

1. Company and Product Identification


1.1	Identification – Product Name:	EVOLUTION STARCH OFF
1.2	Other means of identification	NA
	Synonym:	NA
1.3	Recommended Use Of The Chemical and Restrictions On Use:	Cleaning agent
1.4	Name, Address, And Telephone Number Of The Manufacturer, Or Other Responsible Party:	Clean Print Solutions 16 Mallet Road, Tullamarine, Victoria 3043 Ph: +61 3 5783 2902 Mob: +61416 275 634
	Competent Person email address	NA
	24 Hour Emergency No.:	USA 770-425-3353 800-222-1222 (24-Hr, CHEMTREC) Australia 131 126, NZ 0800 764 766

2. HAZARDS IDENTIFICATION

When the concentrate is diluted per label instructions, the resulting solution is COMPLETELY NON-HAZARDOUS.

EMERGENCY OVERVIEW: This product is a blue liquid with pine odor. Repeated exposure may cause skin dryness or cracking or minor irritation. The product is not flammable. Depending on the duration of over-exposure, breathing vapors may headache or dizziness, respiratory tract irritation. Thermal decomposition of this product may produce irritating vapors and toxic gases (e.g. carbon monoxide and carbon dioxide). Emergency responders must wear personal protective equipment (and have appropriate fire-extinguishing protection) suitable for the situation to which they are responding.

	Physical Hazards Summary	Not classifiable
	Potential Health Hazards Summary	Skin irritation, Category 2 Eye irritation, Category 2A Respiratory sensitizer, Category 1
	Potential Ecological Effects Summary	Not classifiable
2.1	Classification Of Product	
	U.S. OSHA classification	Skin irritation, Category 2 Eye irritation, Category 2A Respiratory sensitizer, Category 1
	Classification as per EC 1272/2008	Skin irritation, Category 2 Eye irritation, Category 2 Respiratory sensitizer, Category 1

	(CLP/GHS)											
	Hazardous Materials Information System (HMIS) Rating	<table border="1"> <tr> <td>Health</td> <td>2</td> </tr> <tr> <td>Flammability</td> <td>0</td> </tr> <tr> <td>Physical Hazard</td> <td>0</td> </tr> <tr> <td>Protective Equipment</td> <td>C</td> </tr> <tr> <td>Chronic Health Hazard</td> <td></td> </tr> </table>	Health	2	Flammability	0	Physical Hazard	0	Protective Equipment	C	Chronic Health Hazard	
Health	2											
Flammability	0											
Physical Hazard	0											
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Chronic Health Hazard												
2.2	Label Elements OSHA/GHS											
	Signal Word	DANGER										
	Hazard Statements	<table border="1"> <tr> <td>H315 H319 H334</td> <td>Causes skin irritation Causes serious eye irritation May cause allergy or asthma symptoms or breathing difficulties if inhaled</td> </tr> </table>	H315 H319 H334	Causes skin irritation Causes serious eye irritation May cause allergy or asthma symptoms or breathing difficulties if inhaled								
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	Precautionary Statements: Prevention	<table border="1"> <tr> <td>P264 P280 P261 P285</td> <td>Wash thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection Avoid breathing mist, vapors or spray In case of inadequate ventilation wear respiratory protection</td> </tr> </table>	P264 P280 P261 P285	Wash thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection Avoid breathing mist, vapors or spray In case of inadequate ventilation wear respiratory protection								
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	Precautionary Statements: Response	<table border="1"> <tr> <td>P305+P351+P338+P310 P337+P313 P302+P352 P321 P363 P304+P341 P342+P311</td> <td>IF IN EYES 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 IF ON SKIN wash with soap and water Specific treatment: See first aid section on this SDS Wash contaminated clothing before reuse IF INHALED if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing If experiencing respiratory symptoms call a POISON CENTER or doctor/physician</td> </tr> </table>	P305+P351+P338+P310 P337+P313 P302+P352 P321 P363 P304+P341 P342+P311	IF IN EYES 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 IF ON SKIN wash with soap and water Specific treatment: See first aid section on this SDS Wash contaminated clothing before reuse IF INHALED if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing If experiencing respiratory symptoms call a POISON CENTER or doctor/physician								
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	Precautionary statements: Storage											
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	Hazard pictograms											
2.3	Unclassified Hazards	None										
2.4	Ingredients with unknown acute toxicity	None										

