

## Per-Fix™ for Styrene and Polycarbonate

according to the NMX-R-019-SCFI-2011, according to the NOM-018-STPS-2015

### SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product Identifier

Product Name : Per-Fix™ for Styrene and Polycarbonate  
 Manufacturer Product Number : 6500AA, 6500A, 6500B, 6500C

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

#### 1.5 24 hr Emergency Phone Number

Emergency Number : ChemTel for Mexico: 800-099-0731

### 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. 2a	H319	Health Hazards	Serious eye damage/eye irritation, Category 2A
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 2	H401	Environmental Hazards	Hazardous to the aquatic environment — Acute Hazard, Category 2
Aquatic Chronic 2	H411	Environmental Hazards	Hazardous to the aquatic environment — Chronic Hazard, Category 2

#### 2.2 Label Elements

##### Hazard Pictograms



##### Signal Word

**Danger**

##### Hazard Statements

H225 : Highly flammable liquid and vapour.  
 H304 : May be fatal if swallowed and enters airways.  
 H315 : Causes skin irritation.  
 H319 : Causes serious eye irritation.  
 H336 : May cause drowsiness or dizziness.  
 H361 : Suspected of damaging fertility or the unborn child.

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<b>Precautionary Statements</b>	<p>H373 : May cause damage to organs through prolonged or repeated exposure.</p> <p>H401 : Toxic to aquatic life</p> <p>H411 : Toxic to aquatic life with long lasting effects.</p> <p>P202 : Do not handle until all safety precautions have been read and understood.</p> <p>P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P233 : Keep container tightly closed.</p> <p>P240 : Ground/bond container and receiving equipment.</p> <p>P241 : Use explosion-proof electrical/ventilating/lighting equipment.</p> <p>P242 : Use only non-sparking tools.</p> <p>P243 : Take action to prevent static discharges.</p> <p>P260 : Do not breathe vapor.</p> <p>P264 : Wash hands thoroughly after handling.</p> <p>P271 : Use only outdoors or in a well-ventilated area.</p> <p>P273 : Avoid release to the environment.</p> <p>P280 : Wear protective gloves and eye protection.</p> <p>P301+P310 : IF SWALLOWED: Immediately call POISON CENTER.</p> <p>P303+P361+P353 : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .</p> <p>P304+P340 : IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 : If exposed or concerned: Get medical advice/attention</p> <p>P314 : Get medical advice/attention if you feel unwell.</p> <p>P331 : Do NOT induce vomiting.</p> <p>P332+P313 : If skin irritation occurs: Get medical advice/attention.</p> <p>P337+P313 : If eye irritation persists: Get medical advice/attention.</p> <p>P362+P364 : Take off contaminated clothing and wash it before reuse.</p> <p>P370+P378 : In case of fire: Use water, CO2, dry chemical, or universal aqueous film forming foam to extinguish.</p> <p>P391 : Collect spillage.</p> <p>P403+P233 : Store in a well-ventilated place. Keep container tightly closed.</p> <p>P235 : Keep cool.</p> <p>P405 : Store locked up.</p> <p>P501 : Dispose of contents/container to applicable regulations</p>
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**2.3 Other Hazards Which Do Not Result In Classification**

Hazards Not Otherwise Classified : None Identified.

**SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

**3.1 Substance / Mixture**

Substance / Mixture : Mixture

**3.2 Composition**

Substance name	CAS Number	% wt*	Classification
Solvent Naphtha (Petroleum), Light Aliphatic	64742-89-8	10 - 30	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304
Methyl Acetate	79-20-9	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336

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Substance name	CAS Number	% wt*	Classification
N-Hexane	110-54-3	10 - 30	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 Aquatic Chronic 2, H411
Hydrotreated Light Petroleum Naphtha	64742-49-0	10 - 30	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Isopropyl Alcohol	67-63-0	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
N-Heptane	142-82-5	5 - 10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Secondary Butyl Alcohol	78-92-2	1 - 5	Flam. Liq. 3, H226 Eye Irrit. 2A, H319 STOT SE 3, H335 STOT SE 3, H336
Stoddard Solvent	8052-41-3	1 - 5	Flam. Liq. 3, H226 Asp. Tox. 1, H304
Ethyl Acetate	141-78-6	1 - 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Xylene	1330-20-7	1 - 5	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
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
Ethylbenzene	100-41-4	0.2714	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

