

Per-Fix™ Black for ABS

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™ Black for ABS
 Manufacturer Product Number : 8500AA, 8500A, 8500B, 8500C

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. 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
Skin Sens. 1	H317	Health Hazards	Skin sensitisation, Category 1
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
Asp. Tox. 1	H304	Health Hazards	Aspiration hazard, Category 1

2.2 Label Elements

Hazard Pictograms



GHS02



GHS07



GHS08

Signal Word

Danger

Hazard Statements

H222 : Extremely flammable aerosol.
 H304 : May be fatal if swallowed and enters airways.
 H315 : Causes skin irritation.
 H317 : May cause an allergic skin reaction.
 H319 : Causes serious eye irritation.
 H336 : May cause drowsiness or dizziness.
 H351 : Suspected of causing cancer.



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Precautionary Statements	H361	: Suspected of damaging fertility or the unborn child.
	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.
	P261	: Avoid breathing spray.
	P264	: Wash hands thoroughly after handling.
	P271	: Use only outdoors or in a well-ventilated area.
	P272	: Contaminated work clothing should not be allowed out of the workplace.
	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
	P312	: Call physician if you feel unwell.
	P331	: Do NOT induce vomiting.
	P333+P313	: If skin irritation or rash 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.

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	30 - 60	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304
Propane	74-98-6	10 - 30	Flam. Gas 1, H220 Press. Gas (Diss.), H280
Ethyl Acetate	141-78-6	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Methyl Acetate	79-20-9	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Poly(Iso-Butyl Methacrylate)	9011-15-8	5 - 10	Not classified
(1-Methoxy-2-Propyl) Acetate	108-65-6	1 - 5	Flam. Liq. 3, H226 Aquatic Acute 3, H402
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

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Substance name	CAS Number	% wt*	Classification
Light Aromatic Solvent Naphtha	64742-95-6	1 - 5	Flam. Liq. 3, H226 Muta. 1B, H340 Carc. 1B, H350 Asp. Tox. 1, H304 Aquatic Acute 3, H402
Carbon Black	1333-86-4	0.1 - 1	Carc. 2, H351
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	0.2548	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
Boron, Trifluoro(Tetrahydrofuran) Polymer	753501-40-5	0.1 - 1	Skin Sens. 1, H317

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 or rash 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, Drowsiness, Vomiting, Optical Nerve Damage, Cough, Chest Tightness, Mucous Membrane, Diarrhea.
Delayed Effects	: No known delayed effects.
Immediate Effects	: No known immediate effects.
Chronic Effects	: Repeated or prolonged contact may cause skin sensitization.
Target Organs	: Central Nervous System, Eyes, Liver, Nasal Cavity, Reproductive System, Respiratory System, Skin, Kidneys.

4.3 Indication of Immediate Medical Attention and Special Treatment

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

SECTION 5 - FIRE-FIGHTING MEASURES

5.1 Suitable Extinguishing Media

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

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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.

6.3 Methods and Materials for Containment and Cleaning up

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

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling

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

7.2 Conditions for Safe Storage Including Any Incompatibilities

- Storage Requirements** : Storage of individual cans should be done in an area below 55°C (120 °F), and away from heat sources. Ensure can is in a secure place to prevent knocking over and accidental rupture.
- Incompatibilities** : Segregate storage away from materials indicated in Section 10.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters



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Ethyl Acetate (141-78-6)		
NOM-010-STPS-1999	LMPE-PPT (mg/m ³)	1400 mg/m ³
NOM-010-STPS-1999	LMPE-PPT (ppm)	400 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	400 ppm
USA (ACGIH)	ACGIH TWA (mg/m ³)	400 ppm

Toluene (108-88-3)		
NOM-010-STPS-1999	LMPE-PPT (mg/m ³)	188 mg/m ³
NOM-010-STPS-1999	LMPE-PPT (ppm)	50 ppm
NOM-010-STPS-2014	VLE-CT (ppm)	20 ppm
USA (ACGIH)	ACGIH TWA (mg/m ³)	20 ppm
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