3. COMPOSITION and INFORMATION ON INGREDIENTS

Chemical name CAS # EINECS #	% w/w	US OSHA	GHS/EU CLP
Proprietary blend of surfactants, fragrances and enzymes	<10%	Flammable liquid, Category 3 Acute toxicity, Oral, Category 4 Acute toxicity, Inhal, Category 4 Acute toxicity, Dermal, Category 4 Skin irritation, Category 2 Eye irritation, Category 2A Aspiration toxicity, Category 1 Acute aquatic toxicity, Category 2 Chronic aquatic toxicity, Category 2 Respiratory sensitization, Category 1	Flammable liquid, Category 3 (H226) Acute toxicity, Oral, Category 4 (H302) Acute toxicity, Inhal, Category 4 (H332) Acute toxicity, Dermal, Category 4 (H312) Skin irritation, Category 2 (H315) Eye irritation, Category 2 (H319) Aspiration toxicity, Category 1 (H304) Acute aquatic toxicity, Category 2 (H401) Chronic aquatic toxicity, Category 2 (H411) Respiratory sensitization, Category 1
Proprietary blend of solvents	<10%	Flammable liquid, Category 4 Acute toxicity, Oral, Category 4 Acute toxicity, Inhal, Category 4 Acute toxicity, Dermal, Category 4 Skin irritation, Category 2 Eye irritation, Category 2A	Acute toxicity, Oral, Category 4 (H302) Acute toxicity, Inhal, Category 4 (H332) Acute toxicity, Dermal, Category 4 (H312) Skin irritation, Category 2 (H315) Eye irritation, Category 2 (H319)
Ethanolamine (CAS 9007-33-4)	<5%	Flammable liquid, Category 4 Acute toxicity, Oral, Category 4 Acute toxicity, Inhal, Category 4 Acute toxicity, Dermal, Category 4 Skin corrosion, Category 1 Serious eye damage, Category 1 Specific target organ toxicity, Single exposure (Resp), Category 3 Acute aquatic toxicity, Category 2 Chronic aquatic toxicity, Category 3	Acute toxicity, Oral, Category 4 (H302) Acute toxicity, Inhal, Category 4 (H332) Acute toxicity, Dermal, Category 4 (H312) Skin corrosion, Category 1 (H314) Serious eye damage, Category 1 (H318) Specific target organ toxicity, Single exposure (Resp), Category 3 (H335) Acute aquatic toxicity, Category 2 (H401) Chronic aquatic toxicity, Category 3 (H412)
Water	Bulk	Not classifiable	Not classifiable

See Section 16 for Definitions of Terms Used.

The manufacturer claims Trade Secret Information as defined in 29CFR1910.1200 Appendix E and 29CFR1910.1200(i). All hazards have been accounted for in this product's hazard classification.

4. FIRST-AID MEASURES

4.1	Description of Necessary Measures	
	Skin exposure:	If this product contaminates the skin, immediately begin decontamination with running water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim should seek immediate medical attention if any adverse exposure symptoms develop or irritation persists.
	Eye exposure:	If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Seek medical attention immediately.
	Inhalation:	If this product is inhaled, remove victim to fresh air and place in a position comfortable for breathing. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.
	Ingestion:	If this product is swallowed, CALL POISON CENTER or PHYSICIAN FOR MOST CURRENT INFORMATION. DO NOT INDUCE VOMITING. Have victim rinse mouth with water, if conscious. Never induce vomiting or give a diluent (e.g., water) to someone who is unconscious, having convulsions, or unable to swallow. If contaminated individual is convulsing, maintain an open airway and obtain immediate medical attention.
4.2	Most Important Symptoms/Effects:	Immediate: Inhalation exposure may cause coughing or sneezing/respiratory tract irritation. Symptoms of skin and eye contact may include redness and irritation. Ingestion may cause stomach pains, cramps, and gastritis.

