

Per-Fix™ for Nylon

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 Nylon
Manufacturer Product Number : 5205AA, 5205A, 5205B, 5205C

1.2 Other Means of Identification

Other Identifiers : Flaw Repair

1.3 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommended Use : Touch-up coating for molded plastic parts.
Restrictions on Use : None Identified

1.4 Supplier Details

	Manufacturer Details	Supplier Details
Company Name	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	msds@chem-pak.com
Website	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. Aerosol 1	H222	Physical Hazards	Flammable aerosol Category 1
Press. Gas (Diss.)	H280	Physical Hazards	Gases under pressure Dissolved gas
Skin Irrit. 2	H315	Health Hazards	Skin corrosion/irritation Category 2
Eye Irrit. 2a	H319	Health Hazards	Serious eye damage/eye irritation Category 2A
Carc. 2	H351	Health Hazards	Carcinogenicity Category 2
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

2.2 Label Elements

Hazard Pictograms



Signal Word

Danger

Hazard Statements

H222 : Extremely flammable aerosol
 H280 : Contains gas under pressure; may explode if heated
 H304 : May be fatal if swallowed and enters airways



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H315 : Causes skin irritation
H319 : Causes serious eye irritation
H336 : May cause drowsiness or dizziness
H351 : Suspected of causing cancer
H361 : Suspected of damaging fertility or the unborn child
H373 : May cause damage to organs through prolonged or repeated exposure
H401 : Toxic 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.
P211 : Do not spray on an open flame or other ignition source.
P251 : Pressurized container: 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.
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.

2.4 Unknown acute toxicity

43.4% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
44.6% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
9.6% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (vapors))

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance / Mixture

Substance / Mixture : Mixture

3.2 Composition

Substance name	CAS Number	% wt*	Classification
Dimethyl Ether	115-10-6	30 - 60	Flam. Gas 1, H220 Press. Gas (Diss.), H280
Methyl Ethyl Ketone	78-93-3	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336

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Substance name	CAS Number	% wt*	Classification
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
Toluene	108-88-3	5 - 10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401
N-Butyl Acetate	123-86-4	5 - 10	Flam. Liq. 2, H225 STOT SE 3, H336 Aquatic Acute 3, H402
Propane	74-98-6	5 - 10	Flam. Gas 1, H220 Press. Gas (Diss.), H280
Ethyl Benzene	100-41-4	2.4271	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401
Ethyl 3-Ethoxypropionate	763-69-9	1 - 5	Flam. Liq. 3, H226 Aquatic Acute 3, H402
Ethyl Acetate	141-78-6	1 - 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Methyl Acetate	79-20-9	1 - 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336

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.

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, Upper Respiratory Tract Irritation, 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	: Methyl alcohol may be fatal or cause blindness if swallowed. Repeated or prolonged contact may cause skin sensitization.



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Target Organs : Central Nervous System, Eyes, Gastrointestinal Tract, 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 : Extremely flammable. Contents under pressure. In a fire or if heated, a pressure increase will occur which may result in container bursting. Vapors heavier than air may spread along the ground and travel to 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.

6.3 Methods and Materials for Containment and Cleaning up

Containment Procedures : Product is an aerosol, therefore spills and leaks are unlikely. In case of rupture, released content may be contained with oil/solvent absorbent pads, socks, and/or absorbents.
Cleanup Procedures : Spills from aerosol cans are unlikely and are generally of small volume. Large spills are therefore not normally considered a problem. In case of actual rupture, avoid breathing vapors and ventilate area well. Remove sources of ignition and use non-sparking equipment. Soak up material with inert absorbent and place in safety containers for proper disposal.
Other Information : Aerosol products represent a limited hazard and will not spill or leak unless ruptured. In case of rupture contents are generally evacuated from the can rapidly. Area should be ventilated immediately and continuous ventilation provided until all fumes and vapors have been removed. Aerosol cans should never be incinerated or burned.
Prohibited Materials : Combustible absorbent material such as sawdust. Use of equipment that may cause sparking.

