CROSSFIELD PRODUCTS CORPORATION

www.crossfieldproducts.com

3000 E. Harcourt St.
Rancho Dominguez, CA 90221 (Headquarters)
(310)-886-9100 (8:00 AM – 5:00 PM Pacific Time)
Eastern Time)

140 Valley Rd.
Roselle Park, NJ 07204
(908)-245-2800 (8:00 AM – 5:00 PM

SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	**QUIK-GLAZE LO Clear and tint Base, PART A**
CHEMICAL NAME/CLASS:	Amino Functional Resin
PRODUCT USE:	Decking Topcoat Resin
SUPPLIER/MANUFACTURER'S NAME:	Crossfield Products Corp.
ADDRESS: (West Coast):	3000 E. Harcourt St. Rancho Dominguez, CA 90221 (Headquarters)
ADDRESS: (East Coast):	140 Valley Rd. Roselle Park, NJ 07204
EMERGENCY PHONE:	**CHEMTREC**: 800-424-9300
DATE OF PREPARATION:	November 29, 2021
REVISION DATE:	January 31, 2023

2. HAZARD(S) IDENTIFICATION

GHS Classification;
- Acute Toxicity (Oral) – Category 5
- Flammable Liquids – Category 3
- Skin sensitization – Category 1
- Skin Toxicity - Category 5
- Eye irritation – Category 2A
- Acute Aquatic Toxicity – Category 5
- Specific target organ toxicity – Category 3 (Central Nervous System) single exposure

Signal Word: (Danger)

Hazard Statements:

H226 Flammable liquid and vapor
H313: May be harmful in contact with skin
H317: May cause an allergic skin reaction
H332: Harmful if inhaled
H360: May damage fertility or the unborn child
H303: May be harmful if swallowed
H315: Causes skin irritation
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness
H402: Harmful to aquatic life

Precautionary Statements:

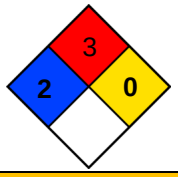
P102: Keep out of reach of children
P103: Read label before use
P202 Do not handle until all safety precautions have been read and understood
P210: Keep away from heat/sparks/open flames/hot surfaces – no smoking
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilation/lighting/equipment.
P243: Use only non-sparking tools
P260 Do not breathe dust/fume/gas/mist/vapors/spray
P280: Wear protective gloves/protective clothing/eye protection/face protection
P303+P361+P352: IF ON SKIN (or hair): Take of immediately all contaminated clothing. Wash with plenty of soap and water.
P333+P313: If skin irritation occurs: Get medical attention.
P363: Wash contaminated clothing before reuse.
P501: Dispose of contents and container in accordance with all local, regional, national and international regulations.

HMIS-RATINGS (SCALE 0 – 4)

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

Health = 2
Fire = 3
Reactivity = 0

NFPA RATING



3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	%w/w	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA			
			TLV mg/m^3	STEL mg/m^3	PEL mg/m^3	STEL mg/m^3	IDLH mg/m^3	OTHER mg/m^3
Aspartic Ester	136210-32-7	40 - 70	NE	NE	NE	NE	NE	NE
Aspartic Ester	136210-30-5	15 - 30	NE	NE	NE	NE	NE	NE
Dimethyl Glutarate	1119-40-0	7 - 13	NE	NE	NE	NE	NE	NE
Dimethly Adipate	627-93-0	3 - 7	NE	NE	NE	NE	NE	NE
Propylene Carbonate	108-32-7	3 - 7	NE	NE	NE	NE	NE	NE
Methyl Acetate	79-20-9	1 - 5	TWA 200 ppm	250 ppm	NE	ND	ND	NIOSH REL 250 ppm
Water and other ingredients. The other ingredients are each present in less than 1 percent concentration in this product.		Balance	The components present in the balance of this product do not contribute any significant, additional hazards. All hazard information pertinent to this product has been presented in the remaining sections of this Material Safety Data Sheet, per the requirements of Federal Occupational Safety and Health Hazard Communication Standard (29 CFR 1910.1200).					
VOC Component = 74 g/L			As Applied (Part of multi-component system) = 49 g/L					

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.
NOTE: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

4. FIRST-AID MEASURES

Most Important Symptoms(s)/Effect(s): Acute: May cause allergic skin reaction with symptoms of reddening, itching, swelling , and rash. May cause skin irritation with symptoms of reddening, itching, and swelling. May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling.