		Delayed: Prolonged or repeated skin overexposure to this product may cause dermatitis (dry, red skin).
4.3	Indication Of Immediate Medical Attention And Special Treatment Needed, If Necessary:	None known. TARGET ORGANS: Acute: Eyes and Skin
Victims of chemical exposure must be taken for medical attention if any adverse effects occur. Rescuers should be taken for medical attention if necessary. Take a copy of label and SDS to physician or health professional with victim.		

5. FIRE-FIGHTING MEASURES

	Flammable properties	Not classifiable as flammable	<div style="text-align: center;"> <p>NFPA RATING FLAMMABILITY</p> <p>HEALTH 2 0 REACTIVITY</p> <p>OTHER See Section 16 for definitions of ratings</p> </div>												
		Flash Point °C (°F): > 200 °F (> 93.3 °C)													
		Autoignition Temperature °C (°F): Not evaluated													
		Flammable Limits (in air by volume, %): Not evaluated													
5.1	Suitable And Unsuitable Extinguishing Media:	<p>This material should not contribute to the intensity of a fire. Use extinguishing material suitable for ordinary combustibles.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Water spray</td> <td style="width: 33%;">YES</td> <td style="width: 33%;">Carbon dioxide</td> <td style="width: 33%;">YES</td> </tr> <tr> <td>Foam</td> <td>YES</td> <td>Dry chemical</td> <td>YES</td> </tr> <tr> <td>Halon</td> <td>YES</td> <td>Other</td> <td></td> </tr> </table>		Water spray	YES	Carbon dioxide	YES	Foam	YES	Dry chemical	YES	Halon	YES	Other	
Water spray	YES	Carbon dioxide	YES												
Foam	YES	Dry chemical	YES												
Halon	YES	Other													
5.2	Specific Hazards Arising From Chemical:	<p>When involved in a fire, this material may decompose and produce irritating fumes and toxic gases (e.g., carbon monoxide, carbon dioxide)</p> <p><u>Explosion Sensitivity to Mechanical Impact:</u> None.</p> <p><u>Explosion Sensitivity to Static Discharge:</u> Vapors are not expected to ignite</p>													
5.3	Special Protective Equipment And Precautions For Fire-Fighters:	<p>Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.</p>													

6. ACCIDENTAL RELEASE MEASURES

6.1	Personal Precautions	Uncontrolled releases should be responded to only by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area and protect people.
	Protective equipment	For small releases (< 20 liters, 5 gallons), clean up spilled liquid wearing gloves, goggles, face shield, and suitable body protection. Absorb with earth, sand or other non-combustible material and transfer to containers for proper disposal. The minimum Personal Protective Equipment recommended for response to non-incident releases (more than 20 liters or 5 gallons) should be Level C: triple-gloves (neoprene gloves over nitrile gloves), chemical resistant suit and boots, hard hat, and full-face respirator with Organic Vapor cartridge. Monitoring must indicate oxygen levels above 19.5% in order to use air purifying respirators. Prevent further leak/release if it is safe to do so. Do not let the product enter drains.
	Emergency procedures	Eliminate all ignition sources. Stop leak if you can do so without risk. Monitoring must indicate that exposure levels are below those provided in Section 8 (Exposure Controls-Personal Protection) and that oxygen levels are above 19.5% before anyone is permitted in the area without Self-Contained Breathing Apparatus.
6.2	Methods and Materials for Containment and Cleaning Up	Use absorbent material for cleaning up spills. Collect spilled material for proper disposal. Decontaminate the area thoroughly. Place all spill residues in a suitable container. Dispose of in accordance with applicable U.S. Federal, State, or local procedures, or appropriate local standards (see Section 13, Disposal Considerations).