Xylene (1330-20-7)		
NOM-010-STPS-1999	LMPE-PPT (mg/m ³)	435 mg/m ³
NOM-010-STPS-1999	LMPE-PPT (ppm)	100 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m ³)	655 mg/m ³
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 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)		
NOM-010-STPS-1999	LMPE-PPT (mg/m ³)	435 mg/m ³
NOM-010-STPS-1999	LMPE-PPT (ppm)	100 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m ³)	435 mg/m ³
NOM-010-STPS-1999	LMPE-CT (ppm)	125 ppm
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

Methyl Acetate (79-20-9)		
NOM-010-STPS-1999	LMPE-PPT (mg/m ³)	610 mg/m ³
NOM-010-STPS-1999	LMPE-PPT (ppm)	200 ppm
NOM-010-STPS-1999	LMPE-CT (mg/m ³)	760 mg/m ³
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
USA (ACGIH)	ACGIH TWA (mg/m ³)	200 ppm
USA (ACGIH)	ACGIH Ceiling (mg/m ³)	250 ppm

Propane (74-98-6)		
NOM-010-STPS-2014	VLE-CT (ppm)	1000 ppm

Poly(Iso-Butyl Methacrylate) (9011-15-8)		
USA (ACGIH)	ACGIH TWA (ppm)	3 mg/m ³ (Particulates (insoluble or poorly soluble)(NOS); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Respirable fraction)

Carbon Black (1333-86-4)		
NOM-010-STPS-1999	LMPE-PPT (mg/m ³)	3.5 mg/m ³
NOM-010-STPS-1999	LMPE-CT (mg/m ³)	7 mg/m ³
NOM-010-STPS-2014	VLE-CT (mg/m ³)	3 mg/m ³
USA (ACGIH)	ACGIH TWA (ppm)	3 mg/m ³



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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	> -98.00 °C
Flash Point, Liquid	> -20.00 °C	Flash Point, Propellant	-104.40 °C
Explosive Limits	LEL: 0.80 UEL: 24.60 vol %	Autoignition Temperature, Liquid	> 190.00 °C
Flammability	Extremely Flammable Aerosol	Density	0.728 g/cm ³
Molecular Weight	Not Available	Weight	6.075 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	14396.73 BTU/lb
Appearance / Color	Black	Water Solubility	Not Available
Odor	Paint-like	Decomposition Temperature	Not Available

9.2 Environmental Properties

Percent Volatile	90.35 % wt	VOC Regulatory	650.09 g/L (5.43 lbs/gal)
Percent VOC	80.19 % wt	VOC Actual	583.78 g/L (4.87 lbs/gal)
Percent HAP	2.69 % wt	HAP Content	19.58 g/L (0.16 lbs/gal)
Global Warming Potential	0.84 GWP	Maximum Incremental Reactivity	1.0740 g O3/g
Ozone Depletion Potential	0.00 ODP		

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

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

10.2 Chemical Stability

Chemical Stability : This product is stable.

10.3 Possibility of Hazardous Reactions

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

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10.4 Conditions to Avoid

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

10.5 Incompatible Materials

Materials to Avoid : Strong Oxidizing Agents, Strong Reducing Agents, Alkali Metals, Strong Acids, Aluminum, Potassium t-Butoxide, Halogen Compounds, Bases, Calcium Hypochlorite, Acids, 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, Methanol, Acetic Acid, Peroxybenzoic Acid, Benzoic Acid.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

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

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

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)

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

LC50 Inhalation (Rat)	658 mg/l/4h (Lit.)
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Light Aromatic Solvent Naphtha (CAS: 64742-95-6 / EC: 265-199-0)

LD50 Oral (Rat)	8400 mg/kg (RTECS)
LD50 Dermal (Rabbit)	> 3160 mg/kg (ChemInfo)
LC50 Inhalation (Rat)	3670 ppm/4h (Lit.)