SKIN EXPOSURE: In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

EYE EXPOSURE: In case of contact, flush eyes with plenty of lukewarm water. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention if irritation develops.

INHALATION: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if irritation develops.

INGESTION: If ingested, do not induce vomiting unless directed to do so by medical personnel. Give two glasses of water for dilution. Call a physician immediately. Never give anything by mouth to an unconscious person.

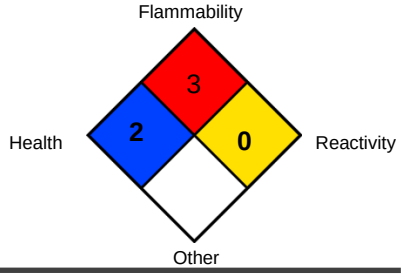
5. FIRE-FIGHTING MEASURES

FLASH POINT, °C (method): =24°C (75ºF) Closed Cup
AUTOIGNITION TEMPERATURE, °C: ND
FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): NE Upper (UEL): NE

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES
Foam: YES
Halon: ND
Carbon Dioxide: YES
Dry Chemical: YES
Other: Any "ABC" Class.

NFPA RATING



UNUSUAL FIRE AND EXPLOSION HAZARDS: Run-off from fire control may cause pollution. Keep fire-exposed containers cool with water spray to prevent rupture due to excessive heat. High pressure water hose may spread product from broken containers increasing contamination. If involved in a fire, this product may decompose to produce a variety of compounds (i.e. carbon monoxide, carbon dioxide, aldehydes, nitrogen oxides and compounds). Emergency responders must wear the proper personal protective equipment suitable for the situation to which they are responding. Products of combustion are irritating to the respiratory tract and may cause breathing difficulty. Symptoms may be delayed several hours or longer depending upon the extent of exposure.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move fire-exposed containers, if it can be done without risk to firefighters. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, discard or decontaminate fire response equipment before returning such equipment to service.

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

The proper personal protective equipment for incidental releases (e.g.-1 L of the product released in a well-ventilated area) use impermeable gloves, specific for the material handled, goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard-hat. Self Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, Select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

Absorb spilled liquid with polypads or other suitable absorbent materials. Neutralize residue with sodium bicarbonate and water rinse. Decontaminate the area thoroughly. Test area with litmus paper to confirm neutralization. Place all spill residue in a suitable container. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations (see Section 13, Disposal Considerations).

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Do not eat or drink while handling this material. Remove contaminated clothing immediately. Discard contaminated clothing items, or launder before re-use. Inform anyone handling such contaminated laundry of the hazards associated with this product. Use ventilation and other engineering controls to minimize potential exposure to this product.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Avoid breathing mists or sprays generated by this product. Use in a well-ventilated location.

For Non-Bulk Containers: Open containers slowly, on a stable surface. Containers of this product must be properly labeled. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Wash thoroughly after using this material. Storage areas should be made of fire-resistant materials. 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. Empty containers may contain residual liquid, therefore, empty containers should be handled with care.

Bulk Containers: All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

Tank Car Shipments: Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tank (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be clean and free of incompatible chemicals, prior to connection to the tank car or vessel. Valves and hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment before maintenance begins by a triple-rinse with water followed, if necessary, by using sodium bicarbonate and an additional rinse. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: If required use a corrosion-resistant ventilation system separate from other exhaust ventilation systems to ensure that there is no potential for overexposure to sprays, or mists of this product and that exposures are below those in section 2 (Composition and Information on Ingredients). Ensure eyewash/safety shower stations are available near areas where this product is used.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below exposure limits listed in Section 2 (Composition and Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, or applicable State regulations. If adequate ventilation is not available or if there is potential for airborne exposure above the exposure limits (listed in Section 2) a respirator may be worn up to respirator exposure limitations, check with respirator equipment manufactures recommendations/limitations. For a higher level of protection use positive pressure supplied air respiration protection or Self Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS:
Positive pressure, full-facepiece Self Contained Breathing Apparatus; or positive pressure, full-facepiece Self Contained Breathing Apparatus with an auxiliary positive pressure Self Contained Breathing Apparatus.

