

**Per-Fix™ for Vinyl**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**SECTION 1 - IDENTIFICATION**

**1.1 Product Identifier**

**Product Name** : Per-Fix™ for Vinyl  
**Manufacturer Product Number** : 6405AAA, 6405AA, 6405A, 6405B, 6405C

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

**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**

Flam. Liq. 2	H225	Physical Hazards	Flammable liquids Category 2
Skin Irrit. 2	H315	Health Hazards	Skin corrosion/irritation Category 2
Eye Irrit. 2	H319	Health Hazards	Serious eye damage/eye irritation Category 2
Muta. 1b	H340	Health Hazards	Germ cell mutagenicity Category 1B
Carc. 1b	H350	Health Hazards	Carcinogenicity Category 1B
Repr. 2	H361	Health Hazards	Reproductive toxicity Category 2
Stot Se 3	H336	Health Hazards	Specific target organ toxicity (single exposure) Category 3, Narcosis
Stot Re 2	H373	Health Hazards	Specific target organ toxicity (repeated exposure) Category 2
Asp. Tox. 1	H304	Health Hazards	Aspiration hazard Category 1
Aquatic Acute 3	H402	Environmental Hazards	Hazardous to the aquatic environment - Acute Hazard Category 3

**2.2 Label Elements**

**Hazard Pictograms**



GHS02



GHS07



GHS08

**Signal Word**

**Danger**

**Hazard Statements**

H225 : Highly flammable liquid and vapour  
 H304 : May be fatal if swallowed and enters airways  
 H315 : Causes skin irritation



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H319 : Causes serious eye irritation  
H336 : May cause drowsiness or dizziness  
H340 : May cause genetic defects  
H350 : May cause cancer  
H361 : Suspected of damaging fertility or the unborn child  
H373 : May cause damage to organs through prolonged or repeated exposure  
H402 : Harmful to aquatic life

### Precautionary Statements

P202 : Do not handle until all safety precautions have been read and understood.  
P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 : Keep container tightly closed.  
P240 : Ground/Bond container and receiving equipment  
P241 : Use explosion-proof electrical/ventilating/lighting equipment  
P242 : Use only non-sparking tools.  
P243 : Take precautionary measures against static discharge.  
P260 : Do not breathe vapor or fumes.  
P264 : Wash hands thoroughly after handling.  
P271 : Use only outdoors or in a well-ventilated area.  
P273 : Avoid release to the environment.  
P280 : Wear protective gloves and eye protection.  
P301+P310 : If swallowed: Immediately call POISON CENTER  
P303+P361+P353 : If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 : If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 : If exposed or concerned: Get medical advice/attention.  
P312 : Call physician if you feel unwell  
P314 : Get medical advice/attention if you feel unwell.  
P331 : Do NOT induce vomiting.  
P332+P313 : If skin irritation occurs: Get medical advice/attention.  
P337+P313 : If eye irritation persists: Get medical advice/attention.  
P362+P364 : Take off contaminated clothing and wash it before reuse.  
P370+P378 : In case of fire: Use water, CO2, dry chemical, or universal aqueous film forming foam to extinguish.  
P403+P233 : Store in a well-ventilated place. Keep container tightly closed.  
P235 : Keep cool.  
P405 : Store locked up.  
P501 : 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

6% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)  
8.1% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)  
6% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

## SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substance / Mixture

Substance / Mixture : Mixture

### 3.2 Composition

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Substance name	CAS Number	% wt*	Classification
Ethyl Acetate	141-78-6	30 - 60	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
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. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Asp. Tox. 1, H304 Aquatic Acute 2, H401
Light Aromatic Solvent Naphtha	64742-95-6	1 - 5	Flam. Liq. 3, H226 Muta. 1B, H340 Carc. 1B, H350 Asp. Tox. 1, H304 Aquatic Acute 3, H402
Ethyl Benzene	100-41-4	1.7579	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
1,2,4-Trimethyl Benzene	95-63-6	1 - 5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Methyl Acetate	79-20-9	1 - 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Toluene	108-88-3	0.1 - 1	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
Cumene	98-82-8	0.1 - 1	Flam. Liq. 3, H226 Carc. 2, H351 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

*Full text of hazard classes and H-statements : see section 16*
*\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret*

## SECTION 4 - FIRST-AID MEASURES

### 4.1 Description of First-Aid Measures

<b>General Measures</b>	: Call a physician immediately.
<b>Inhalation</b>	: Remove person to fresh air and keep comfortable for breathing.
<b>Skin Contact</b>	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.