7. HANDLING and STORAGE

7.1	Precautions for Safe Handling	<p>All employees who handle this material should be trained to handle it safely. Open containers carefully on a stable surface. Ensure all connections are tight before transfer. Empty containers may contain residual liquid; therefore, empty containers should be handled with care. Keep away from ignition sources; no smoking.</p> <p>As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat or drink while handling this material. Remove contaminated clothing promptly.</p> <p>During equipment maintenance follow practices indicated in Section 6 (Accidental Release Measures) to decontaminate equipment or clean-up small spills. Make certain that application equipment is locked and tagged-out safely if necessary. Collect all rinsates and residual material and dispose of according to applicable U.S. Federal, State, or local procedures or appropriate local standards.</p>
7.2	Conditions For Safe Storage	Keep containers tightly closed. Store individual containers out of direct sunlight. Tanks should be stored away from intense heat or direct sunlight. Avoid freezing. Store away from incompatible materials. Storage and use areas should be covered with impervious materials. Keep container tightly closed when not in use. If appropriate, post warning signs in storage and use areas. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.
	Incompatibilities	Oxidizers, strong oxidizing acids.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

8.1	Control Parameters								
	CHEMICAL NAME	CAS #	% w/w	EXPOSURE LIMITS IN AIR					
				ACGIH-TLV		OSHA-PEL (NIOSH)			OTHER
				TWA ppm	STEL ppm	TWA ppm	STEL ppm	IDLH ppm	ppm
	Proprietary blend of surfactants, fragrances and enzymes	NA	<10%	NA	NA	NA(9NA)	NA(NA)	NA	
	Proprietary blend of solvents	NA	<10%	NA	NA	NA(NA)	NA(NA)	NA	
	Ethanolamine	9007-33-4	<5%	3	6	3(3)	NA(6)	NA	
	No occupational exposure limits have been established for this product. Efforts should be made to limit exposure to prevent injury.		None of the other components contribute significant additional hazards at the concentration present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards and Canadian Workplace Hazardous Materials Identification System Standards (CPR 4).						
8.2	Appropriate Engineering Controls.			Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in this Section or as low as reasonably achievable. Ensure eyewash/safety shower stations are available near areas where this product is used.					
8.3	Personal Protective Equipment Respiratory protection:			None needed under normal conditions of use. Use NIOSH approved respirators if ventilation is inadequate to control mists or vapor. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the applicable local standards. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-face piece pressure/demand SCBA or a full-face piece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).					
	Eye protection:			Use approved safety goggles or safety glasses, as described in OSHA 29 CFR 1910.133. Splash goggles with a face shield may be needed if splash hazards exist.					
	Hand protection:			Wear chemical impervious gloves (e.g., Solvex™, Neoprene, Nitrile).					
	Body protection:			None normally needed. If needed, use body protection appropriate for task (e.g., Tyvek suit, rubber apron) to protect from splashes and sprays. Nomex coveralls are recommended for handling bulk product.					

9. PHYSICAL and CHEMICAL PROPERTIES

Appearance	This product is a clear, blue liquid.		
Odor	Pine-like	Odor Threshold	NE
Melting Point °C (°F)	Not evaluated	pH	8
Initial Boiling Point °C (°F)	100 °C (212 °F)	Boiling Point Range °C (°F)	Not evaluated
Flammability	Not flammable	Evaporation Rate (n-butyl acetate = 1)	Not evaluated
Vapor Density (air = 1)	Not evaluated	Vapor Pressure mm Hg @ 20°C:	Not evaluated
Solubility (in water)	Soluble	Relative density (water = 1)	1.0
Viscosity	Not evaluated	Oil-Water Partition Coefficient	NE
VOC	3g/L (0.025lb/gal)	HAP	0
How To Detect This Substance (Warning Properties):	Pine like odor.		

10. STABILITY and REACTIVITY

10.1	Reactivity	Not considered reactive.
10.2	Chemical Stability	Stable under normal use and storage.
10.3	Possibility of hazardous reactions	Hazardous polymerization will not occur.
10.4	Conditions to avoid	Avoid mixing with incompatible materials.
10.5	Incompatible Materials	Strong oxidizers, Strong acids.
10.6	Hazardous Decomposition Products	Thermal decomposition of this product may generate carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

11.1 Toxicology Information

Note: This product has not been evaluated for its toxicity as a whole.