EYE PROTECTION: Splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

HAND PROTECTION: Wear appropriate gloves for routine industrial use. Use appropriate gloves for spill response, as stated in Section 6 of this MSDS (Accidental Release Measures).

BODY PROTECTION: Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from natural rubber are generally acceptable, depending upon the task.

For Routine Industrial Applications

Vapor Respirator

Safety Glasses

Safety Gloves

Synthetic Apron

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): ND
SPECIFIC GRAVITY (water = 1): 1.1 – 1.4
SOLUBILITY IN WATER: Not soluble.
VAPOR PRESSURE, mm Hg @ 20 °C: ND
ODOR : Low
EVAPORATION RATE (n-BuAc=1): ND
MELTING/FREEZING POINT: <-18°C (0°F)
BOILING POINT: ND
pH: Not Established
LOG WATER/OIL DISTRIBUTION COEFFICIENT: Not available.

APPEARANCE AND COLOR: This product is a pigmented liquid of various colors with a slightly ester odor.
HOW TO DETECT THIS SUBSTANCE (warning properties): ND

10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: Fire will produce carbon monoxide, carbon dioxide, oxides of nitrogen, amines and other aliphatic components which have not been determined.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product may react with oxidizers and isocyanates.
HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure or contact to high moisture, extreme temperatures and incompatible chemicals.

11. TOXICALOGICAL INFORMATION

TOXICITY DATA: Additional toxicology information for components greater than 1 percent in concentration is provided below

Toxicity Data for Aspartic Ester

Acute Oral Toxicity	LD50: >2,000 mg/kg (rat)	(Directive 67/548/EEC, Annex V, B.1.)
Acute Inhalation Toxicity	LC50: >4,224 mg/l, 4h (rat, male/female)	(OECD Test Guideline 403)
Acute Dermal Toxicity	LD50: >2,000 mg/kg (rat, male/female)	(Directive 67/548/EEC, Annex V, B.3.)
Skin Irritation	Slight irritant (rabbit)	(Test Guideline 404)
Eye Irritation	Slightly irritating (rabbit)	(Test Guideline 405)
Sensitization	Skin sensitization according to Magnusson/Kligmann (maximizing test): In the guinea-pig the product has a sensitizing effect. (OECD Test Guideline 406)	
	Maximisation Test (GPMT): sensitizer (Guinea pig, OECD Test Guideline 406)	
Repeated Dose Toxicity	29 days, oral: NOAEL: 1,000 mg/kg, (rate, male/female, daily)	
Mutagenicity	Genetic Toxicity in Vitro: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)	
	Genetic Toxicity in Vivo: Micronucleus test: negative (mouse, male/female, intraperitoneal)	
Toxicity to Reproduction/Fertility	Two generation study, oral, daily, (rat, male/female) NOAEL, (parental): 1,000 mg/kg, NOAEL (F1): 1,000 mg/kg, NOAEL (F2): 1,000 mg/kg	
Developmental Toxicity/Teratogenicity:	rat, female, Oral, NOAEL (teratogenicity): 1,000 mg/kg, NOAEL (maternal): 1,000 mg/kg	

Toxicity Data for Dimethyladipate (CAS 627-93-0)

Acute Oral Effects (LD50):	>5,000 mg/kg (rat)	
Acute Dermal Toxicity (LD50):	>1,000 mg/kg (rabbit)	OECD Test Guideline 402
Skin corrosion/irritation(Rabbit)	No skin irritation – 4 h	
Serious eye damage/eye irritation	No eye irritation	

Toxicity Data for Methyl Acetate (CAS 79-20-9)

Acute Oral Toxicity	LD50: 6,482 mg/kg (rat, male)	(OECD test Guideline 401)
Acute Inhalation Toxicity	LCO: 49 mg/l (rabbit, male/female) 4h (Method: Standard Acute)	
Acute Dermal Toxicity	LD50: >2,000 mg/kg (rat, male/female) (OECD Test Guideline 402)	
Skin corrosion/irritation	No skin irritation (rabbit) 4h (OECD Test Guideline 404)	