(1-Methoxy-2-Propyl) Acetate (CAS: 108-65-6 / EC: 203-603-9)

LD50 Oral (Rat)	10000 mg/kg (ChemInfo)
LD50 Dermal (Rabbit)	19200 mg/kg (ChemInfo)



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(1-Methoxy-2-Propyl) Acetate (CAS: 108-65-6 / EC: 203-603-9)

LC50 Inhalation (Rat) > 5250 ppm/4h (ChemInfo)

Carbon Black (CAS: 1333-86-4 / EC: 215-609-9)

LD50 Oral (Rat) > 15400 mg/kg (RTECS)

LD50 Dermal (Rabbit) > 3000 mg/kg (RTECS)

LC50 Inhalation (Rat) 27 mg/l/4h (ChemInfo)

Boron, Trifluoro(Tetrahydrofuran) Polymer (CAS: 753501-40-5 / EC:)

LD50 Oral (Rat) > 2000 mg/kg (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 : May cause an allergic skin reaction.
Germ Cell Mutagenicity : May cause genetic defects.
Reproductive Toxicity : Suspected of damaging fertility or the unborn child.
STOT-Single Exposure : May cause drowsiness or dizziness.
STOT-Repeated Exposure : Not classified
Aspiration Hazard : May be fatal if swallowed and enters airways.
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

Carbon Black (CAS: 1333-86-4 / EC: 215-609-9)

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 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

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



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Toluene (108-88-3)

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 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

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

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).

Light Aromatic Solvent Naphtha (64742-95-6)

LC50 Fish	18 mg/l (LC50)
EC50 Daphnia	21 mg/l (EC50)

Per-Fix™ Black for ABS

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

Light Aromatic Solvent Naphtha (64742-95-6)	
Persistence and Degradability	Readily biodegradable in water.
Log Pow	> 3
Poly(iso-Butyl Methacrylate) (9011-15-8)	
Persistence and Degradability	Biodegradability in water: no data available. Non degradable in the soil. Adsorbs into the soil.
Bioaccumulative Potential	Bioaccumable.
(1-METHOXY-2-PROPYL) ACETATE (108-65-6)	
LC50 Fish	100 mg/l Rainbow Trout - 96hr
EC50 Daphnia	373 mg/l Water Flea - 48hr
EC50 Daphnia	> 1000 mg/l Green Algae - 96hr
Persistence and Degradability	Biodegradability 81% / 28 days.
Biochemical Oxygen Demand	330 mg/g
Chemical Oxygen Demand	1740 mg/g
Theoretical Oxygen Demand	1820 mg/g
Log Pow	0.56
Log Koc	0.36
Carbon Black (1333-86-4)	
LC50 Fish	> 1000 mg/l Zebra Fish - 96hr
EC50 Daphnia	> 5600 mg/l Water Flea - 24hr
EC50 Other Aquatic Organisms	> 10000 mg/l Green Algae - 72hr
Theoretical Oxygen Demand	Not applicable
Log Pow	1.09
Bioaccumulative Potential	Not bioaccumulative.
Boron, Trifluoro(Tetrahydrofurane) Polymer (753501-40-5)	
Log Pow	> 1.5

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	NOM-002-SLT (MEXICO)	IATA (AIR)	IMDG (OCEAN)
UN Number	: UN1950	UN1950	UN1950
14.2 UN Proper Shipping Name	NOM-002-SLT (MEXICO)	IATA (AIR)	IMDG (OCEAN)
UN Proper Shipping Name	: Aerosols, Limited Quantity	Aerosols, Flammable, Limited Quantity	Aerosols, Limited Quantity
14.3 Transport Hazard Class(es)	NOM-002-SLT (MEXICO)	IATA (AIR)	IMDG (OCEAN)
Transport Hazard Class(es)	: 2.1	2.1	2.1
Labels	: None	2.1 - Flammable gas	None





SAFETY DATA SHEET

Part No. See Section 1.1 (Aerosol)

Print Date: 07/09/2019
Revision Date: 07/09/2019
Supersedes Date: 08/22/2017
Issue Date: 08/22/2017
Version: 2.0 (EN)-MX
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according to the NMX-R-019-SCFI-2011, according to the NOM-018-STPS-2015

Limited Quantity

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EmS Code

:	Not Applicable	Not Applicable	F-D, S-U
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14.4 Packing Group

NOM-002-SLT (MEXICO) IATA (AIR) IMDG (OCEAN)

Packing Group	:	None	None	None
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14.5 Environmental Hazards

Marine Pollutant	:	No	No	No
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14.6 Special Precautions

Precautions	:	None Identified
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14.7 Transport in Bulk According to Annex II of Marpol and the IBC Code

Remarks	:	Not applicable for product as supplied
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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

Indication of changes

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

Full Text of H-Statements

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.
H317	May cause an allergic skin reaction.
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
H402	Harmful to aquatic life

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.