

CROSSFIELD PRODUCTS CORPORATION

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SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

<u>TRADE NAME (AS LABELED):</u>	MiraPrime MVERS, Part B
<u>CHEMICAL NAME/CLASS:</u>	Polyamine Solution
<u>PRODUCT USE:</u>	Specialty Flooring Curative
<u>SUPPLIER/MANUFACTURER'S NAME:</u>	Crossfield Products Corp.
<u>ADDRESS: (West Coast):</u>	3000 E. Harcourt St. Rancho Dominguez, CA 90221 (Headquarters)
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<u>DATE OF PREPARATION:</u>	June 9, 2009
<u>REVISION DATE:</u>	March 22, 2021

2. HAZARD(S) IDENTIFICATION



GHS Classification

Flammable Liquids – Category 4
 Skin Corrosion/irritation – Category 1B
 Serious Eye Damage/Eye irritation – Category 1
 Skin Sensitization – Category 1
 Specific target organ toxicity (Repeated Exposure) – Category 2
 Aquatic Hazard (Acute) – Category 1
 Aquatic Hazard (Long Term) – Category 1

Signal Word: (Danger)

Hazard Statements:

H227: Combustible Liquid
 H314: Causes severe skin burns and eye damage
 H317: May cause an allergic skin reaction

H373: May Cause damage to organs through prolonged or repeated exposure
 H410: Very toxic to aquatic life with long lasting effects

Precautionary Statements:

P210: Keep away from heat, sparks, open flames, and hot surfaces. No Smoking
 P260: Do not breathe dust/fume/gas/mist/vapors/spray
 P264: Wash hands thoroughly after handling
 P272: Contaminated work clothing should not be allowed out of the workplace.
 P273: Avoid release to the environment
 P280: Wear protective gloves (>8 hours breakthrough time, butyl rubber/ethyl vinyl alcohol laminate–EVAL), protective clothing, eye protection, face protection.
 P314: Get medical attention if you feel unwell
 P391: Collect spillage
 P301+P340+P310: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
 P301+P310+P330+P331: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353+P363+P310: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician
 P302+P352+P333+P313: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or a rash occurs: Get medical advice/attention.

P305+P351+P338+P310: IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing. Immediately call a POISON CENTER or doctor/physician.

P403: Store in a well ventilated place.

P235: Keep cool

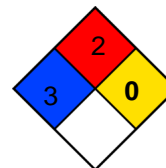
P501: Dispose of contents and container in accordance with all local, regional, national and international regulations

HMIS-RATINGS (SCALE 0 – 4)

HEALTH	3
FLAMMABILITY	2
REACTIVITY	0

Health = 3
Fire = 1
Reactivity = 0

NFPA RATING



EMERGENCY OVERVIEW: Danger! Combustible liquid and Vapor. Causes eye and skin burns. Harmful if absorbed through skin. Causes respiratory tract irritation. May cause allergic skin reaction. May be harmful if swallowed. Contains material that may cause target organ damage, based on animal data.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant route of occupational overexposure is contact with skin. The symptoms of overexposure to this product are as follows:

INHALATION: If mists or sprays of this solution are inhaled, this product may cause pulmonary irritation, irritation of the mucus membranes, runny nose, coughing, and a sore throat.

CONTACT WITH SKIN or EYES: Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and injure eye tissue. Prolonged or repeated skin contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, burns and other skin damage. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects), and numbness. Passage of this material into the body through the skin is possible, and may add to toxic effects from breathing or swallowing.

INGESTION: Though ingestion is not anticipated to be a significant route of over-exposure to this product, if ingestion does occur, burning and irritation of the mouth, throat, esophagus, and other tissues of the digestive system will occur upon contact.

INJECTION: Though injection is not anticipated to be a significant route of over-exposure to this product, if it occurs, local reddening, tissue swelling, and discomfort may result.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**.

ACUTE: This solution is corrosive, and can burn and damage eyes, skin, mucous membranes, and any other exposed tissue. If inhaled, irritation of the respiratory system may occur, with coughing, and breathing difficulty

CHRONIC: Repeated skin contact with this product may result in dermatitis (inflammation and reddening of the skin)

3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% w/w	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA		IDLH mg/m ³	OTHER mg/m ³
			TLV mg/m ³	STEL mg/m ³	PEL mg/m ³	STEL mg/m ³		
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	186321-96-0	60 - 100	NE	NE	NE	NE	NE	NE
Benezenemethanol	100-51-6	13 - 30	NE	NE	NE	NE	NE	NE
3-aminopropyldimethylamine	109-55-7	3 - 7	NE	NE	NE	NE	NE	NE
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	3 - 7	NE	NE	NE	NE	NE	MFR TLV 5 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 = 0 g/L			As Applied (Part of multi-component system) = 2 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

SKIN EXPOSURE: For Skin contact, if available, wash with large amounts of running water and soap for 15 minutes. Remove contaminated clothing and shoes. Get immediate medical attention. Discard or decontaminate clothing before re-use, and destroy contaminated shoes.