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. 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, Lassitude (Weakness), Dermatitis, Confusion, Skin Irritation, Headache, Dizziness, Nausea, Narcosis, Drowsiness, Vomiting, Optical Nerve Damage, Cough, Chest Tightness, Chemical Pneumonitis (Aspiration Liquid), Numbness, 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, Peripheral Nervous System, 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, vapours. 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. Vapours 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.
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### 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. 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. 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)

NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	1400 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	400 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	400 ppm
USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	400 ppm

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

NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	188 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	50 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	20 ppm
USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	20 ppm
USA (ACGIH)	ACGIH Ceiling (mg/m <sup>3</sup> )	150 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

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

NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	435 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	100 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m <sup>3</sup> )	655 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-CT (ppm)	150 ppm
NOM-010-STPS-2014	VLE-PPT (ppm)	150 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	100 ppm
USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	100 ppm
USA (ACGIH)	ACGIH Ceiling (mg/m <sup>3</sup> )	150 ppm
Biological Exposure Index	Methylhippuric Acid in Urine (Post Shift), End of shift	1.5 g/g creatinine

#### Ethylbenzene (100-41-4)

NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	435 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	100 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m <sup>3</sup> )	435 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-CT (ppm)	125 ppm
USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	20 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)

NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	610 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	200 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m <sup>3</sup> )	760 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-CT (ppm)	250 ppm
NOM-010-STPS-2014	VLE-PPT (ppm)	250 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	200 ppm

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USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	200 ppm
USA (ACGIH)	ACGIH Ceiling (mg/m <sup>3</sup> )	250 ppm
Isopropyl Alcohol (67-63-0)		
NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	980 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	400 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m <sup>3</sup> )	1225 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-CT (ppm)	500 ppm
NOM-010-STPS-2014	VLE-PPT (ppm)	400 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	200 ppm
USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	200 ppm
USA (ACGIH)	ACGIH Ceiling (mg/m <sup>3</sup> )	400 ppm
Secondary Butyl Alcohol (78-92-2)		
NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	305 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	100 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m <sup>3</sup> )	455 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-CT (ppm)	150 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	100 ppm
USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	100 ppm
Stoddard Solvent (8052-41-3)		
NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	523 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	100 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m <sup>3</sup> )	1050 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-CT (ppm)	200 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	100 ppm
USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	100 ppm
N-Hexane (110-54-3)		
NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	176 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	50 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	50 ppm
USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	50 ppm
Biological Exposure Index	2,5-Hexanedion in urine (without hydrolysis), End of shift at end of workweek	
		0.4 mg/l
N-Heptane (142-82-5)		
NOM-010-STPS-1999	LMPE-PPT (mg/m <sup>3</sup> )	1600 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-PPT (ppm)	400 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m <sup>3</sup> )	2000 mg/m <sup>3</sup>
NOM-010-STPS-1999	LMPE-CT (ppm)	500 ppm
NOM-010-STPS-2014	VLE-PPT (ppm)	500 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	400 ppm
USA (ACGIH)	ACGIH TWA (mg/m <sup>3</sup> )	400 ppm

### 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 EN 374.
<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, wear an appropriate NIOSH approved respirator.



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**Other Protective Equipment** : Safety showers and eye-wash stations should be available in the workplace near where the material will be used.

**Environmental Exposure Controls** : Avoid release to the environment.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Physical Properties

Boiling Point	> 56.90 °C	Melting / Freezing Point	> -115.00 °C
Flash Point, Liquid	> -27.00 °C		
Explosive Limits	LEL: 0.50 UEL: 24.60 vol %	Autoignition Temperature, Liquid	> 190.00 °C
Flammability	Highly Flammable Liquid	Density	0.796 g/cm <sup>3</sup>
Molecular Weight	Not Available	Weight	6.643 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, Colourless	Water Solubility	Not Available
Odor	Paint-like	Decomposition Temperature	Not Available

### 9.2 Environmental Properties

Percent Volatile	87.50 % wt	VOC Regulatory	680.14 g/L (5.68 lbs/gal)
Percent VOC	73.17 % wt	VOC Actual	582.46 g/L (4.86 lbs/gal)
Percent HAP	3.02 % wt	HAP Content	24.04 g/L (0.20 lbs/gal)
Global Warming Potential	0.02 GWP	Maximum Incremental Reactivity	1.0900 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.