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- Eye Contact** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion** : Do NOT induce vomiting. Call a physician immediately.
- 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

- Symptoms of Exposure** : Eye Irritation, Nose Irritation, Throat Irritation, Dermatitis, Confusion, Skin Irritation, Headache, Dizziness, Nausea, Narcosis, Drowsiness, Vomiting, Optical Nerve Damage, Cough, Chest Tightness, Mucous Membrane, Diarrhea.
- Delayed Effects** : No known delayed effects.
- Immediate Effects** : No known immediate effects.
- Chronic Effects** : Repeated or prolonged contact may cause skin sensitization.
- Target Organs** : Central Nervous System, Eyes, Liver, Nasal Cavity, Reproductive System, Respiratory System, Skin, Kidneys.

### 4.3 Indication of Immediate Medical Attention and Special Treatment

- Notes to Physician** : Treat symptomatically.
- Specific Treatments/Antidotes** : No Information Available.
- Medical Conditions Aggravated** : May aggravate personnel with pre-existing disorders associated with any of the Target Organs.

## 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

- Hazardous Combustion Products** : Decomposition products may include: oxides of carbon, smoke, vapors. See also Section 10.6.
- Specific Hazards During Firefighting** : CONTENTS HIGHLY FLAMMABLE. 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 an ignition source.

### 5.3 Special Protective Actions for Fire-Fighters

- Firefighting Instructions** : Use water spray to cool fire exposed containers, as contents can rupture violently from heat developed pressure.
- Protection during Firefighting** : 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.
- For Emergency Personnel** : Use personal protection as recommended in Section 8. Observe precautions provided for non-emergency personnel above.

### 6.2 Environmental Precautions

- Environmental 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** : Released content may be contained with oil/solvent absorbent pads, booms, and/or absorbents.
- Cleanup Procedures** : 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** : The North American Emergency Response Guidebook or similar resources providing emergency response information for dealing with accidents, spills, leaks, and/or fires involving dangerous goods.



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**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. When using in spray application, conformance to NFPA 33 Spray Application using Flammable and Combustible Materials is recommended.
- 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 flammable materials should conform to NFPA 30 Flammable and Combustible Liquid. Keep containers tightly closed and stored in a well-ventilated place. Keep away from sources of ignition. . Keep containers closed when not in use. Do not store in open or unlabelled containers.
- Incompatibilities** : Segregate storage away from materials indicated in Section 10.

## SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control Parameters

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

ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	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

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

ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	200 ppm
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	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
Biological Exposure Index	MEK in Urine, End of shift	2 mg/l

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

ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	20 ppm
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	150 ppm
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
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
Biological Exposure Index	Toluene in blood, Prior to last shift of workweek	0.02 mg/l
Biological Exposure Index	Toluene in urine, End of shift	0.03 mg/l
Biological Exposure Index	o-Cresol in urine (with hydrolysis), End of shift (B)	0.3 mg/g creatinine



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### Xylene (1330-20-7)

ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	100 ppm
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	150 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)	900 ppm
NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
NIOSH	NIOSH REL (STEL) (ppm)	150 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
Biological Exposure Index	Methylhippuric Acid in Urine (Post Shift), End of shift	1.5 g/g creatinine

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

ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	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 mg/m <sup>3</sup>
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
California	California PEL (STEL) (mg/m <sup>3</sup> )	130 mg/m <sup>3</sup>
California	California PEL (STEL) (ppm)	30 ppm
Biological Exposure Index	Sum of Mandelic Acid and Phenyl Glyoxylic Acid in Urine, End of shift at end of workweek	0.7 g/g creatinine

