

Per-Fix™ for Styrene and Polycarbonate

according to the Hazardous Products Regulations (February 11, 2015)

SECTION 1 - IDENTIFICATION

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: 800-255-3924 (North America)

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Flam. Aerosol 1	H222	Physical Hazards	Flammable aerosols, Category 1
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



GHS02



GHS07



GHS08



GHS09

Signal Word

Danger

Hazard Statements

H222 : Extremely flammable aerosol.
 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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Precautionary Statements

- H373 : May cause damage to organs through prolonged or repeated exposure.
H401 : Toxic to aquatic life
H411 : Toxic to aquatic life with long lasting effects.
- 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.
P211 : Do not spray on an open flame or other ignition source.
P251 : Do not pierce or burn, even after use.
P260 : Do not breathe spray.
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.
P302+P352 : IF ON SKIN: Wash with plenty of water.
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
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.
P391 : Collect spillage.
P403 : Store in a well-ventilated place.
P410+P412 : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 : Dispose of contents/container to applicable regulations

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
Propane	74-98-6	10 - 30	Flam. Gas 1, H220 Press. Gas (Diss.), H280
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
N-Hexane	110-54-3	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 Aquatic Chronic 2, H411

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Substance name	CAS Number	% wt*	Classification
Hydrotreated Light Petroleum Naphtha	64742-49-0	5 - 10	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Isopropyl Alcohol	67-63-0	5 - 10	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
N-Heptane	142-82-5	1 - 5	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	0.2036	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

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



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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	: Extremely flammable. Contents under pressure. 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 aerosol 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	: 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.



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

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Propane (74-98-6)

Canada (Alberta)	OEL TWA (ppm)	1000 ppm
Canada (British Columbia)	OEL TWA (ppm)	1000 ppm
Canada (Ontario)	OEL TWA (ppm)	1000 ppm
Canada (Quebec)	VEMP (ppm)	1000 ppm
Canada (Quebec)	VEMP (mg/m ³)	1800 mg/m ³

Xylene (1330-20-7)

Canada (Alberta)	OEL TWA (ppm)	100 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	434 mg/m ³
Canada (British Columbia)	OEL TWA (ppm)	100 ppm
Canada (British Columbia)	OEL STEL (ppm)	150 ppm
Canada (Ontario)	OEL TWA (ppm)	100 ppm
Canada (Ontario)	OEL STEL (ppm)	150 ppm
USA (ACGIH)	ACGIH TWA (mg/m ³)	100 ppm
USA (ACGIH)	ACGIH Ceiling (mg/m ³)	150 ppm
Biological Exposure Index	Methylhippuric Acid in Urine (Post Shift), End of shift	1.5 g/g creatinine

Ethylbenzene (100-41-4)

Canada (Alberta)	OEL TWA (ppm)	100 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	434 mg/m ³
Canada (Alberta)	OEL Ceiling (ppm)	125 ppm
Canada (Alberta)	OEL Ceiling (mg/m ³)	543 mg/m ³
Canada (British Columbia)	OEL TWA (ppm)	20 ppm
Canada (Ontario)	OEL TWA (ppm)	20 ppm
Canada (Quebec)	VECD (ppm)	125 ppm
Canada (Quebec)	VECD (mg/m ³)	543 mg/m ³
Canada (Quebec)	VEMP (ppm)	100 ppm
Canada (Quebec)	VEMP (mg/m ³)	434 mg/m ³
USA (ACGIH)	ACGIH TWA (mg/m ³)	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

Toluene (108-88-3)

Canada (Alberta)	OEL TWA (ppm)	50 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	188 mg/m ³
Canada (British Columbia)	OEL TWA (ppm)	20 ppm
Canada (Ontario)	OEL TWA (ppm)	20 ppm
Canada (Quebec)	VEMP (ppm)	50 ppm
Canada (Quebec)	VEMP (mg/m ³)	188 mg/m ³
USA (ACGIH)	ACGIH TWA (mg/m ³)	20 ppm



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Toluene (108-88-3)

USA (ACGIH)	ACGIH Ceiling (mg/m ³)	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

Ethyl Acetate (141-78-6)

Canada (Alberta)	OEL TWA (ppm)	400 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	1440 mg/m ³
Canada (British Columbia)	OEL TWA (ppm)	150 ppm
Canada (Ontario)	OEL TWA (ppm)	400 ppm
Canada (Quebec)	VEMP (ppm)	400 ppm
Canada (Quebec)	VEMP (mg/m ³)	1440 mg/m ³
USA (ACGIH)	ACGIH TWA (mg/m ³)	400 ppm

Methyl Acetate (79-20-9)

Canada (Alberta)	OEL TWA (ppm)	200 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	600 mg/m ³
Canada (Alberta)	OEL STEL (ppm)	250 ppm
Canada (Alberta)	OEL STEL (mg/m ³)	757 mg/m ³
Canada (British Columbia)	OEL TWA (ppm)	200 ppm
Canada (British Columbia)	OEL STEL (ppm)	250 ppm
Canada (Ontario)	OEL TWA (ppm)	200 ppm
Canada (Ontario)	OEL STEL (ppm)	250 ppm
Canada (Quebec)	VECD (ppm)	250 ppm
Canada (Quebec)	VECD (mg/m ³)	757 mg/m ³
Canada (Quebec)	VEMP (ppm)	200 ppm
Canada (Quebec)	VEMP (mg/m ³)	606 mg/m ³
USA (ACGIH)	ACGIH TWA (mg/m ³)	200 ppm
USA (ACGIH)	ACGIH Ceiling (mg/m ³)	250 ppm