### 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, Halogen Compounds, Bases, Acid Anhydrides, Calcium Hypochlorite, Aluminum Chloride, Acids, Magnesium, Sulfuric Acid, Perchloric Acid, Nitrating Agents, Chlorosulfuric Acid, Chlorine, Potassium Chlorate, Dinitrogen Tetroxide, Chlorine Dioxide, Organic Peroxides, 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



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### 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)

### 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)

### Ethylbenzene (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)

### Solvent Naphtha (Petroleum), Light Aliphatic (CAS: 64742-89-8 / EC: 265-192-2)

LD50 Oral (Rat)	> 5000 mg/kg (External SDS)
LD50 Dermal (Rabbit)	> 2000 mg/kg (External SDS)
LC50 Inhalation (Rat)	> 20 mg/l/4h (External SDS)

### 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)

### Isopropyl Alcohol (CAS: 67-63-0 / EC: 200-661-7)

LD50 Oral (Rat)	5045 mg/kg (RTECS)
LD50 Dermal (Rabbit)	12870 mg/kg (ChemInfo)
LC50 Inhalation (Rat)	73 mg/l/4h (Lit.)
LC50 Inhalation (Rat)	17000 ppm/4h (ChemInfo)

### Secondary Butyl Alcohol (CAS: 78-92-2 / EC: 201-158-5)

LD50 Oral (Rat)	2193 mg/kg (RTECS)
LD50 Dermal (Rat)	> 2000 mg/kg (RTECS)
LC50 Inhalation (Rat)	48.5 mg/l/4h (Rat)

### Stoddard Solvent (CAS: 8052-41-3 / EC: 232-489-3)

LD50 Oral (Rat)	> 5000 mg/kg (RTECS)
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### N-Hexane (CAS: 110-54-3 / EC: 203-777-6)

LD50 Oral (Rat)	29700 mg/kg (RTECS)
LD50 Dermal (Rabbit)	> 3350 mg/kg bodyweight (ChemInfo)
LC50 Inhalation (Rat)	38500 ppm/4h (ChemInfo)

### N-Heptane (CAS: 142-82-5 / EC: 205-563-8)

LD50 Oral (Rat)	15000 mg/kg (ChemInfo)
LD50 Dermal (Rabbit)	> 3160 mg/kg (Lit.)
LC50 Inhalation (Rat)	25132 mg/l/4h 103 gm/m3 (RTECS)

### Hydrotreated Light Petroleum Naphtha (CAS: 64742-49-0 / EC: 265-151-9)

LD50 Oral (Rat)	> 5800 mg/kg (External SDS)
LD50 Dermal (Rabbit)	> 2920 mg/kg (External SDS)
LC50 Inhalation (Rat)	> 23 mg/l/4h (External SDS)



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## Per-Fix™ for Styrene and Polycarbonate

according to the NMX-R-019-SCFI-2011, according to the NOM-018-STPS-2015

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	: 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	: May be fatal if swallowed and enters airways.
Carcinogen Data	: The following ingredients are listed as known or suspected carcinogens:

### Ethylbenzene (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

## 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

#### 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



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### Xylene (1330-20-7)

Bioaccumulative Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	3.156

### Ethylbenzene (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

### Solvent Naphtha (Petroleum), Light Aliphatic (64742-89-8)

Persistence and Degradability	Expected to be readily biodegradable. Oxidises rapidly by photo-chemical reactions in air.
Biodegradation	95 % 28 Days
Log Kow	2.1
Bioaccumulative Potential	Low potential for bioaccumulation (Log Kow < 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