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

ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	200 ppm
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	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

### Cumene (98-82-8)

ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	50 ppm
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	245 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	50 ppm
NIOSH	US IDLH (mg/m <sup>3</sup> )	900 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	245 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	50 ppm

### 1,2,4-Trimethyl Benzene (95-63-6)

ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	25 ppm
NIOSH	NIOSH REL (TWA) (ppm)	25 ppm
California	California PEL (TWA) (mg/m <sup>3</sup> )	125 mg/m <sup>3</sup>
California	California PEL (TWA) (ppm)	25 ppm



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### 8.2 Exposure Controls

<b>Engineering Measures</b>	: 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.
<b>Personal Protective Equipment</b>	
<b>Eye / Face Protection</b>	: 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.
<b>Hand Protection</b>	: Chemical-resistant gloves, tested according to ASTM F903-17.
<b>Remarks</b>	: Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to the place of work.
<b>Skin and Body Protection</b>	: 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.
<b>Respiratory Protection</b>	: An approved respirator with an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed occupational exposure limits.
<b>Compliance</b>	: If needed, compliance with OSHA standard 29 CFR 1910.134 is necessary.
<b>Other Protective Equipment</b>	: Safety showers and eye-wash stations should be available in the workplace near where the material will be used.
<b>Environmental Exposure Controls</b>	: Avoid release to the environment.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Physical Properties

Boiling Point	> 56.90 °C	Melting / Freezing Point	> -98.00 °C
Flash Point, Liquid	> -20.00 °C		
Explosive Limits	LEL: 0.80 UEL: 24.60 vol %	Autoignition Temperature, Liquid	> 190.00 °C
Flammability	Highly Flammable Liquid	Density	0.879 g/cm <sup>3</sup>
Molecular Weight	Not Available	Weight	7.335 lbs/gal
Vapor Pressure	Not Available	pH	Not Available
Vapor Density	Not Available	Evaporation Rate (nBac=1)	Not Available
Viscosity	Not Available	Partition Coefficient (Log Pow)	Not Available
Odor Threshold	Not Available	Refractive Index	Not Available
Physical State	Liquid	Heat Of Combustion	Not Available
Appearance / Color	Clear, Colorless	Water Solubility	Not Available
Odor	Paint-like	Decomposition Temperature	Not Available

### 9.2 Environmental Properties

Percent Volatile	90.89 % wt	VOC Regulatory	797.79 g/L (6.66 lbs/gal)
Percent VOC	89.45 % wt	VOC Actual	786.28 g/L (6.56 lbs/gal)
Percent HAP	44.58 % wt	HAP Content	391.86 g/L (3.27 lbs/gal)
Global Warming Potential	0.01 GWP	Maximum Incremental Reactivity	2.3460 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

**Chemical Stability** : This product is stable.

### 10.3 Possibility of Hazardous Reactions

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



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### 10.4 Conditions to Avoid

Conditions to Avoid : Electrostatic Discharge, Other Ignition Sources, Hot Surfaces, Heat, Flames, Sparks, Strong Heating.

### 10.5 Incompatible Materials

Materials to Avoid : Strong Oxidizing Agents, Strong Reducing Agents, Alkali Metals, Strong Acids, Aluminum, Potassium t-Butoxide, Bases, Calcium Hypochlorite, Aluminum Chloride, Acids, Hydrogen Peroxide, Magnesium, Sulfuric Acid, Perchloric Acid, Nitrating Agents, Chlorosulfuric Acid, Potassium Chlorate, Heavy Metals and their Salts, Phenols, Performic Acid.