Component	Oral LD ₅₀ (mg/kg)	Dermal LD ₅₀ (mg/kg)	Inhalation LC ₅₀ (mg/m ³)	Skin Irritation	Serious eye damage
Proprietary blend of surfactants, fragrances and enzymes	No data available	No data available	No data available	YES	Irritation
Proprietary blend of solvents	No data available	No data available	No data available	YES	YES
Ethanolamine	1089 mg/kg (Rat)	1015 mg/kg (Rabbit)	No data available	YES	YES

11.2: Carcinogenicity (IARC, ACGIH, NTP, OSHA)

None of the components are listed as carcinogenic by IARC, ACGIH, NTP or OSHA

11.3: Reproductive toxicity:

None of the components of this product are listed as reproductive toxins on the California Proposition 65 List.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

12.1 Ecological Information

Note: This product has not been evaluated for its ecologic impact as a whole.

Component	Toxicity to fish	Toxicity to daphnia	Bioaccumulation	Solubility	Biodegradability
Proprietary blend of surfactants, fragrances and enzymes	No data available	No data available	No data available	No data available	Readily biodegradable
Proprietary blend of solvents	No data available	No data available	Not expected	Soluble	Readily biodegradable
Ethanolamine	150 mg/L (LC50, 96 hr, carp)	65 mg/L (EC 50, 48 hr)	No data available	Soluble	Readily biodegradable

12.2	Persistence and Degradability	This product is expected to be readily biodegradable
12.3	Bioaccumulative Potential	This product is not expected to bioaccumulate
12.4	Mobility in Soil	When spilled onto soil, this product is expected to evaporate slowly.
12.5	Other Adverse Ecological Effects	This product may be harmful to aquatic life if large volumes of it are released into an aquatic environment.

13. DISPOSAL CONSIDERATIONS

Preparing Wastes of this Product for Disposal	Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or with local regulations.
Disposal of Contaminated Packaging	Cleaned containers can be recycled or disposed of as non-contaminated waste, if authorized by your local authorities. Dispose of containers as required by local regulations.
U.S. EPA Waste Number	

14. TRANSPORT INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION. ALWAYS CONSULT LATEST REGULATIONS PRIOR TO SHIPPING FOR CHANGES!

US Domestic

14.1	UN Number	Not dangerous goods
14.2	UN Proper Shipping Name	
14.3	Transport Hazard Class(es)	
	Transport label(s) required	
14.4	Packing Group	
14.5	Marine Pollutant	
	NA Emergency Response Guide Number (2012)	
	Reportable Quantity (RQ)	

International Air Transport Association

14.6	UN Number	Not dangerous goods
	UN Proper Shipping Name	
	Transport Hazard Class(es)	
	Transport label(s) required	
	Packing Group	
	Marine Pollutant	
	Packaging Instructions	

International Maritime Organization

14.7	UN Number	Not dangerous goods
	UN Proper Shipping Name	
	Transport Hazard Class(es)	
	Transport label(s) required	
	Packing Group	
	Marine Pollutant	
	NA Emergency Response Guide Number (2012)	

15. SAFETY, HEALTH and ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT

PROGRAM	Super Starch Off
Clean Air Act Hazardous Air Pollutants	YES
Safe Drinking Water Act	NO
RCRA F, K, P, U or D-lists	NO
SARA 302 EHS RQ	NO
SARA 302 EHS TPQ	NO
CERCLA RQ (lbs)	NO
SARA 313 LISTED	NO
SARA 311/312 ACUTE	NO
SARA 311/312 CHRONIC	NO

SARA 311/312 FIRE	NO
SARA 311/312 PRESSURE	NO
SARA 311/312 REACTIVITY	NO
EPA EXTREMELY HAZARDOUS SUBSTANCE	NO
PEL	NO
PSM	NO
DHS CFATS STQ (Flammable Release)	NO
DEA Controlled Substances	NO
DSL	NOTE 1
NDSL	NOTE 1
REACH Pre-registered List	NOTE 1
TSCA (Public)	NOTE 1
European Inventory of Existing Commercial Chemical Substances (EINECS)	NO
EU No-Longer Polymers List (NLP)	NO
EEC Classification Packaging, and Labeling of Dangerous Substances(Annex 1)	NO
Philippines	NE
Japan	NE
Australia	NOTE 2
Korea	NE
China	NE
New Zealand Inventory of Chemicals	NE

NOTE 1: Some components of this product are listed in the Canadian DSL/NDSL, REACH and US TSCA publicly available list.