Isopropyl Alcohol (67-63-0)

Canada (Alberta)	OEL TWA (ppm)	200 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	492 mg/m ³
Canada (Alberta)	OEL STEL (ppm)	400 ppm
Canada (Alberta)	OEL STEL (mg/m ³)	984 mg/m ³
Canada (British Columbia)	OEL TWA (ppm)	200 ppm
Canada (British Columbia)	OEL STEL (ppm)	400 ppm
Canada (Ontario)	OEL TWA (ppm)	200 ppm
Canada (Ontario)	OEL STEL (ppm)	400 ppm
Canada (Quebec)	VECD (ppm)	500 ppm
Canada (Quebec)	VECD (mg/m ³)	1230 mg/m ³
Canada (Quebec)	VEMP (ppm)	400 ppm
Canada (Quebec)	VEMP (mg/m ³)	983 mg/m ³
USA (ACGIH)	ACGIH TWA (mg/m ³)	200 ppm
USA (ACGIH)	ACGIH Ceiling (mg/m ³)	400 ppm

Secondary Butyl Alcohol (78-92-2)

Canada (Alberta)	OEL TWA (ppm)	100 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	303 mg/m ³
Canada (British Columbia)	OEL TWA (ppm)	100 ppm
Canada (Ontario)	OEL TWA (ppm)	100 ppm
Canada (Quebec)	VEMP (ppm)	100 ppm
Canada (Quebec)	VEMP (mg/m ³)	303 mg/m ³
USA (ACGIH)	ACGIH TWA (mg/m ³)	100 ppm

Stoddard Solvent (8052-41-3)

Canada (Alberta)	OEL TWA (ppm)	100 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	572 mg/m ³
Canada (British Columbia)	OEL TWA (mg/m ³)	100 ppm 290 mg/m ³ 100 ppm
Canada (British Columbia)	OEL STEL (mg/m ³)	580 mg/m ³
Canada (Ontario)	OEL TWA (ppm)	100 ppm



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Stoddard Solvent (8052-41-3)

Canada (Quebec)	VEMP (ppm)	100 ppm
Canada (Quebec)	VEMP (mg/m ³)	525 mg/m ³
USA (ACGIH)	ACGIH TWA (mg/m ³)	100 ppm

N-Hexane (110-54-3)

Canada (Alberta)	OEL TWA (ppm)	50 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	1760 mg/m ³
Canada (British Columbia)	OEL TWA (ppm)	20 ppm
Canada (Ontario)	OEL TWA (ppm)	50 ppm
Canada (Quebec)	VEMP (ppm)	50 ppm
Canada (Quebec)	VEMP (mg/m ³)	176 mg/m ³
USA (ACGIH)	ACGIH TWA (mg/m ³)	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)

Canada (Alberta)	OEL TWA (ppm)	400 ppm
Canada (Alberta)	OEL TWA (mg/m ³)	1640 mg/m ³
Canada (Alberta)	OEL STEL (ppm)	500 ppm
Canada (Alberta)	OEL STEL (mg/m ³)	2050 mg/m ³
Canada (British Columbia)	OEL TWA (ppm)	400 ppm
Canada (British Columbia)	OEL STEL (ppm)	500 ppm
Canada (Ontario)	OEL TWA (ppm)	400 ppm
Canada (Ontario)	OEL STEL (ppm)	500 ppm
Canada (Quebec)	VECD (ppm)	500 ppm
Canada (Quebec)	VECD (mg/m ³)	2050 mg/m ³
Canada (Quebec)	VEMP (ppm)	400 ppm
Canada (Quebec)	VEMP (mg/m ³)	1640 mg/m ³
USA (ACGIH)	ACGIH TWA (mg/m ³)	400 ppm

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.
- Personal Protective Equipment**
- 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.
- Hand Protection** : Chemical-resistant gloves, tested according to EN 374.
- Remarks** : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to the place of work.
- Skin and Body 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.
- 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.
- Compliance** : If needed, wear an appropriate NIOSH approved respirator.
- 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	Flash Point, Propellant	-104.40 °C
Explosive Limits	LEL: 0.50 UEL: 24.60 vol %	Autoignition Temperature, Liquid	> 190.00 °C
Flammability	Extremely Flammable Aerosol	Density	0.698 g/cm ³
Molecular Weight	Not Available	Weight	5.825 lbs/gal
Vapor Pressure	Not Available	pH	Not Available
Vapor Density	Not Available	Evaporation Rate (nBac=1)	Not Available



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Viscosity	Not Available	Partition Coefficient (Log Pow)	Not Available
Odor Threshold	Not Available	Refractive Index	Not Available
Physical State	Pressurized Product	Heat Of Combustion	15399.28 BTU/lb
Appearance / Color	Clear, Colourless	Water Solubility	Not Available
Odor	Paint-like	Decomposition Temperature	Not Available

9.2 Environmental Properties

Percent Volatile	90.62 % wt	VOC Regulatory	624.29 g/L (5.21 lbs/gal)
Percent VOC	79.88 % wt	VOC Actual	557.56 g/L (4.65 lbs/gal)
Percent HAP	2.27 % wt	HAP Content	15.84 g/L (0.13 lbs/gal)
Global Warming Potential	0.84 GWP	Maximum Incremental Reactivity	0.9580 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

Propane (CAS: 74-98-6 / EC: 200-827-9)

LC50 Inhalation (Rat) : 658 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)



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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.)