SECTION 7 - HANDLING AND STORAGE



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7.1 Precautions for Safe Handling

- General Handling Precautions** : KEEP OUT OF THE REACH OF CHILDREN. Avoid prolonged or repeated skin contact. Avoid breathing of vapors. Do not incinerate (burn) containers. Always replace overcap when not in use. Avoid use around open flames or other sources of ignition. Exposure to heat or prolonged exposure to sun may cause can to burst. Use only with adequate ventilation, opening doors or windows to achieve cross-ventilation.
- Hygiene Recommendations** : Do not eat, drink or smoke when using this product. Wash hands thoroughly after use. Remove contaminated clothing and protective equipment before entering eating or smoking areas.

7.2 Conditions for Safe Storage Including Any Incompatibilities

- Storage Requirements** : Storage of individual cans should be done in an area below 55°C (120 °F), and away from heat sources. Ensure can is in a secure place to prevent knocking over and accidental rupture. For storage of pallet quantities, compliance with NFPA 30B (Manufacture and Storage of Aerosol Products) is recommended.
- Incompatibilities** : Segregate storage away from materials indicated in Section 10.
- NFPA 30B Classification** : This product is classified as a Level 2 Aerosol per NFPA 30B

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Propane (74-98-6)

OSHA	OSHA PEL (TWA) (mg/m ³)	1800 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
NIOSH	US IDLH (ppm)	2100 ppm
NIOSH	NIOSH REL (TWA) (mg/m ³)	1800 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
California	California PEL (TWA) (mg/m ³)	1800 mg/m ³
California	California PEL (TWA) (ppm)	1000 ppm

Dimethyl Ether (115-10-6)

AIHA	WEEL TWA (ppm)	1000 ppm
Manufacturer Recommended	Recommended PEL (TWA) (ppm)	1000 ppm (Dupont AEL)

Xylene (1330-20-7)

ACGIH	ACGIH TWA (mg/m ³)	100 ppm
ACGIH	ACGIH Ceiling (mg/m ³)	150 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	435 mg/m ³
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 ³)	435 mg/m ³
California	California PEL (TWA) (ppm)	100 ppm
California	California PEL (STEL) (mg/m ³)	655 mg/m ³
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 ³)	20 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	435 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
NIOSH	US IDLH (ppm)	800 ppm
NIOSH	NIOSH REL (TWA) (mg/m ³)	435 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
NIOSH	NIOSH REL (STEL) (mg/m ³)	545 mg/m ³
NIOSH	NIOSH REL (STEL) (ppm)	125 ppm
California	California PEL (TWA) (mg/m ³)	22 mg/m ³
California	California PEL (TWA) (ppm)	5 ppm
California	California PEL (STEL) (mg/m ³)	130 mg/m ³
California	California PEL (STEL) (ppm)	30 ppm



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Ethyl Benzene (100-41-4)

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
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N-Butyl Acetate (123-86-4)

ACGIH	ACGIH TWA (mg/m ³)	150 ppm
ACGIH	ACGIH Ceiling (mg/m ³)	200 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	710 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	150 ppm
NIOSH	US IDLH (ppm)	1700 ppm
NIOSH	NIOSH REL (TWA) (ppm)	150 ppm
NIOSH	NIOSH REL (STEL) (ppm)	200 ppm
California	California PEL (TWA) (mg/m ³)	710 mg/m ³
California	California PEL (TWA) (ppm)	150 ppm
California	California PEL (STEL) (mg/m ³)	950 mg/m ³
California	California PEL (STEL) (ppm)	200 ppm

Toluene (108-88-3)

ACGIH	ACGIH TWA (mg/m ³)	20 ppm
ACGIH	ACGIH Ceiling (mg/m ³)	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 ³)	37 mg/m ³
California	California PEL (TWA) (ppm)	10 ppm
California	California PEL (STEL) (mg/m ³)	560 mg/m ³
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

