

# Crossfield Products Corp.

3000 E. Harcourt St  
Rancho Dominguez, CA 90221  
310-886-9100  
CHEMTREC: 800-424-9300

## MATERIAL SAFETY DATA SHEET

PREPARATION DATE: 11/21/14

### I. PRODUCT IDENTIFICATION

PRODUCT NAME: MiraThane 100 CRU Part A  
PRODUCT NUMBER: 7128-  
CHEMICAL FAMILY: POLYESTER POLYOL IN ORGANIC SOLVENT

### II. HAZARDOUS INGREDIENTS

Ingredient Name	CAS Number	Concentration(%)
Propylene Glycol Monomethyl Ether Acetate	108-65-6	20-45%
Benzene, 1-Chloro-4(trifluoromethyl)-	98-56-6	10-25%
Proprietary Ingredients		10-25%
Methyl Acetate	79-20-9	10-25%

#### EMERGENCY OVERVIEW

**WARNING:** Color: Cloudy Form: Liquid Odor: Solvent  
Flammable. May cause eye, skin, and respiratory tract irritation. Also harmful by inhalation and if swallowed. Vapors may travel to areas away from worksite before igniting/flashing back to vapor source. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Closed container may forcibly rupture under extreme heat. Toxic fumes are produced during a fire situation when product is combined with phosphorus-containing material. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal. May affect nervous system.

#### Potential Health Effects

Primary Route of Entry: Skin Contact, Eye Contact, Ingestion, Inhalation

#### Medical Conditions Aggravated

By Exposure: Skin disorders, Respiratory disorders, Eye disorders

#### NFPA 704M Rating

Health	2
Flammability	3
Reactivity	0
Other	

0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

\*= Chronic Health Hazard

#### HMIS Rating

Health	2*
Flammability	3
Physical Hazard	0

0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

\* = Chronic Health Hazard

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**III. PHYSICAL PROPERTIES**

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<b>Physical Form:</b>	<b>Liquid</b>
<b>Color:</b>	<b>Cloudy</b>
<b>Odor:</b>	<b>Solvent</b>
<b>Boiling Point:</b>	<b>Begins at 137.8°C (180°F) Estimated based on components</b>
<b>Melting/Freezing Point:</b>	<b>Not Established</b>
<b>Solubility in Water:</b>	<b>Insoluble</b>
<b>Specific Gravity:</b>	<b>1.1 @ 77° F (25° C)</b>
<b>Bulk Density:</b>	<b>9.2 lbs/gal</b>
<b>% Volatile By Volume:</b>	<b>Approximately 29%</b>
<b>Vapor Pressure:</b>	<b>3.7 mmHg (PMA) @ 20°C (68°F)</b>

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**IV. FIRE AND EXPLOSION DATA**

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**Flash Point:** 122.0° F (50.0° C) Setaflash (ASTM D-3243, D-3278, D-3828)

**Flammable Limits:**

Upper Explosive Limit (UEL) (%): 13.1% @ 283° F PMA

Lower Explosive Limit (LEL) (%): 1.3% @ 173° F PMA

**Extinguishing Media:** All extinguishing media are suitable.

**Special Fire Fighting Procedures:**

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water to cool fire-exposed containers to minimize risk of rupture.

**Unusual Fire/Explosion Hazards:**

Flammable Liquid. Vapors may spread long distances and ignite. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. If this polyol is combined with phosphorus compounds, trimethylolpropanesphosphate (TMPP), a known neurotoxin, can be given off in the event of a fire. Therefore, we do not recommend mixing this polyol with phosphorus compounds.

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**V. HUMAN HEALTH DATA**

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**Route(s) of Entry:** Inhalation, Skin Contact, Eye

**Human Effects and Symptoms of Overexposure:**

**Acute Inhalation:** Solvent vapors are irritating to the eyes, nose, throat and respiratory tract resulting in red, itchy eyes, dryness of the throat and tightness in the chest. Other possible symptoms of overexposure include headache, nausea, narcosis, fatigue and loss of appetite.

**Chronic Inhalation:** Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage. Symptoms include loss of memory, loss of intellectual ability, and loss of coordination.

**Acute Skin Contact:** Repeated or prolonged skin contact with the solvent can result in dry, defatted and cracked skin causing increased susceptibility to infection. In addition, dermatitis and skin rash and redness may occur from skin contact. Solvents may penetrate the skin causing effects similar to those identified under acute inhalation symptoms.

**Chronic Skin Contact:** Chronic skin exposure to the solvent may cause effects similar to those identified under chronic inhalation effects.

**Acute Eye Contact:** Liquid, aerosols or vapors are severely irritating and can cause pain, tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible.

**Chronic Eye Contact:** Prolonged vapor contact may cause conjunctivitis.

**Acute Ingestion:** Can result in irritation in the digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. Vomiting may cause aspiration of solvent resulting in chemical pneumonitis.

**Chronic Ingestion:** Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage.

**Carcinogenicity:** This product is not listed by NTP, IARC or regulated as a carcinogen by OSHA.

## VI. EMERGENCY AND FIRST AID PROCEDURES

**First Aid for Eyes:** Flush with clean, lukewarm water (low pressure) for at least 15 minutes while occasionally lifting eyelids. Obtain medical attention if irritation persists.

**First Aid for Skin:** Remove contaminated clothing and wash affected areas thoroughly with soap and water. Wash contaminated clothing before reuse.

**First Aid for Inhalation:** Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention.

**First Aid for Ingestion:** DO NOT INDUCE VOMITING. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult physician.

## VII. EMPLOYEE PROTECTION RECOMMENDATIONS

**Industrial Hygiene/Ventilation Measures:** General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent the build up of explosive atmospheres and to prevent off gases from entering the workplace.