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)

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 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)

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.



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Vaporizer : Aerosol
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

Propane (74-98-6)	
Persistence and Degradability	Readily biodegradable in water. Not applicable (gas). Photodegradation in the air.
BCF Fish	9 - 25 (BCF)
Log Pow	2.28 (Calculated)
Bioaccumulative Potential	Low potential for bioaccumulation (Log Kow < 4).

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 ₂ /g substance
Chemical Oxygen Demand	2.56 - 2.91 g O ₂ /g substance
Theoretical Oxygen Demand	3.1 g O ₂ /g substance
BCF Fish	14.1 - 24 (BCF)
Log Pow	3.217
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 ₂ /g substance
Chemical Oxygen Demand	2.1 g O ₂ /g substance
Theoretical Oxygen Demand	3.17 g O ₂ /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

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 ₂ /g substance
Chemical Oxygen Demand	2.52 g O ₂ /g substance
Theoretical Oxygen Demand	3.13 g O ₂ /g substance
Biodegradation	86 % 28 Days
Log Pow	2.73 (Experimental Value)
Bioaccumulative Potential	Low potential for bioaccumulation (BCF < 500).
Log Koc	2.15

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



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

Bioaccumulative Potential Low potential for bioaccumulation (Log Kow < 4).

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 ₂ /g substance
Chemical Oxygen Demand	1.69 g O ₂ /g substance
Theoretical Oxygen Demand	1.82 g O ₂ /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 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 ₂ /g substance
Chemical Oxygen Demand	2.23 g O ₂ /g substance
Theoretical Oxygen Demand	2.4 g O ₂ /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 ₂ /g substance
Chemical Oxygen Demand	2.47 g O ₂ /g substance
Theoretical Oxygen Demand	2.59 g O ₂ /g substance
Log Pow	0.61 (Experimental value)
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

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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 ₂ /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 ₂ /g substance
Chemical Oxygen Demand	0.06 g O ₂ /g substance
Theoretical Oxygen Demand	3.52 g O ₂ /g substance
Log Pow	4.66 (Experimental value)
Bioaccumulative Potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

Hydrotreated Light Petroleum Naphtha (64742-49-0)

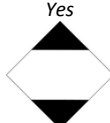

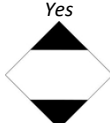
LC50 Fish	4.1 mg/l Fathead Minnow - 96h
EC50 Daphnia	10 mg/l Water Flea - 48hr
EC50 Other Aquatic Organisms	11 mg/l Green Algae - 72hr
Log Kow	3.6 - 5.7

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Waste Disposal	: 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	: 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	: ** DO NOT INCINERATE ** CONTENTS UNDER PRESSURE **.

SECTION 14 - TRANSPORTATION INFORMATION

14.1 UN Number	TDG (CANADA)	IATA (AIR)	IMDG (OCEAN)
UN Number	: UN1950	UN1950	UN1950
14.2 UN Proper Shipping Name	TDG (CANADA)	IATA (AIR)	IMDG (OCEAN)
UN Proper Shipping Name	: Aerosols, Limited Quantity	Aerosols, Flammable, Limited Quantity	Aerosols, Limited Quantity
14.3 Transport Hazard Class(es)	TDG (CANADA)	IATA (AIR)	IMDG (OCEAN)
Transport Hazard Class(es)	: 2.1	2.1	2.1
Labels	: None	2.1 - Flammable gas	None
Limited Quantity	:  Yes	 Yes	 Yes



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EmS Code : Not Applicable Not Applicable F-D, S-U

14.4 Packing Group TDG (CANADA) IATA (AIR) IMDG (OCEAN)

Packing Group : None None None

14.5 Environmental Hazards TDG (CANADA) IATA (AIR) IMDG (OCEAN)

Marine Pollutant : No No 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 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.

DSL/NDL Inventory (Canada) : All chemical substances in this product are listed on the Domestic Substance List (DSL), exempt or are not subject to notification.

SECTION 16 - OTHER INFORMATION

Section	Changed item	Change
1	Revision date	Modified
1	Supersedes	Modified
2.2	Precautionary statements (GHS US)	Modified
3	Composition/information on ingredients	Modified
9	Auto-ignition temperature	Modified
9	Explosive limits (vol %)	Modified
9	Relative vapour density at 20 °C	Added

H Code	H Phrase
H222	Extremely flammable aerosol.
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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