Ethyl Acetate (141-78-6)

ACGIH	ACGIH TWA (mg/m ³)	400 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	1400 mg/m ³
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 ³)	1400 mg/m ³
California	California PEL (TWA) (ppm)	400 ppm

Methyl Acetate (79-20-9)

ACGIH	ACGIH TWA (mg/m ³)	200 ppm
ACGIH	ACGIH Ceiling (mg/m ³)	250 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	610 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
NIOSH	US IDLH (ppm)	3100 ppm
NIOSH	NIOSH REL (TWA) (mg/m ³)	610 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
NIOSH	NIOSH REL (STEL) (mg/m ³)	760 mg/m ³
NIOSH	NIOSH REL (STEL) (ppm)	250 ppm
California	California PEL (TWA) (mg/m ³)	610 mg/m ³
California	California PEL (TWA) (ppm)	200 ppm
California	California PEL (STEL) (mg/m ³)	760 mg/m ³
California	California PEL (STEL) (ppm)	250 ppm

Methyl Ethyl Ketone (78-93-3)

ACGIH	ACGIH TWA (mg/m ³)	200 ppm
ACGIH	ACGIH Ceiling (mg/m ³)	300 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	590 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm



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Methyl Ethyl Ketone (78-93-3)

NIOSH	US IDLH (ppm)	3000 ppm
NIOSH	NIOSH REL (TWA) (mg/m ³)	590 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
California	California PEL (TWA) (mg/m ³)	590 mg/m ³
California	California PEL (TWA) (ppm)	200 ppm
California	California PEL (STEL) (mg/m ³)	885 mg/m ³
California	California PEL (STEL) (ppm)	300 ppm
Biological Exposure Index	MEK in Urine, End of shift	2 mg/l

8.2 Exposure Controls

Engineering Measures	: Use only with adequate ventilation. General ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Local exhaust ventilation or an enclosed handling system may be necessary to control air contamination below that of the lowest OEL from the table above.
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 ASTM F903 - 17.
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 may be permissible under certain circumstances where airborne concentrations are expected to exceed occupational exposure limits. Under those circumstances, users should be provided with either a half-facepiece (if wearing safety glasses) or a full-facepiece (if not wearing safety glasses) air-purifying respirator, fitted with organic vapor cartridges and P95 filters.
Compliance	: If needed, compliance with OSHA standard 29 CFR 1910.134 is necessary.
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	> 55.80 °C	Melting / Freezing Point	> -108.40 °C
Flash Point, Liquid	> -13.00 °C	Flash Point, Propellant	> -104.40 °C
Explosive Limits	LEL: 0.70 UEL: 40.00 vol %	Autoignition Temperature, Liquid	> 190.00 °C
Flammability	Extremely Flammable Aerosol	Density	0.780 g/cm ³
Molecular Weight	Not Available	Weight	6.509 lbs/gal
Vapor Pressure	Not Available	pH	Not Available
Vapor Density	Not Available	Evaporation Rate (nBac=1)	Not Available
Viscosity	Not Available	Partition Coefficient (Log Pow)	Not Available
Odor Threshold	Not Available	Refractive Index	Not Available
Physical State	Pressurized Product	Heat Of Combustion	12613.71 BTU/lb
Appearance / Color	Clear, Colorless	Water Solubility	Not Available
Odor	Paint-like	Decomposition Temperature	Not Available

9.2 Environmental Properties

Percent Volatile	89.26 % wt	VOC Regulatory	694.91 g/L (5.80 lbs/gal)
Percent VOC	87.52 % wt	VOC Actual	682.67 g/L (5.70 lbs/gal)
Percent HAP	22.75 % wt	HAP Content	177.45 g/L (1.48 lbs/gal)
Global Warming Potential	0.71 GWP	Maximum Incremental Reactivity	1.1570 g O3/g
Ozone Depletion Potential	0.00 ODP		



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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, Temperatures above 140°F (60°C), 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, Hydrogen Peroxide, Magnesium, Sulfuric Acid, Perchloric Acid, Strong Bases, 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, Formaldehyde, 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.)