EYE EXPOSURE: For eye contact, immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. If physician is not available, flush for an additional 15 minutes. Get immediate medical attention.

INHALATION: Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. In the event of any complaints or symptoms, avoid further exposure.

INGESTION: If swallowed, immediately give at least 3-4 glasses of water, but do not induce vomiting. If vomiting occurs, give fluids again. Do not give anything by mouth to an unconscious or convulsing person. Get immediate medical attention. Have physician determine whether vomiting or stomach evacuation is necessary.

5. FIRE-FIGHTING MEASURES

FLASH POINT, °C (method): 76°C (169°F) 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

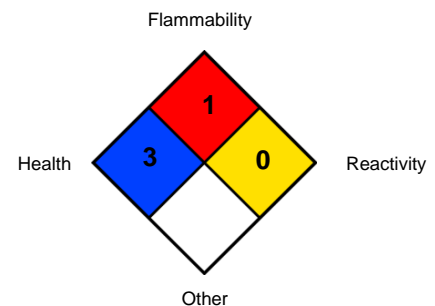
Halon: ND

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.



Vapor Respirator



Safety Glasses



Safety Gloves



Synthetic Apron

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): ND

SPECIFIC GRAVITY (water = 1): 1.01

SOLUBILITY IN WATER: Slightly soluble.

VAPOR PRESSURE, mm Hg @ 21 °C: ND

ODOR: Amine

LOG WATER/OIL DISTRIBUTION COEFFICIENT: Not available.

APPEARANCE AND COLOR: This product is a pale yellow liquid solution

HOW TO DETECT THIS SUBSTANCE (warning properties): Litmus paper will turn blue upon contact with this solution

EVAPORATION RATE (n-BuAc=1): ND

MELTING/FREEZING POINT: Not established.

BOILING POINT: Not established

pH: >7 (Alkaline)

10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: Thermal decomposition products of this solution can include a variety of compounds. (i.e. carbon monoxide, carbon dioxide, aldehydes, nitrogen oxides and other compounds).

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product reacts with strong oxidizers and acids

HAZARDOUS POLYMERIZATION: Will not occur by itself. Considerable exothermic reaction with epoxy resins is possible.

CONDITIONS TO AVOID: Avoid exposure or contact to extreme temperatures and incompatible chemicals i.e. mineral acids, organic acids, oxidizing agents and reactive metals.

11. TOXICOLOGICAL INFORMATION

Potential acute health effects

Inhalation : Irritating to respiratory system.
 Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.
 Skin : Corrosive to the skin. Causes burns. Toxic in contact with skin. May cause sensitization by skin contact.
 Eyes : Corrosive to eyes. Causes burns.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
3-aminopropyldimethylamine	LD50 Dermal	Rabbit-Male Female	2140 mg/kg	-
	LD50 Oral	Rat	1600 mg/kg	-
	LC50 Inhalation Vapor	Rat-Male Female	24.8 mg/L	4 hours

Chronic toxicity

Product/ingredient name	Result	Species	Dose	Exposure
3-aminopropyldimethylamine	Sub-acute NOAEL Oral	Rat-Male Female	50 mg/kg/d	28 days
	2,4,6-tris(dimethylaminomethyl)phenol	Sub-acute NOEL :Oral	Rat-Male Female	15 mg/kg 43 days: 7 days per week

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,4,6-tris(dimethylaminomethyl)phenol	Eyes-Corrosive	Rabbit	-	-	-
	Skin-Corrosive	Rabbit	-	-	-

Skin : **2,4,6-tris(dimethylaminomethyl)phenol:** Corrosive to the skin.
Eyes : **2,4,6-tris(dimethylaminomethyl)phenol:** Corrosive to eyes.

Sensitizer

Product/ingredient name	Route of Exposure	Species	Result
3-aminopropyldimethylamine	skin	Guinea pig	Sensitizing
2,4,6-tris(dimethylaminomethyl)phenol	skin	Guinea pig	Sensitizing

Mutagenicity

Product/ingredient name	Test	Experiment	Result
3-aminopropyl dimethylamine	-	Experiment : in vitro Subject: Bacteria Metabolic activation: +/-	Negative
	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Negative
	OECD 473 <i>In Vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Human Metabolic activation: +/-	Negative
	OECD 474 Mammalian <i>Erythrocyte Micronucleus</i> Test	Experiment: In vivo Subject: Mammalian-Animal	Negative

Conclusion/Summary : 2,4,6-tris(dimethylaminomethyl)phenol: Not mutagenic in a standard battery of genetic toxicological tests.