### Isopropyl Alcohol (67-63-0)

LC50 Fish	9640 mg/l Fathead Minnow - 96h
EC50 Daphnia	13299 mg/l Water Flea - 48hr
EC50 Other Aquatic Organisms	> 2000 mg/l Green Algae - 72hr
Persistence and Degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test) data on mobility of the substance available.
Biochemical Oxygen Demand	1.19 g O <sub>2</sub> /g substance
Chemical Oxygen Demand	2.23 g O <sub>2</sub> /g substance
Theoretical Oxygen Demand	2.4 g O <sub>2</sub> /g substance
Biodegradation	95 % 21 DAY
BCF Fish	-2
Log Pow	0.05 (Weight of evidence approach; Other; 25 °C)
Bioaccumulative Potential	Low potential for bioaccumulation (Log Kow < 4).
Log Koc	1.4

### Secondary Butyl Alcohol (78-92-2)

LC50 Fish	3670 mg/l Fathead Minnow - 96h
EC50 Daphnia	4227 mg/l Water Flea - 48hr
Persistence and Degradability	Biodegradability 88% / 28 days.
Biochemical Oxygen Demand	1.87 g O <sub>2</sub> /g substance
Chemical Oxygen Demand	2.47 g O <sub>2</sub> /g substance
Theoretical Oxygen Demand	2.59 g O <sub>2</sub> /g substance
Log Pow	0.61 (Experimental value)



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Secondary Butyl Alcohol (78-92-2)	
Bioaccumulative Potential	Low potential for bioaccumulation (Log Kow < 4).
Stoddard Solvent (8052-41-3)	
LC50 Fish	Rainbow Trout - 96hr
Log Pow	3.16-7.06
Log Koc	log Koc, 2.85-6.74
n-Hexane (110-54-3)	
LC50 Fish	2.5 mg/l Fathead Minnow - 96h
EC50 Daphnia	3878 mg/l Water Flea - 48hr
Theoretical Oxygen Demand	3.52 g O <sub>2</sub> /g substance
BCF Fish	501.187 (BCF; Other; Pimephales promelas)
Log Pow	3.9
Bioaccumulative Potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
Log Koc	2.17
n-Heptane (142-82-5)	
LC50 Fish	375 mg/l 96h, Mozambique Tilapia (Lit.)
EC50 Daphnia	0.2 mg/l 48h, Leach (Lit.)
Persistence and Degradability	Readily biodegradable in water. Biodegradability in soil: no data available. Adsorbs into the soil.
Biochemical Oxygen Demand	1.92 g O <sub>2</sub> /g substance
Chemical Oxygen Demand	0.06 g O <sub>2</sub> /g substance
Theoretical Oxygen Demand	3.52 g O <sub>2</sub> /g substance
Log Pow	4.66 (Experimental value)
Bioaccumulative Potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).
Hydrotreated Light Petroleum Naphtha (64742-49-0)	
LC50 Fish	4.1 mg/l Fathead Minnow - 96h
EC50 Daphnia	10 mg/l Water Flea - 48hr
EC50 Other Aquatic Organisms	11 mg/l Green Algae - 72hr
Log Kow	3.6 - 5.7

### SECTION 13 - DISPOSAL CONSIDERATIONS

#### 13.1 Waste Treatment Methods

- Waste Disposal** : 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.
- Waste Disposal Of Packaging** : 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.
- Landfill Precautions** : Not Available.
- Incineration Precautions** : Not Available.

### SECTION 14 - TRANSPORTATION INFORMATION

14.1 UN Number	NOM-002-SLT (MEXICO)	IATA (AIR)	IMDG (OCEAN)
UN Number	: UN1263	UN1263	UN1263
14.2 UN Proper Shipping Name	NOM-002-SLT (MEXICO)	IATA (AIR)	IMDG (OCEAN)
UN Proper Shipping Name	: Paint	Paint	Paint
14.3 Transport Hazard Class(es)	NOM-002-SLT (MEXICO)	IATA (AIR)	IMDG (OCEAN)
Transport Hazard Class(es)	: 3	3	3