Dimethyl Ether (CAS: 115-10-6 / EC: 204-065-8)

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

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)

N-Butyl Acetate (CAS: 123-86-4 / EC: 204-658-1)

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

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

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

LC50 Inhalation (Rat) : 390 ppm/4h (RTECS)

Ethyl 3-Ethoxypropionate (CAS: 763-69-9 / EC: 212-112-9)

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

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

LC50 Inhalation (Rat) : > 2404 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.)

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)

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)

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.
Vaporizer	: Aerosol
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

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).

Dimethyl Ether (115-10-6)

Persistence and Degradability	Biodegradability 7% / 28 days.
Log Pow	0.1 (Experimental value; 0.07; QSAR; KOWWIN; 25 °C)
Bioaccumulative Potential	Low potential for bioaccumulation (Log Kow < 4).

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



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Xylene (1330-20-7)

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

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 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

n-Butyl Acetate (123-86-4)

LC50 Fish	62 mg/l Golden Orfe - 96hr
LC50 Fish	18 mg/l Fathead Minnow - 96h
EC50 Daphnia	72.8 mg/l Water Flea - 24hr
EC50 Other Aquatic Organisms	675 mg/l Green Algae - 72hr
EC50 Other Aquatic Organisms	959 mg/l Bacteria - 18hr
Persistence and Degradability	Biodegradability 88% / 28 days.
Biochemical Oxygen Demand	520 mg/g
Chemical Oxygen Demand	2320 mg/g
Theoretical Oxygen Demand	2207 mg/g
Log Pow	1.804
Log Koc	2.35

Ethyl 3-Ethoxypropionate (763-69-9)

LC50 Fish	55.3 mg/l Fathead Minnow - 96h
EC50 Daphnia	785 mg/l Water Flea - 48hr
EC50 Other Aquatic Organisms	114.86 mg/l Green Algae - 72hr
Persistence and Degradability	Readily biodegradable in water.
Log Pow	1.25 (Calculated)
Bioaccumulative Potential	Low potential for bioaccumulation (Log Kow < 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

Ethyl Acetate (141-78-6)

LC50 Fish	450 - 600 mg/l Rainbow Trout - 96hr
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Ethyl Acetate (141-78-6)

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

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 ₂ /g substance
Chemical Oxygen Demand	2.31 g O ₂ /g substance
Theoretical Oxygen Demand	2.44 g O ₂ /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,34; Calculated value

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

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

SECTION 14 - TRANSPORTATION INFORMATION

14.1 UN Number	DOT (USA)	IATA (AIR)	IMDG (OCEAN)
UN Number	: UN1950	UN1950	UN1950



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14.2 UN Proper Shipping Name	DOT (USA)	IATA (AIR)	IMDG (OCEAN)
UN Proper Shipping Name	: Aerosols, Limited Quantity	Aerosols, Flammable, Limited Quantity	Aerosols, Limited Quantity
14.3 Transport Hazard Class(es)	DOT (USA)	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
EmS Code	: Not Applicable	Not Applicable	F-D, S-U
14.4 Packing Group	DOT (USA)	IATA (AIR)	IMDG (OCEAN)
Packing Group	: None	None	None
14.5 Environmental Hazards	DOT (USA)	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 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.