### 10.6 Hazardous Decomposition Products

Thermal Decomposition : Oxides of carbon, Aldehydes, Methanol, Acetic Acid, Peroxybenzoic Acid, Benzoic Acid.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects

#### Ethyl Acetate (CAS: 141-78-6 / EC: 205-500-4)

LD50 Oral (Rat)	5620 mg/kg (RTECS)
LD50 Dermal (Rabbit)	> 18000 mg/kg (Sigma-Aldrich)
LC50 Inhalation (Rat)	10600 ppm/4h (ChemInfo)

#### Methyl Ethyl Ketone (CAS: 78-93-3 / EC: 201-159-0)

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)

#### Toluene (CAS: 108-88-3 / EC: 203-625-9)

LD50 Oral (Rat)	> 2000 mg/kg (Lit.)
LD50 Dermal (Rabbit)	12124 mg/kg (IUCLID)
LC50 Inhalation (Rat)	> 20 mg/l/4h (Lit.)

#### Xylene (CAS: 1330-20-7 / EC: 215-535-7)

LD50 Oral (Rat)	4300 mg/kg (RTECS)
LD50 Dermal (Rabbit)	12126 mg/kg (Sigma-Aldrich)
LC50 Inhalation (Rat)	21.7 mg/l/4h (GESTIS Substance Database)
LC50 Inhalation (Rat)	6700 ppm/4h (ChemInfo)

#### Ethyl Benzene (CAS: 100-41-4 / EC: 202-849-4)

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)

#### Methyl Acetate (CAS: 79-20-9 / EC: 201-185-2)

LD50 Oral (Rat)	6970 mg/kg (Lit.)
LD50 Dermal (Rabbit)	> 5000 mg/kg (RTECS)
LC50 Inhalation (Rat)	> 49.28 mg/l/4h (External SDS)
LC50 Inhalation (Rat)	16000 - 32000 (ChemInfo)

#### Cumene (CAS: 98-82-8 / EC: 202-704-5)

LD50 Oral (Rat)	2900 mg/kg (RTECS)
LD50 Dermal (Rabbit)	10627 mg/kg (ChemInfo)
LC50 Inhalation (Rat)	40 mg/l/4h (ChemInfo)
LC50 Inhalation (Rat)	8000 ppm/4h (ChemInfo)

#### Light Aromatic Solvent Naphtha (CAS: 64742-95-6 / EC: 265-199-0)

LD50 Oral (Rat)	8400 mg/kg (RTECS)
LD50 Dermal (Rabbit)	> 3160 mg/kg (ChemInfo)





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### Light Aromatic Solvent Naphtha (CAS: 64742-95-6 / EC: 265-199-0)

LC50 Inhalation (Rat) 3670 ppm/4h (Lit.)

### 1,2,4-Trimethyl Benzene (CAS: 95-63-6 / EC: 202-436-9)

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

LD50 Dermal (Rat) > 3440 mg/kg (Lit.)

LC50 Inhalation (Rat) 18 mg/l/4h (RTECS)

**Routes Of Exposure** : Eye Contact, Ingestion, Skin Contact, Inhalation, Skin Absorption.  
**Delayed and Immediate Effects and Also Chronic Effects from Short and Long Term Exposure** : See Section 4.2  
**Skin Corrosion/Irritation** : Causes skin irritation.  
**Eye Damage/Irritation** : Causes serious eye irritation.  
**Respiratory or Skin Sensitization** : Not classified  
**Germ Cell Mutagenicity** : May cause genetic defects.  
**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** : May be fatal if swallowed and enters airways.  
**Carcinogen Data** : The following ingredients are listed as known or suspected carcinogens:

#### Ethyl Benzene (CAS: 100-41-4 / EC: 202-849-4)

IARC group 2B - Possibly Carcinogenic to Humans

ACGIH Category A3 - Confirmed animal carcinogen with unknown relevance to humans

#### Cumene (CAS: 98-82-8 / EC: 202-704-5)

IARC group 2B - Possibly Carcinogenic to Humans

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Ecotoxicity and Ecological Properties