Reproductive toxicity

Product/ingredient name	Maternal Toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
2,4,6-tris(dimethylaminomethyl)phenol	-	-	-	Rat-Male Female	Oral: NOAEL	43 days: 7 days per week

Potential chronic health effects

Chronic effects	: Contains material that may cause target organ damage, based on animal data. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Target organs	: Contains material which may cause damage to the following organs: central nervous system (CNS)
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure

Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

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

*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.*

12. ECOLOGICAL INFORMATION

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/Ingredient name	Test	Result	Species	Exposure
Benzyl Alcohol	OECD 202 <i>Daphnia sp.</i> Acute Immobilisation Test	Acute EC50 230 Mg/L Fresh water	Daphnia- Daphnia magna	48 hours
	OECD 201 Alga, Growth Inhibition Test	Acute EgC50 770 mg/L Fresh water	Algae	72 hours Static
	EPA OPPTS	Acute LC50 460 Mg/L Fresh water	Fish – Fathead minnow (Pime- phales promelas	96 hours Static
	OECD 201 Alga, Growth Inhibition Test	Chronic NOEC 310 mg/L Fresh water	Algae	72 hours Static
	OECD 211 <i>Daphnia Magna</i> Reproduction Test	Chronic NOEC 51 mg/L Fresh water	Daphnia	21 days Semi- static
3-aminopropydimethylamine	-	Acute EC50 59.5 Mg/L Fresh water	Daphnia	48 hours Static
	DIN	Acute EbC50 (biomass) 53.5 mg/L Fresh water	Algae – Green	72 hours Static
	DIN 38412 Part 15	Acute LC50 122 mg/L Fresh water	Fish	96 hours Static
2,4,6-tris(dimethylaminomethyl)phenol	OECD 201 Alga, Growth Inhibition Test	Acute EC50 84 mg/L Fresh water	Algae	72 hours Static
		Acute LC50 718 mg/L Marine water	Daphnia	96 hours Static
		Acute LC50 175 mg/L Fresh Water	Fish	96 hours Static

Benzyl Alcohol: Not toxic or harmful to aquatic organisms.

Biodegradability

Product/Ingredient name	Test	Result	Dose	Inoculum
3-aminopropydimethylamine	-	>60% - Readily - 28 days	-	Activated Sludge
2,4,6-tris(dimethylaminomethyl)phenol	OECD 301D Biodegradability – Closed Bottle Test	4% - Not readily	2 mg/L	Activated Sludge

Other ecological information

Biological Oxygen Demand (BOD 5 DAY) : Not Determined
Chemical Oxygen Demand (COD) : Not Determined

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
3-aminopropydimethylamine	-	-	Readily
2,4,6-tris(dimethylaminomethyl)phenol	-	-	Not Readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
3-aminopropyldimethylamine	-0.352	-	low
2.4.6-tris(dimethylaminomethyl)phenol	.0219	-	low

Other adverse effects : No known significant effects or critical hazards
 PBT : Not applicable.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. It 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:

Proper Shipping Name: Paint related material
 Class: 8
 UN/ID No.: UN3066
 Packing Group: II



The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes.

IMDG Shipping Data:

Proper Shipping Name: Paint related material
 Class: 8
 UN/ID No.: UN3066
 Packing Group: II
 Marine Pollutant: Yes



Emergency Schedules (EMS)
 F-A, S-B

The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg

IATA:

Proper Shipping Name: Paint related material
 Class: 8
 UN/ID No.: UN3066
 Packing Group: II



Passenger and Cargo Aircraft
 Quantity limitation: 1 L
 Packaging Instructions: 851
Cargo Aircraft Only
 Quantity limitation: 30 L
 Packaging Instructions: 855

TDG

Proper Shipping Name: Paint related material
 Class: 8
 UN/ID No.: UN3066
 Packing Group: II
 Marine Pollutant: Yes



The marine pollutant mark is not required when transported by road or rail.

15. REGULATORY INFORMATION

OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

SARA REPORTING REQUIREMENTS: The components of this product are not subject to the reporting requirements of Sections 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

SARA Threshold Planning Quantity: Not applicable.

TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

CERCLA REPORTABLE QUANTITY (RQ): None

OTHER FEDERAL REGULATIONS: Not applicable.

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

New Jersey Right-to-know: The following is required composition information:

CAS Number: 109-55-7
Chemical Name: 1,3-Propanediamine, N,N-dimethyl

Pennsylvania Right-to-know: The following is required composition information:

CAS Number: 109-55-7
Chemical Name: 1,3-Propanediamine, N,N-dimethyl
Comment: Hazardous Substance.

CAS Number: 100-51-6
Chemical Name: Benzenemethanol
Common Name: Benzyl Alcohol
Comment: Hazardous Substance.

CALIFORNIA PROPOSITION 65: Not listed.

Canadian DSL: All components of this product are on the Canadian DSL except CAS 186321-96-0 which is on the NDSL

WHMIS

B3 – Flammable and combustible material – combustible liquid
D2B - Poisonous and infectious material - Other effects - Toxic
E - Corrosive material



B3 – Combustible Liquid



D2B – Toxic



E – Corrosive

WHMIS Health Effects Criteria Met by this Chemical:

D2B - Eye irritation - toxic - other

E - TDG class 8 - corrosive substance

WHMIS Ingredient Disclosure List:

Included for disclosure at 1% or greater

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. 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** 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]) and boiling 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 **National Fire Protection Association (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: **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. 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 **TDL_o**, the lowest dose to cause a symptom and **TCL_o** 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.