NOTE 2: Not hazardous under NOHSC:1008(2004), 3rd Edition.

16. OTHER INFORMATION

16.1	Original Preparation	14 November 2016
16.2	Revision History	1.1: 2 July 2017
16.3	Prepared by	Christopher Bright 2/530 Boundary Road Derrimut 3030
16.4	Date of Printing	June 4, 2019

DEFINITIONS OF TERMS

16.5	A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:	
	Section 2	<p>GHS: Global Harmonization System OSHA: U.S. Occupational Safety and Health Administration. CLP: Classification and Packaging WHMIS: Workplace Hazardous Materials Information System STOT: Specific Target Organ Toxicity</p>
	Section 3	<p>CAS #: Chemical Abstract Service index number EINECS #: European Chemical Substances Information System index number</p>
	Section 5	<p>NFPA: Nation Fire Protection Association Health Hazard: 0 (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); 1 (materials that on exposure under fire conditions could cause irritation or minor residual injury); 2 (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); 3 (materials that can on short exposure could cause serious temporary or residual injury); 4 (materials that under very short exposure could cause death or major residual injury). Flammability Hazard Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System". Flash Point: Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL: The lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL: The highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.</p>
	Section 8	<p>ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (TWA), the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level (C). Skin absorption effects must also be considered PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (<u>Federal Register</u>: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order. IDLH - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. The DFG - MAK is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. NIOSH is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (OSHA). NIOSH issues exposure guidelines called Recommended Exposure Levels (RELs). When no exposure guidelines are established, an entry of NE (Not Established) is made for reference.</p>
	Section 11	<p>LD₅₀ : Lethal Dose (solids & liquids) which kills 50% of the exposed animals; LC₅₀ : Lethal Concentration (gases) which kills 50% of the exposed animals; ppm: Concentration expressed in parts of material per million parts of air or water; mg/m³ : Concentration expressed in weight of substance per volume of air; mg/kg: Quantity of material, by weight, administered to a test subject, based on their body weight in kg IARC - the International Agency for Research on Cancer; NTP - the National Toxicology Program, RTECS - the Registry of Toxic Effects of Chemical Substances, OSHA and CAL/OSHA. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. TDLo, the lowest dose to cause a symptom and TCLo the lowest concentration to cause a symptom; TD₀, LDLo, and LD₀, or TC, TC₀, LCLo, and LCo, the lowest dose (or concentration) to cause lethal or toxic effects. BEI - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.</p>
	Section 12	<p>LC₅₀: The lowest concentration in water which kills 50% of the test subjects. EC₅₀: The Effect Concentration in water at which 50% of the test species is affected.</p>
	Section 13	<p>US EPA Hazardous Waste Codes: refer to 40 CFR 261.20</p>
	Section 14	<p>DOT: US Department of Transportation IATA: International Air Transport Association IMO: International Maritime Organization MARPOL: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 IBC Code : Merchant Shipping Code</p>
	Section 15	<p>RCRA: US Resource Conservation and Recovery Act SARA: US Superfund Amendments and Reauthorization Act PSM: US OSHA Process Safety Management CFATS: US Department of Homeland Security Chemical Facility Anti-terrorism Standard DSL: Canadian Domestic Substances List NDSL: Canadian Non-Domestic Substances List REACH: European Registration, Evaluation, Authorization and Restriction of Chemicals list TSCA: US Toxic Substances Control Act</p>

H Phrases

H225: Highly flammable liquid and vapor

H226: Flammable liquid and vapor

H304: May be fatal if swallowed and enters airways

- H314: Causes severe skin burns and eye damage
- H315: Causes skin irritation
- H317: May cause an allergic skin reaction
- H318: Causes serious eye damage
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335: May cause respiratory irritation
- H401: Toxic to aquatic life
- H402: Harmful to aquatic life
- H412: Harmful to aquatic life with long lasting effects