L (5.75 lbs/gal)
Percent HAP	39.75 % wt	HAP Content	310.05 g/L (2.59 lbs/gal)
Global Warming Potential	0.41 GWP	Maximum Incremental Reactivity	2.2200 g O3/g
Ozone Depletion Potential	0.00 ODP		

## SECTION 10 - STABILITY AND REACTIVITY

### 10.1 Reactivity

Reactivity : No specific test data related to reactivity is available for this products or its ingredients.

### 10.2 Chemical Stability

Stability : This product is stable.

### 10.3 Possibility Of Hazardous Reactions

Reactions : Under normal conditions of storage and use, hazardous reactions are not expected to occur.

### 10.4 Conditions To Avoid

Conditions : Electrostatic Discharge, Other Ignition Sources, Temperatures above 140°F (60°C), Hot Surfaces, Heat, Flames, Sparks.

### 10.5 Incompatible Materials

Incompatibilities : Strong Oxidizing Agents, Strong Reducing Agents, Strong Acids, Potassium t-Butoxide, Bases, Calcium Hypochlorite, Acids, Hydrogen Peroxide, Magnesium, Sulfuric Acid, Perchloric Acid, Chlorosulfuric Acid.

### 10.6 Hazardous Decomposition Products

Products : Oxides of carbon, Aldehydes, Methanol, Acetic Acid.

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## 11.1.1 Information On Toxicological Effects

### Propane (74-98-6)

LC50 Inhalation (Rat) 658 mg/l/4h (Lit.)

### Dimethyl Ether (115-10-6)

LC50 Inhalation (Rat) 164000 ppm/4h (RTECS)

### Xylene (1330-20-7)

LD50 Oral (Rat) 4300 mg/kg (RTECS)

LD50 Dermal (Rabbit) 12126 mg/kg (Sigma-Aldrich)

LC50 Inhalation (Rat) 6350 ppm/4h (ChemInfo)

### n-Butyl Acetate (123-86-4)

LD50 Oral (Rat) 13100 mg/kg (IUCLID)

LD50 Dermal (Rabbit) > 14100 mg/kg (IUCLID)

LC50 Inhalation (Rat) > 21 mg/l/4h (IUCLID)

### Ethyl Benzene (100-41-4)

LD50 Oral (Rat) 4720 mg/kg (ChemInfo)

LD50 Dermal (Rabbit) 15380 mg/kg (ChemInfo)

LC50 Inhalation (Rat) 17.2 mg/l/4h (IUCLID)

LC50 Inhalation (Rat) 4000 ppm/4h (ChemInfo)

### Ethyl 3-Ethoxypropionate (763-69-9)

LD50 Oral (Rat) 5000 mg/kg (RTECS)

LD50 Dermal (Rabbit) 9490 mg/kg (ChemInfo)

LC50 Inhalation (Rat) > 2404 ppm/4h (ChemInfo)

### Toluene (108-88-3)

LD50 Oral (Rat) > 2000 mg/kg (Lit.)

LD50 Dermal (Rabbit) 12124 mg/kg (IUCLID)

LC50 Inhalation (Rat) > 20 mg/l/4h (Rat; Literature study)

### Ethyl Acetate (141-78-6)

LD50 Oral (Rat) 5620 mg/kg (RTECS)

LD50 Dermal (Rabbit) > 18000 mg/kg (Sigma-Aldrich)

LC50 Inhalation (Rat) 200 g/m<sup>3</sup> (RTECS)

### Methyl Acetate (79-20-9)

LD50 Oral (Rat) 6970 mg/kg (Lit.)

LD50 Dermal (Rabbit) > 5000 mg/kg (RTECS)

LC50 Inhalation (Rat) 16000 - 32000 (ChemInfo)

### Methyl Ethyl Ketone (78-93-3)

LD50 Oral (Rat) 2737 mg/kg (Sigma-Aldrich)

LD50 Dermal (Rabbit) 6480 mg/kg (RTECS)

LC50 Inhalation (Rat) 205 mg/l/4h (ChemInfo)

LC50 Inhalation (Rat) 30200 ppm/4h (ChemInfo)

## 11.1.2 Health Hazard Classification

Skin Corrosion/Irritation	: Not classified
Eye Damage/Irritation	: Causes serious eye irritation.
Respiratory Or Skin Sensitization	: Not classified
Germ Cell Mutagenicity	: Not classified
Reproductive Toxicity	: Suspected of damaging fertility or the unborn child.
Stot-Single Exposure	: May cause drowsiness or dizziness.
Stot-Repeated Exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration Hazard	: Not classified
Carcinogen Data	: The following ingredients are listed as known or suspected carcinogens:





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### Ethyl Benzene (100-41-4)

IARC group	2B - Possibly carcinogenic to humans
ACGIH Category	A3 - Confirmed animal carcinogen with unknown relevance to humans

### 11.1.3 Information On The Likely Routes Of Exposure

Routes Of Exposure : Eye Contact, Ingestion, Skin Contact, Inhalation, Skin Absorption.