## Per-Fix™ for Styrene and Polycarbonate

according to the NMX-R-019-SCFI-2011, according to the NOM-018-STPS-2015

<b>Labels</b>	: 3 - Flammable liquid	: 3 - Flammable liquid	: 3 - Flammable liquid
			
<b>EmS Code</b>	: Not Applicable	: Not Applicable	: F-E, S-E

<b>14.4 Packing Group</b>	<b>NOM-002-SLT (MEXICO)</b>	<b>IATA (AIR)</b>	<b>IMDG (OCEAN)</b>
Packing Group	: II	: II	: II

<b>14.5 Environmental Hazards</b>	<b>IATA (AIR)</b>	<b>IMDG (OCEAN)</b>
Marine Pollutant	: No	: No

<b>14.6 Special Precautions</b>
Precautions
: None Identified

<b>14.7 Transport in Bulk According to Annex II of Marpol and the IBC Code</b>
Remarks
: Not applicable for product as supplied

## SECTION 15 - REGULATORY INFORMATION

### 15.1 Safety, Health and Environmental Regulations Specific to the Product

- TSCA Inventory (United States)** : All chemical substances in this product are either listed on the Toxic Substances Control Act (TSCA) Inventory or are in compliance with a TSCA Inventory exemption.
- INSQ Inventory (Mexico)** : To the best of our knowledge, all chemical substances in this product are listed on the National Inventory of Chemical Substances of Mexico.

## SECTION 16 - OTHER INFORMATION

<b>Indication of changes</b>	: <table border="1" style="width: 100%; border-collapse: collapse; background-color: #e6f2ff;"> <thead> <tr> <th style="width: 15%;">Section</th> <th style="width: 45%;">Changed item</th> <th style="width: 40%;">Change</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Created Safety Data Sheet - Revision 1</td> <td style="text-align: center;">Added</td> </tr> </tbody> </table>	Section	Changed item	Change	1	Created Safety Data Sheet - Revision 1	Added																									
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<b>Full Text of H-Statements</b>	: <table border="1" style="width: 100%; border-collapse: collapse; background-color: #e6f2ff;"> <thead> <tr> <th style="width: 15%;">H Code</th> <th style="width: 85%;">H Phrase</th> </tr> </thead> <tbody> <tr><td>H225</td><td>Highly flammable liquid and vapour.</td></tr> <tr><td>H226</td><td>Flammable liquid and vapour.</td></tr> <tr><td>H304</td><td>May be fatal if swallowed and enters airways.</td></tr> <tr><td>H315</td><td>Causes skin irritation.</td></tr> <tr><td>H319</td><td>Causes serious eye irritation.</td></tr> <tr><td>H335</td><td>May cause respiratory irritation.</td></tr> <tr><td>H336</td><td>May cause drowsiness or dizziness.</td></tr> <tr><td>H361</td><td>Suspected of damaging fertility or the unborn child.</td></tr> <tr><td>H373</td><td>May cause damage to organs through prolonged or repeated exposure.</td></tr> <tr><td>H400</td><td>Very toxic to aquatic life.</td></tr> <tr><td>H401</td><td>Toxic to aquatic life</td></tr> <tr><td>H410</td><td>Very toxic to aquatic life with long lasting effects.</td></tr> <tr><td>H411</td><td>Toxic to aquatic life with long lasting effects.</td></tr> <tr><td>H412</td><td>Harmful to aquatic life with long lasting effects.</td></tr> </tbody> </table>	H Code	H Phrase	H225	Highly flammable liquid and vapour.	H226	Flammable liquid and vapour.	H304	May be fatal if swallowed and enters airways.	H315	Causes skin irritation.	H319	Causes serious eye irritation.	H335	May cause respiratory irritation.	H336	May cause drowsiness or dizziness.	H361	Suspected of damaging fertility or the unborn child.	H373	May cause damage to organs through prolonged or repeated exposure.	H400	Very toxic to aquatic life.	H401	Toxic to aquatic life	H410	Very toxic to aquatic life with long lasting effects.	H411	Toxic to aquatic life with long lasting effects.	H412	Harmful to aquatic life with long lasting effects.	
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#### 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.