Xylene	CAS-No. 1330-20-7	10 - 30%
Ethyl Benzene	CAS-No. 100-41-4	2.4271%
Toluene	CAS-No. 108-88-3	5 - 10%
Chlorobenzene	CAS-No. 108-90-7	0.01 - 0.1%
Cumene	CAS-No. 98-82-8	0.001 - 0.01%
Benzene	CAS-No. 71-43-2	0.01 - 0.1%
Naphthalene	CAS-No. 91-20-3	< 0.0001%
Isopropyl Alcohol	CAS-No. 67-63-0	0.001 - 0.01%
Methanol	CAS-No. 67-56-1	0.001 - 0.01%

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

Xylene	CAS-No. 1330-20-7	100 lb
Ethyl Benzene	CAS-No. 100-41-4	1000 lb
Toluene	CAS-No. 108-88-3	1000 lb



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Ethyl Acetate	CAS-No. 141-78-6	5000 lb
Chlorobenzene	CAS-No. 108-90-7	100 lb
Methyl Ethyl Ketone	CAS-No. 78-93-3	5000 lb
Cumene	CAS-No. 98-82-8	5000 lb
Benzene	CAS-No. 71-43-2	10 lb
Naphthalene	CAS-No. 91-20-3	100 lb
Isobutyl Acetate	CAS-No. 110-19-0	5000 lb
Methanol	CAS-No. 67-56-1	5000 lb

15.2 State Regulations

California Proposition 65

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

Ethyl Benzene (100-41-4)	Cancer	Yes	2.4271 %
Cumene (98-82-8)	Cancer	Yes	0.0054 %
Benzene (71-43-2)	Cancer	Yes	0.0137 %
Naphthalene (91-20-3)	Cancer	Yes	0.0 %
Toluene (108-88-3)	Developmental Toxicity	Yes	8.9939 %
Benzene (71-43-2)	Developmental Toxicity	Yes	0.0137 %
Methanol (67-56-1)	Developmental Toxicity	Yes	0.0026 %
Ethyl Benzene (100-41-4)	No significance risk level (NSRL)	54 µg/day	
Toluene (108-88-3)	No significance risk level (NSRL)	7000 µg/day	

State Right-to-Know Lists

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

Propane (74-98-6)	U.S. - New Jersey - Right to Know Hazardous Substance List
Dimethyl Ether (115-10-6)	U.S. - New Jersey - Right to Know Hazardous Substance List
Xylene (1330-20-7)	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Ethyl Benzene (100-41-4)	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Toluene (108-88-3)	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
n-Butyl Methacrylate (97-88-1)	U.S. - New Jersey - Right to Know Hazardous Substance List
Ethyl Acetate (141-78-6)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Isobutyl Methacrylate (97-86-9)	U.S. - New Jersey - Right to Know Hazardous Substance List
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
Methyl Acetate (79-20-9)	U.S. - New Jersey - Right to Know Hazardous Substance List
Benzaldehyde (100-52-7)	U.S. - New Jersey - Right to Know Hazardous Substance List
Isopropyl Acetate (108-21-4)	U.S. - New Jersey - Right to Know Hazardous Substance List
Precipitated Silica (112926-00-8)	U.S. - New Jersey - Right to Know Hazardous Substance List
Methyl Ethyl Ketone (78-93-3)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
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
2-Butoxyethanol (111-76-2)	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List



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	<i>U.S. - Massachusetts - Right To Know List</i>
<i>Isopropyl Alcohol (67-63-0)</i>	<i>U.S. - New Jersey - Right to Know Hazardous Substance List</i>
<i>Isobutyl Acetate (110-19-0)</i>	<i>U.S. - New Jersey - Right to Know Hazardous Substance List</i> <i>U.S. - Pennsylvania - RTK (Right to Know) List</i>
<i>Methanol (67-56-1)</i>	<i>U.S. - New Jersey - Right to Know Hazardous Substance List</i> <i>U.S. - Pennsylvania - RTK (Right to Know) List</i>
<i>n-Heptane (142-82-5)</i>	<i>U.S. - New Jersey - Right to Know Hazardous Substance List</i>

SECTION 16 - OTHER INFORMATION

Indication of changes :

<i>Section</i>	<i>Changed item</i>	<i>Change</i>
1	Revision date	Modified
1	Supersedes	Modified
3	Composition/Information on ingredients	Modified

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