Serious Eye damage/irritation	Irritation to eyes (rabbit) 24h (Method: OECD Test Guideline 405	
Respiratory or skin sensitization	Result: Does not cause skin sensitization	
Germ Cell Mutagenicity	Genotoxicity vitro:	Result – negative (Ames test, species: Salmonella typhimurium with and without metabolic activation. OECD Test Guideline 471
	Genotoxicity in vivo:	Result – negative (In vivo micronucleus test, species: rat male and female, Cell type: bone marrow, Application Route: inhalation 28d OECD Test Guideline 474)

Toxicity Data for Propylene Carbonate (CAS 108-32-7)

Acute Oral Effects (LD50):	(Rat) >5000 mg/kg
Acute Dermal Toxicity (LD50):	(Rabbit) > 2,000 mg/kg
Acute Inhalation Toxicity (LD0):	
Skin irritation	
Eye irritation	
Sensitization (Dermal)	

SUSPECTED CANCER AGENT: The components of this product does not contain 0.1% or more of any substance found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, CAL/OSHA; and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This product is not reported to produce mutagenic effects in humans.
Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.
Teratogenicity: This product is not reported to cause teratogenic effects in humans.
Reproductive Toxicity: This product is not reported to cause reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

BIOLOGICAL EXPOSURE INDICES: Currently there are no Biological Exposure Indices (BEIs) associated with the components of this product.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE Skin disorders can be aggravated by over-exposure to this product. Inhalation of this products mists may aggravate respiratory conditions.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate over-exposure to this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION

Ecological Data for Aspartic Ester

Biodegradation*	13%, Exposure time: 28 d, i.e. not readily degradable
	0%, exposure time: 28 d, i.e. not inherently degradable
Bioaccumulation	value calculated, 1,872 BCF
Acute and Prolonged Toxicity to Fish*	LC50: 60 mg/l (Danio rerio (zebra fish), 96 h)
Acute Toxicity to Aquatic Invertebrates*	EC50: 88.6 mg/l (Daphnia magna (Water flea), 48 h)
Toxicity to Aquatic Plants*	IC50: 113 mg/l (Green algae (Scenedesmus subspicatus), 72 h)
Toxicity to Terrestial Plants*	NOEC: ≥100 mg/kg, End Point: seedling emergence (Allium copa (onion))
	NOEC: ≥100 mg/kg, End Point: seedling emergence (Avena sativa (oats))
	NOEC: ≥100 mg/kg, End Point: seedling emergence (Brassica napus (rape))
Toxicity to Microorganisms*	EC50: 3,110 mg/l, (activated sludge, 3 h)

*** Studies run on a comparable product**

Ecological Data for Methyl Acetate (79-20-9)

Biodegradability	Aerobic: Inoculum – Activated sludge, domestic, non adapted. Concentration: 3.6 mg/l. Result – Readily biodegradable. Biodegradation: 70% Exposure time 28 d. Method – OCED Test Guideline 301D
Toxicity to fish:	LC50: ≥ 250 mg/l 96 h (Danio rerio (zebra fish)) OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates:	EC50: 1,027 mgl 48 h (Daphnia magna (Water flea)) Static Test OECD Test Gudeline 202
Toxicity to algae:	EC50: > 120 mg/l 72 h (Desmodesmus subspicatus) Static Test IECD Test Guideline 201

Ecological Data for Dimethyladipate (627-93-0)

Toxicity to daphnia and other aquatic invertebrates:	EC50: = 72 mg/l 48 h (Daphnia magna (Water flea)) Static Test OECD Test Guideline 202
Toxicity to algae:	static test –Pseudokirchneriella subcapitata - > 100 mg/l – 72 h OECD Test Guideline 201

108-32-7 (Propylene Carbonate

Toxicity to Fish	
LC50: >1,000 mg/l 96 hr (Semi-static)	Carp (Cyprinus carpio)
Toxicity to Aquatic Invertebrates	
EC50: >1,000 mg/l 48 hr (Static)	Water flea (Daphnia magna)
Toxicity to Algae	
EC50: >900 mg/l 72 hr	Green Algae (Desmodismus subspicatus)
Toxicity to Bacteria	
EC10: 7,400 mg/l 16 hr	Pseudomonas putida