**Eye Protection Requirements:** Liquid chemical goggles in combination with a full-face shield. Contact lenses should not be worn.

**Skin Protection Requirements:** Permeation resistant gloves (butyl rubber, nitrile rubber). Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered only by the cream to a minimum.

**Respiratory/Ventilation Requirements:** The use of a positive pressure supplied air respirator is mandatory when: airborne concentrations are not known; airborne solvent levels are 10 times the appropriate TLV; spraying is performed in a confined space or area with limited ventilation.

**Additional Protective Measures:** Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eyewash stations should be available.

## VIII. REACTIVITY DATA

<b>Stability:</b>	This is a stable material.
<b>Hazardous Polymerization:</b>	Will not occur.
<b>Incompatibilities:</b>	Heat, flames and sparks.
<b>Instability Conditions:</b>	None determined.
<b>Decomposition Products:</b>	By fire and thermal decomposition: CO, CO <sub>2</sub> , oxides of nitrogen (NO <sub>x</sub> ), dense black smoke, other undetermined compounds

## IX. SPILL AND LEAK PROCEDURES

**Spill or Leak Procedures:** Cleanup personnel must use appropriate personal protective equipment. Remove all sources of ignition, including flames, heat and sparks. Dike or dam spilled material and control further spillage, if possible. Do not allow spilled material or wash water to enter sewers,

surface waters, or groundwater systems. Cover spill with inert material (e.g., dry sand or earth) and collect for proper disposal. Wash spill are with soap and water.

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## X. SPECIAL PRECAUTIONS & STORAGE DATA

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**Storage Temperature (Min/Max):** 32°F (0°C)/122°F (50°C)

**Shelf Life:** 12 months at 77°F (25°C) in closed original container.

**Handling/Storage Precautions:** Keep away from heat, sparks and open flames. Ground and bond containers and equipment before transferring to avoid static sparks. Do not breathe vapors or spray mist. Avoid contact with eyes. Avoid contact with skin or clothing. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

**Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

**Empty Container Precautions:**

Do not heat or cut container with electric or gas torch. Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Label precautions also apply to this container when empty.

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## XI. SHIPPING INFORMATION

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**LAND TRANSPORT (DOT)**

<b>Proper Shipping Name:</b>	<b>Resin solution</b>
<b>Hazard Class or Division:</b>	<b>3</b>
<b>UN/NA Number:</b>	<b>UN1866</b>
<b>Packaging Group:</b>	<b>PG III</b>
<b>Hazard Label(s):</b>	<b>Flammable Liquid</b>
<b>Hazard Placard(s):</b>	<b>Flammable Liquid</b>

**SEA TRANSPORT (IMO/ IMDG CODE) (OCEAN)**

<b>Proper Shipping name:</b>	<b>Resin solution</b>
<b>Hazard Class Division Number:</b>	<b>3</b>
<b>UN Number:</b>	<b>UN1866</b>
<b>Packaging Group:</b>	<b>III</b>
<b>Hazard Label(s):</b>	<b>Flammable Liquid</b>
<b>Hazard Placard(s):</b>	<b>Flammable Liquid</b>

**AIR (ICAO/ IATA)**

<b>Proper Shipping Name:</b>	<b>Resin solution</b>
<b>Hazard Class Division Number:</b>	<b>3</b>
<b>UN Number:</b>	<b>UN1866</b>
<b>Packing Group:</b>	<b>III</b>
<b>Hazard Label(s):</b>	<b>Flammable Liquid</b>

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**XII. ECOLOGICAL DATA**


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**Ecological Data for Propylene Glycol Monomethyl Ether Acetate****Biodegradation**

Acrobic, 100 %, Exposure time: 8 days

**Acute and Prolonged Toxicity to Fish**LC50: 11 mg/l (Fathead minnow (*Pimephales promelas*), 96 hrs.)**Acute Toxicity to Aquatic Invertebrates**EC50: 408 mg/l (Water flea (*Daphnia magna*), 48 hrs)

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**XIII. FEDERAL REGULATORY INFORMATION**


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<b>OSHA Status:</b>	This product is hazardous under the criteria of the Federal OSHA Hazard communication Standard 29 CFR 1910.1200.
<b>TSCA Status:</b>	On TSCA Inventory
<b>CERCLA Reportable Quantity:</b>	None Reported
<b>SARA Title III:</b>	
Section 302	US EPA Emergency Planning and Community Right-To Know Act (EPCRA) Extremely hazardous Substance (40 CFR 355, Appendix A) Components: None
Section 311/312 Categories:	Acute Health Hazard, Chronic Health Hazard, Fire Hazard
Section 313 Toxic Categories:	None
<b>RCRA Status:</b>	When discarded in its purchased form, this product meets the criteria of ignitability, and should be managed as a hazardous waste (EPA Hazardous Waste Number D001). (40 CFR 261.20-24)

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**XIV. OTHER REGULATORY INFORMATION**


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**State Right-To-Know Information:** The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

**Massachusetts, New Jersey or Pennsylvania Right-To-Know Substance Lists:**

<u>COMPONENT NAME</u>	<u>WEIGHT</u>	<u>CAS-NO.</u>
Propylene Glycol Monomethyl Ether Acetate	25-50%	108-65-6
Polyester Polyol	>=1%	67815-82-1
Benzene, 1-Chloro-4-(trifluoromethyl)-	10-25%	98-56-6

**WARNING: Prop 65**

This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

<u>Cas #</u>	<u>Chemical Name</u>	<u>%</u>
95-63-6	Trimethylbenzene	Trace

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