### 11.1.4 Symptoms Related To The Physical, Chemical And Toxicological Characteristics

Symptoms of Exposure : Eye Irritation, Nose Irritation, Throat Irritation, Dermatitis, Confusion, Skin Irritation, Headache, Dizziness, Narcosis, Upper Respiratory Tract Irritation, Drowsiness, Vomiting, Optical Nerve Damage, Chest Tightness, Mucous Membrane.

### 11.1.5 Delayed And Immediate Effects And Also Chronic Effects From Short And Long Term Exposure

Delayed Effects : No known delayed effects.  
Immediate Effects : No known immediate effects.  
Chronic Effects : No chronic effects identified.  
Target Organs : Central Nervous System, Eyes, Respiratory System, Skin.  
Medical Conditions Aggravated : None identified.

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Ecotoxicity

Ecology - general : Harmful to aquatic life.

#### Xylene (1330-20-7)

LC50 fish 1	3.3 mg/l Rainbow Trout - 96hr
EC50 Daphnia 1	75.49 mg/l Water Flea - 48hr
EC50 other aquatic organisms 1	72 mg/l Green Algae - 14d

#### n-Butyl Acetate (123-86-4)

LC50 fish 1	62 mg/l Golden Orfe - 96hr
EC50 Daphnia 1	72.8 mg/l Water Flea - 24hr
EC50 other aquatic organisms 1	675 mg/l Green Algae - 72hr
EC50 other aquatic organisms 2	959 mg/l Bacteria - 18hr

#### Ethyl Benzene (100-41-4)

LC50 fish 1	4.2 mg/l Rainbow Trout - 96hr
EC50 Daphnia 1	2.4 mg/l Water Flea - 48hr
EC50 other aquatic organisms 1	9.68 mg/l Bacteria - 30min
EC50 other aquatic organisms 2	4.6 mg/l Green Algae - 72hr

#### Ethyl 3-Ethoxypropionate (763-69-9)

LC50 fish 1	55.3 mg/l Fathead Minnow - 96h
EC50 Daphnia 1	785 mg/l Water Flea - 48hr
EC50 other aquatic organisms 1	> 114.86 mg/l Green Algae - 72hr

#### Toluene (108-88-3)

LC50 fish 1	5.8 mg/l Rainbow Trout - 96hr
LC50 other aquatic organisms 1	10 mg/l Green Algae - 72hr
EC50 Daphnia 1	6 mg/l Water Flea - 48hr

#### Ethyl Acetate (141-78-6)

LC50 fish 1	450 - 600 mg/l Rainbow Trout - 96hr
LC50 fish 2	220 - 250 mg/l Fathead Minnow - 96h
LC50 other aquatic organisms 1	560 mg/l Water Flea - 48hr
EC50 Daphnia 1	2300 - 3090 mg/l Water Flea - 24hr
EC50 other aquatic organisms 1	4300 mg/l Green Algae - 24hr

#### Methyl Acetate (79-20-9)

LC50 fish 1	250 - 350 mg/l Zebra Fish - 96hr
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<b>Methyl Acetate (79-20-9)</b>	
EC50 Daphnia 1	1026.7 mg/l Water Flea - 48hr
<b>Methyl Ethyl Ketone (78-93-3)</b>	
LC50 fish 1	3130 - 3320 mg/l Fathead Minnow - 96h
EC50 Daphnia 1	7060 mg/l Water Flea - 24hr