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

LC50 Fish 450 - 600 mg/l Rainbow Trout - 96hr

LC50 Fish 220 - 250 mg/l Fathead Minnow - 96h

LC50 Other Aquatic Organisms 560 mg/l Water Flea - 48hr

EC50 Daphnia 2300 - 3090 mg/l Water Flea - 24hr

EC50 Other Aquatic Organisms 4300 mg/l Green Algae - 24hr

**Persistence and Degradability** Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.

**Biochemical Oxygen Demand** 0.293 g O<sub>2</sub>/g substance

**Chemical Oxygen Demand** 1.69 g O<sub>2</sub>/g substance

**Theoretical Oxygen Demand** 1.82 g O<sub>2</sub>/g substance

**Biodegradation** 100 % 28 Days

**BCF Fish** 30

**Log Pow** 0.73

**Bioaccumulative Potential** Low potential for bioaccumulation (BCF < 500).

**Log Koc** 0.778

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

LC50 Fish 3130 - 3320 mg/l Fathead Minnow - 96h

EC50 Daphnia 7060 mg/l Water Flea - 24hr

**Persistence and Degradability** Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions.

**Biochemical Oxygen Demand** 2.03 g O<sub>2</sub>/g substance

**Chemical Oxygen Demand** 2.31 g O<sub>2</sub>/g substance

**Theoretical Oxygen Demand** 2.44 g O<sub>2</sub>/g substance

**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<sub>34</sub>; Calculated value



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### Toluene (108-88-3)

LC50 Fish	5.8 mg/l Rainbow Trout - 96hr
LC50 Other Aquatic Organisms	10 mg/l Green Algae - 72hr
EC50 Daphnia	6 mg/l Water Flea - 48hr
Persistence and Degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for absorption in soil.
Biochemical Oxygen Demand	2.15 g O <sub>2</sub> /g substance
Chemical Oxygen Demand	2.52 g O <sub>2</sub> /g substance
Theoretical Oxygen Demand	3.13 g O <sub>2</sub> /g substance
Biodegradation	86 % 28 Days
Log Pow	2.73 (Experimental Value)
Bioaccumulative Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	2.15

### Xylene (1330-20-7)

LC50 Fish	26.7 mg/l Fathead Minnow - 96h
EC50 Daphnia	75.49 mg/l Water Flea - 48hr
EC50 Other Aquatic Organisms	72 mg/l Green Algae - 14d
Persistence and Degradability	Readily biodegradable in water.
Biochemical Oxygen Demand	1.40 - 2.53 g O <sub>2</sub> /g substance
Chemical Oxygen Demand	2.56 - 2.91 g O <sub>2</sub> /g substance
Theoretical Oxygen Demand	3.1 g O <sub>2</sub> /g substance
BCF Fish	14.1 - 24 (BCF)
Log Pow	3.217
Bioaccumulative Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	3.156

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

LC50 Fish	4.2 mg/l Rainbow Trout - 96hr
EC50 Daphnia	2.4 mg/l Water Flea - 48hr
EC50 Other Aquatic Organisms	9.68 mg/l Bacteria - 30min
EC50 Other Aquatic Organisms	4.6 mg/l Green Algae - 72hr
Persistence and Degradability	Readily biodegradable in water. Biodegradable in the soil. Low potential for absorption in soil.
Biochemical Oxygen Demand	1.44 g O <sub>2</sub> /g substance
Chemical Oxygen Demand	2.1 g O <sub>2</sub> /g substance
Theoretical Oxygen Demand	3.17 g O <sub>2</sub> /g substance
Biodegradation	81 % 28 Days
BCF Fish	1.18
Log Pow	3.15
Bioaccumulative Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	2.4

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

LC50 Fish	250 - 350 mg/l Zebra Fish - 96hr
EC50 Daphnia	1026.7 mg/l Water Flea - 48hr
EC50 Other Aquatic Organisms	> 120 mg/l Green Algae - 72hr
EC50 Other Aquatic Organisms	6100 mg/l Bacteria - 30min
Persistence and Degradability	Readily biodegradable in water. Inherently biodegradable. Highly mobile in soil.
Chemical Oxygen Demand	1511.8 mg/g
Theoretical Oxygen Demand	1510 mg/g
Biodegradation	70 % 28 Days
BCF Fish	< 1 (BCF)
Log Pow	0.18
Bioaccumulative Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	0.68

### Cumene (98-82-8)

LC50 Fish	4.8 mg/l Rainbow Trout - 96hr
EC50 Daphnia	2.14 mg/l Water Flea - 48hr
EC50 Other Aquatic Organisms	2.6 mg/l Green Algae - 72hr
Persistence and Degradability	Inherently biodegradable. Not readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.