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Incineration is a preferred method. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

EPA WASTE NUMBER: NA

14. TRANSPORTATION INFORMATION

Department of Transportation

Name:	Paint Related Material
UN Number	UN1263
Class	3
Packing Group	III

IATA/IMDG

Name:	Paint Related Material
UN Number	UN1263
Class	3
Packing Group	III

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): 153
MARINE POLLUTANT: This product does not contain any components which are designated by the Department of Transportation to be Marine Pollutants. (49 CFR 172.101, Appendix B).

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

PASSENGER AIR MAX. QUANTITY: 60L
PASSENGER PACKING INSTRUCTIONS: 309
CARGO AIR – MAX. QUANTITY: 220L
CARGO AIR – PACKING INSTRUCTION: 310
Note: The latest DOT information is provided, please verify all DOT information as it subject to change without notice.

15. REGULATORY INFORMATION

SARA REPORTING REQUIREMENTS: The components of this product subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act are as follows.

Aspartic Ester	No	No	No

SARA Threshold Planning Quantity: Not applicable.

TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.
DOT REGULATED COMPONENT (RQ): Not regulated.

CERCLA REPORTABLE QUANTITY (RQ): Not regulated.
OTHER FEDERAL REGULATIONS: Not applicable.

STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below:

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Weight%	**Components**	**CAS No.**
3 - 7%	Methyl Acetate	79-20-9
3 – 7%	Propylene Carbonate	108-32-7

CALIFORNIA PROPOSITION 65: ⚠ The components of this product are not known to the state of California to cause cancer, birth defects or other reproductive harm. - Carcinogens

No Listings

Canadian DSL: All components of this product are on the Canadian DSL.

WHMIS Classification:
B3 - Flammable and combustible material - Combustible liquid

WHMIS Health Effects Criteria Met by this Chemical:
Does not meet criteria.

16. OTHER INFORMATION

PREPARED BY: BILL BEACH CROSSFIELD PRODUCTS CORP,

THIS INFORMATION IS DRAWN FROM RECOGNIZED SOURCES BELIEVED TO BE RELIABLE. CROSSFIELD PRODUCTS CORP. MAKES NO GUARANTEES NOR ASSUMES ANY LIABILITY IN CONNECTION WITH THIS INFORMATION. THE USER SHOULD BE AWARE OF CHANGING TECHNOLOGY, RESEARCH, REGULATIONS AND ANALYTICAL PROCEDURES THAT MAY REQUIRE CHANGES HEREIN. THE ABOVE DATA IS SUPPLIED UPON THE CONDITION THAT PERSONS WILL EVALUATE THIS INFORMATION AND THEN DETERMINE ITS SUITABILITY FOR THEIR USE.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:
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**. Skin adsorption effects must also be considered.
OSHA - U.S. Occupational Safety and Health Administration.
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 (Federal Register: 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. **O**ccupational **S**afety and **H**ealth **A**dministration (**OSHA**). NIOSH issues exposure guidelines called **R**ecommended **E**xposure **L**evels (**REL**s). When no exposure guidelines are established, an entry of **NE** is made for reference.

HMIS HAZARD RATINGS:
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime over-exposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime over-exposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100°F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]). Reactivity Hazard: **0** (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

NATIONAL 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 and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:
Much of the information related to fire and explosion is derived from the **N**ational **F**ire **P**rotection **A**ssociation (**NFPA**). 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.

TOXICOLOGICAL INFORMATION:
Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - 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/m^3** 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. Data from several sources are used to evaluate the cancer-causing potential of the material. The sources are: **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. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause death. **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.

REGULATORY INFORMATION:
This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Other acronyms used are: **Superfund Amendments and Reauthorization Act (SARA)**; the **Toxic Substance Control Act (TSCA)**; Marine Pollutant status according to the **DOT**; California's Safe Drinking Water Act (**Proposition 65**); the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund)**; and various state regulations. This section also includes information on the precautionary warnings which appear on the materials package label.