### 12.2 Ecological Properties

<b>Propane (74-98-6)</b>	
Persistence and degradability	Readily biodegradable in water. Not applicable (gas). Photodegradation in the air.
BCF fish 1	9 - 25 (BCF)
Log Pow	2.28 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>Dimethyl Ether (115-10-6)</b>	
Persistence and degradability	Biodegradability 7% / 28 days.
Log Pow	0.1 (Experimental value; 0.07; QSAR; KOWWIN; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>Xylene (1330-20-7)</b>	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.40 - 2.53 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.56 - 2.91 g O <sub>2</sub> /g substance
ThOD	3.1 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.44 - 0.816
BCF fish 1	14.1 - 24 (BCF)
Log Pow	3.15 - 3.3
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>n-Butyl Acetate (123-86-4)</b>	
Persistence and degradability	Biodegradability 88% / 28 days.
Biochemical oxygen demand (BOD)	520 mg/g
Chemical oxygen demand (COD)	2320 mg/g
ThOD	2207 mg/g
Log Pow	1.804
Log Koc	2.35
<b>Ethyl Benzene (100-41-4)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	1.44 g O <sub>2</sub> /g substance (20d.)
Chemical oxygen demand (COD)	2.1 g O <sub>2</sub> /g substance
ThOD	3.17 g O <sub>2</sub> /g substance
BOD (% of ThOD)	45.4 (20 days)
BCF fish 1	1 (BCF; Other; 6 weeks; <i>Oncorhynchus kisutch</i> ; Flow-through system; Salt water; Literature study)
BCF fish 2	15 - 79 (BCF)
BCF other aquatic organisms 1	4.68 (BCF)
Log Pow	3.15 (Experimental value; 3.6; Experimental value; EU Method A.8: Partition Coefficient; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	log Koc, PCKOCWIN v1.66; 2.71; Calculated value; Koc; PCKOCWIN v1.66; 517.8; Calculated value
<b>Ethyl 3-Ethoxypropionate (763-69-9)</b>	
Persistence and degradability	Readily biodegradable in water.
Log Pow	1.25 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>Toluene (108-88-3)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	2.15 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.52 g O <sub>2</sub> /g substance
ThOD	3.13 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.69
BCF fish 2	90 (BCF; 72 h; <i>Leuciscus idus</i> ; Static system; Fresh water)
Log Pow	2.73 (Experimental value; Other; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).



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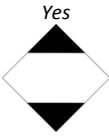

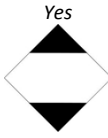
Ethyl Acetate (141-78-6)	
Persistence and degradability	Biodegradability 100% / 28 days.
Biochemical oxygen demand (BOD)	0.293 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.69 g O <sub>2</sub> /g substance
ThOD	1.82 g O <sub>2</sub> /g substance
BCF fish 1	30
Log Pow	0.73
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	0.778
Methyl Acetate (79-20-9)	
Persistence and degradability	Biodegradability 70% / 28 days.
Chemical oxygen demand (COD)	1511.8 mg/g
ThOD	1510 mg/g
BCF fish 1	< 1 (BCF)
Log Pow	0.18
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	0.68
Methyl Ethyl Ketone (78-93-3)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions.
Biochemical oxygen demand (BOD)	2.03 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.31 g O <sub>2</sub> /g substance
ThOD	2.44 g O <sub>2</sub> /g substance
BOD (% of ThOD)	> 0.5 (5 days; Literature study)
Log Pow	0.3 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 40 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Log Koc	Koc,34; Calculated value
Ecology - soil	Slightly harmful to plants.

## SECTION 13 - DISPOSAL CONSIDERATIONS

### 13.1 Waste Treatment Methods

- Waste Disposal** : Characteristics and waste stream classification can change with product use and location. It is the responsibility of the user to determine the proper storage, transportation, treatment, and/or disposal methodologies for spent materials and residues at the time of disposition. All waste must be disposed of in compliance with the respective national, federal, state, and/or local regulations.
- Waste Disposal Of Packaging** : In the United States, an aerosol container that does not contain a significant amount of liquid would meet the definition of scrap metal (40 CFR 261.1(c)(6)), and would be exempt from RCRA regulation under 40 CFR 261.6(a)(3)(iv) if it is to be recycled. If containers are to be disposed of (not recycled) it must be managed under all applicable RCRA and state regulations.
- Landfill Precautions** : Not Available.
- Incineration Precautions** : \*\* DO NOT INCINERATE \*\* CONTENTS UNDER PRESSURE \*\*.

## SECTION 14 - TRANSPORTATION INFORMATION

Transportation Information	Ground Transportation (DOT)	Air Transportation (IATA)	Ocean Transportation (IMDG)
Identification Number	UN1950	UN1950	UN1950
Proper Shipping Name	Aerosols, Limited Quantity	Aerosols, Flammable, Limited Quantity	Aerosols, Limited Quantity
Hazard Class(es)	2.1	2.1	2.1
Packaging Group	None	None	None
Limited Quantity	Yes 	Yes 	Yes 
Marine Pollutant	No	No	No



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Hazard Labels		2.1 - Flammable gas	

### SECTION 15 - REGULATORY INFORMATION

#### 15.1 Federal Regulations

**Trace Ingredient Disclosure** : This product contains this ingredient at a trace amount. This ingredient is known to the State of California to cause cancer.