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### Cumene (98-82-8)

Biochemical Oxygen Demand	1.28 g O <sub>2</sub> /g substance
Chemical Oxygen Demand	2.42 g O <sub>2</sub> /g substance
Theoretical Oxygen Demand	3.2 g O <sub>2</sub> /g substance
Biodegration	88 % 28 days
BCF Fish	35.5
BCF Other Aquatic Organisms	94.69
Log Pow	3.66
Bioaccumulative Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	2.946

### Light Aromatic Solvent Naphtha (64742-95-6)

LC50 Fish	18 mg/l (LC50)
EC50 Daphnia	21 mg/l (EC50)
Persistence and Degradability	Readily biodegradable in water.
Log Pow	> 3

### 1,2,4-Trimethyl Benzene (95-63-6)




LC50 Fish	7.72 mg/l Fathead Minnow - 96h
EC50 Daphnia	3.6 mg/l Water Flea - 48hr
Persistence and Degradability	Biodegradable in the soil. Not readily biodegradable in water.
Chemical Oxygen Demand	0.44 g O <sub>2</sub> /g substance
BCF Fish	243 (Pimephales promelas, QSAR)
Log Pow	3.63 (Experimental value, KOWWIN)
Bioaccumulative Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	3.04 (log Koc, Calculated value)

## SECTION 13 - DISPOSAL CONSIDERATIONS

### 13.1 Waste Treatment Methods

<b>Waste Disposal</b>	: Product is suitable for burning in an enclosed, controlled burner for fuel value. Hazard characteristics and regulatory waste stream classification can change with product use and location. Accordingly, 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 material must be disposed of in compliance with the respective national, federal, state, and/or local regulations.
<b>Waste Disposal Of Packaging</b>	: Consult with your local landfill to determine if empty small containers can be disposed of along with regular trash pickup. For disposal of large containers (typically 10 gallons or larger), or for containers not suitable for landfill, a licensed reconditioner should be used.
<b>Landfill Precautions</b>	: Not Available.
<b>Incineration Precautions</b>	: Not Available.

## SECTION 14 - TRANSPORTATION INFORMATION

14.1 UN Number	DOT (USA)	IATA (AIR)	IMDG (OCEAN)
UN Number	: UN1263	UN1263	UN1263
14.2 UN Proper Shipping Name	DOT (USA)	IATA (AIR)	IMDG (OCEAN)
UN Proper Shipping Name	: Paint	Paint	Paint
14.3 Transport Hazard Class(es)	DOT (USA)	IATA (AIR)	IMDG (OCEAN)
Transport Hazard Class(es)	: 3	3	3
Labels	: 3 - Flammable liquid	3 - Flammable liquid	3 - Flammable liquid
			
EmS Code	: Not Applicable	Not Applicable	F-E, S-E



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## 14.4 Packing Group

Packing Group : II IATA (AIR) II IMDG (OCEAN) II

## 14.5 Environmental Hazards

Marine Pollutant : No IATA (AIR) No IMDG (OCEAN) No

## 14.6 Special Precautions

Precautions : None Identified

## 14.7 Transport in Bulk

Remarks : Not applicable for product as supplied

# SECTION 15 - REGULATORY INFORMATION

## 15.1 Federal Regulations

**SARA Section 313** : 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.

Chemical Name	CAS-No.	Concentration
Toluene	108-88-3	0.1 - 1%
Xylene	1330-20-7	10 - 30%
Ethyl Benzene	100-41-4	1.7579%
Chlorobenzene	108-90-7	0.01 - 0.1%
Cumene	98-82-8	0.1 - 1%
Benzene	71-43-2	0.001 - 0.01%
Naphthalene	91-20-3	< 0.0001%
1,2,4-Trimethyl Benzene	95-63-6	1 - 5%

**TSCA Section 12(b)** : This product or mixture is not known to contain a chemical or chemicals subject to the export notification requirements of section 12(b) of the Toxic Substances Control Act (TSCA) and 40 CFR Part 707, subpart D

**CERCLA Reportable Quantity** : Chemical(s) subject to reporting requirements of Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) if released to the environment at or above the reportable quantity

Chemical Name	CAS-No.	Reportable Quantity
Ethyl Acetate	141-78-6	5000 lb
Methyl Ethyl Ketone	78-93-3	5000 lb
Toluene	108-88-3	1000 lb
Xylene	1330-20-7	100 lb
Ethyl Benzene	100-41-4	1000 lb
Chlorobenzene	108-90-7	100 lb
Cumene	98-82-8	5000 lb
Benzene	71-43-2	10 lb
Naphthalene	91-20-3	100 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.

Chemical Name	Health Effect	Yes/No	Concentration
Ethyl Benzene (100-41-4)	Cancer	Yes	1.7579 %
Cumene (98-82-8)	Cancer	Yes	0.1161 %
Benzene (71-43-2)	Cancer	Yes	0.0032 %
Naphthalene (91-20-3)	Cancer	Yes	0.0 %
Toluene (108-88-3)	Developmental Toxicity	Yes	0.3341 %
Benzene (71-43-2)	Developmental Toxicity	Yes	0.0032 %
Toluene (108-88-3)	No significance risk level (NSRL)	7000	



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		µg/day	
Ethyl Benzene (100-41-4)	No significance risk level (NSRL)	54	

### State Right-to-Know Lists

: The following chemical(s) appear on one or more state RTK (Right to Know) lists as indicated

Ethyl Acetate (141-78-6)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) 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
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
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
Chlorobenzene (108-90-7)	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
n-Butyl Methacrylate (97-88-1)	U.S. - New Jersey - Right to Know Hazardous Substance List
Isobutyl Methacrylate (97-86-9)	U.S. - New Jersey - Right to Know Hazardous Substance List
Isopropyl Acetate (108-21-4)	U.S. - New Jersey - Right to Know Hazardous Substance List
Benzaldehyde (100-52-7)	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
Precipitated Silica (112926-00-8)	U.S. - New Jersey - Right to Know Hazardous Substance List
2-Butoxyethanol (111-76-2)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List
Cumene (98-82-8)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Dipropylene Glycol Monomethyl Ether (34590-94-8)	U.S. - New Jersey - Right to Know Hazardous Substance List
Benzene (71-43-2)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Naphthalene (91-20-3)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
1,2,4-Trimethyl Benzene (95-63-6)	U.S. - New Jersey - Right to Know Hazardous Substance List

## SECTION 16 - OTHER INFORMATION

### Indication of changes

Section	Changed item	Change
1	Revision date	Modified
1	Supersedes	Modified
2.1	GHS-US classification	Modified
2.2	Hazard statements (GHS US)	Modified
2.2	Precautionary statements (GHS US)	Modified
3	Composition/Information on ingredients	Modified
4	Symptoms/effects after ingestion	Modified
4	Symptoms/effects after skin contact	Modified
4	Symptoms/effects after eye contact	Modified
4.1	First-aid measures general	Modified
4.1	First-aid measures after eye contact	Modified
4.1	First-aid measures after ingestion	Modified
4.1	First-aid measures after skin contact	Modified
9	Specific gravity / density	Modified
9	Auto-ignition temperature	Modified
9	Boiling point	Modified
9	Flash point	Modified
9	Melting point	Modified
9	Relative vapor density at 20 °C	Added

### Disclaimer of Liability

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