Cumene CAS #98-82-8 -- 0.0076%

**TSCA Inventory** : All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

**SARA 313 Reporting** : Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Xylene	CAS-No. 1330-20-7	10 - 30%
Ethyl Benzene	CAS-No. 100-41-4	1 - 5%
Toluene	CAS-No. 108-88-3	5 - 10%
Chlorobenzene	CAS-No. 108-90-7	< 1%
Cumene	CAS-No. 98-82-8	< 1%

**Applicable Federal Regulations** : One or more ingredients are regulated by other Federal Regulations.

<b>Xylene (1330-20-7)</b>	
CERCLA RQ	100 lb
CWA Reportable Quantity	100 lb
RCRA Code	U239

<b>Ethyl Benzene (100-41-4)</b>	
CERCLA RQ	1000 lb
CWA Reportable Quantity	1000 lb
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard, Fire hazard, Immediate (acute) health hazard.

<b>Toluene (108-88-3)</b>	
CERCLA RQ	1000 lb

<b>Ethyl Acetate (141-78-6)</b>	
CERCLA RQ	5000 lb

<b>Methyl Ethyl Ketone (78-93-3)</b>	
CERCLA RQ	5000 lb

#### 15.2 State Regulations

**California Proposition 65** : This product contains, or may contain, substance(s) known to the State of California to cause cancer, developmental and/or reproductive harm.

<b>Ethyl Benzene (100-41-4)</b>	
Cancer	Yes
No significant risk level (NSRL)	54
<b>Toluene (108-88-3)</b>	
Developmental Toxicity	Yes
No significant risk level (NSRL)	7000

**State Right-to-Know Lists** : The following ingredients appear on one or more state Right-to-Know lists.

<b>Propane (74-98-6)</b>	
U.S. - New Jersey - Right to Know Hazardous Substance List	



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### Dimethyl Ether (115-10-6)

U.S. - New Jersey - Right to Know Hazardous Substance List

### Xylene (1330-20-7)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

### Ethyl Benzene (100-41-4)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

### Toluene (108-88-3)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

### n-Butyl Methacrylate (97-88-1)

U.S. - New Jersey - Right to Know Hazardous Substance List

### Ethyl Acetate (141-78-6)

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

### Isobutyl Methacrylate (97-86-9)

U.S. - New Jersey - Right to Know Hazardous Substance List

### Methyl Acetate (79-20-9)

U.S. - New Jersey - Right to Know Hazardous Substance List

### Benzaldehyde (100-52-7)

U.S. - New Jersey - Right to Know Hazardous Substance List

### Precipitated Silica (112926-00-8)

U.S. - New Jersey - Right to Know Hazardous Substance List

### Methyl Ethyl Ketone (78-93-3)

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16 - OTHER INFORMATION

### SDS Compliance

: This SDS complies with the below listed regulations only. For SDS that comply with other countries, please contact our Regulatory Department at [msds@chem-pak.com](mailto:msds@chem-pak.com).

OSHA Hazard Communication Standard (HCS 2012) 29 CFR 1910.1200

Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Revision 3

### Disclaimer Of Liability

: The information contained herein is based upon data provided to us by our suppliers, and reflects our best judgement. However, no warranty of merchantability, fitness for any use, or any other warranty or guarantee is expressed or implied regarding the accuracy of such data, or the results to be obtained from use thereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of such application. This information is furnished upon the condition that the persons receiving it shall make their own determinations of the suitability of the material for any particular use. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist.

### Full text of H-statements

H Code	H Phrase
H220	Extremely flammable gas
H222	Extremely flammable aerosol
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H280	Contains gas under pressure; may explode if heated
H304	May be fatal if swallowed and enters airways



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H315	<i>Causes skin irritation</i>
H319	<i>Causes serious eye irritation</i>
H332	<i>Harmful if inhaled</i>
H336	<i>May cause drowsiness or dizziness</i>
H351	<i>Suspected of causing cancer</i>
H361	<i>Suspected of damaging fertility or the unborn child</i>
H373	<i>May cause damage to organs through prolonged or repeated exposure</i>
H401	<i>Toxic to aquatic life</i>
H402	<i>Harmful to aquatic life</i>