



MapleSolutions

3019 Lake Road, Dollard Des Ormeaux, QC, H9B 2R3 Canada - Tel : 1 (514) 472 0094 www.maplechemicals.com

Material Safety Data Sheet

1 - Product and company information

Product: MA-LINK CCR

MSDS No: 96-064A

SUPPLIER: MAPLE SOLUTIONS INC

Address: 3019 Lake Road Dollard Des Ormeaux, QC
H9B 2R3 Canada
514-472-0094

In case of emergency call Maple: +1-514-472 0094

Product description

Crosslinker for coatings

2 - Composition / information on ingredients

Chemical Name	CAS Number	Weight	% Less Than
Water	0007732-18-5		64
Polymer/solids	Proprietary		29
Ethylene Glycol(1,2Ethanediol)	0000107-21-1		7.0

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, nonhazardous, and/or present at amounts below reportable limits.

Notes:

No Additional Information

3 - Hazards identification

Emergency overview

See below for product details

Acute health effects

Vapors or direct eye contact may cause irritation. Repeated or prolonged skin contact may cause irritation. Ingestion may cause irritation. Inhalation may cause irritation of the respiratory tract and mucous membranes. ETHYLENE GLYCOL: May cause eye and skin irritation with symptoms such as stinging, tearing, swelling and redness. Exposure to high concentrations may cause nausea, vomiting, dizziness, drowsiness, weakness, headache and other central nervous system effects.

Chronic health effects

ETHYLENE GLYCOL: Overexposure has been suggested as a cause of kidney damage, liver damage and reproductive effects.

Signs/Symptoms of exposure

Irritation

Routes of exposure/entry

Skin Contact, Inhalation, Ingestion, Eye Contact

Target organs

Eyes, Respiratory tract, Skin

Medical conditions aggravated by exposure

Pre-existing skin problems may be aggravated by prolonged or repeated contact. Persons with sensitive airways (e.g., asthmatics) may react to vapors.

Carcinogenic status

The components of this mixture are not known to be listed or regulated by IARC, NTP, OSHA or ACGIH.

Reproductive effects

None Expected

4 - First aid measures

If irritation or other symptoms (as noted above) occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

Eye contact

Immediately flush eyes with plenty of clean water for an extended time, not less than five (5) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion.

Skin contact

Wash the affected area thoroughly with plenty of water and soap.

Inhalation

If affected, remove to fresh air. If not breathing, give artificial respiration. See a physician.

Ingestion

Treat symptomatically. See a physician.

Notes to physician

No Additional Information

5 - Fire fighting measures

NFPA flammability class: N/A

Flash point: >100°C Pensky-Marten Closed Cup

Explosive range: LEL Not Available
UEL Not Available

Notes: No Additional Information



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Fire and explosive properties

This product is not known to present any fire hazard.

Extinguishing media

Being an aqueous system, product is not a fire hazard, as supplied. After water is evaporated, dry solids could burn. Water spray, ABC dry chemical and protein type air foams are effective. Carbon dioxide may be ineffective on larger fires due to a lack of cooling capacity, which may result in reignition.

Fire fighting instructions

Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressuredemand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

Unusual fire/explosion hazards

Closed container may rupture (due to build up in pressure) when exposed to extreme heat. Irritating and toxic substances will be emitted upon combustion, burning or decomposition of the dry solids. None known for the product as delivered (water solution).

6 - Accidental release measures

Containment techniques

Contain spill. If spilled in an enclosed area, ventilate.

Clean-up techniques

Wear proper personal protective clothing and equipment. Do not flush liquid into public sewer, water systems or surface waters. Soak up large spill residue and small spills with an inert absorbent. Place into labeled, closed container; store in safe location to await disposal. Wash the spill area with soap and water. Change contaminated clothing and launder before reuse. CAUTION: Spilled liquid and dried film are slippery. Use care to avoid falls.

Evacuation instructions

Not Applicable

7 - Handling and storage

Handling

Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid inhalation of aerosol, mist, spray, fume or vapor. Avoid drinking, tasting, swallowing or ingesting this product. Provide eyewash fountains and safety showers in the work area.

Storage

Keep container closed when not in use. Do not store in open, unlabeled or mislabeled containers. Do not reuse empty container without commercial cleaning or reconditioning.

8 - Exposure controls / personal protection

Chemical Name

ACGIH -TWA----- ACGIH -STEL----- OSHA -TWA----- OSHA -TEL



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Water	N/E	N/E	N/E	N/E
Polymer/solids	N/E	N/E	N/E	N/E
Ethylene Glycol (1,2Ethanediol)	N/E	100.00 mg/m3 (c)	N/E	50.00 ppm (c)

Notes: No Additional Information

Engineering controls

Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS. Ventilation guidelines/techniques may be found in publications such as Industrial Ventilation: American Conference of Governmental Industrial Hygienists, 1330 Kemper Meadow Drive, Cincinnati, OH, 45240-1634, USA.

Eye/face protection

Safety glasses or goggles required.

Skin protection

Wear protective gloves.

Respiratory protection

Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the exposure limit(s) of any chemical substance listed in this MSDS. Use respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29CFR).

General protection

No Additional Information

9 - Physical and chemical properties

Form	Liquid
pH	6.0 - 8.0
Appearance	White
% Volatile by weight	65% - 69%
Odor	Acrid
Specific gravity	1.02 - 1.08
Solubility in water	Dilutable
VOC	<7.0
Evaporation rate	Slower than n-butyl acetate
Vapor pressure	Not Available
Boiling point °F	>212°
Boiling point °C	100°
Melting point	Not Available
Vapor density	Not Available
Partition coefficient	Not Available

Notes: No Additional Information



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10 - Stability and reactivity

Stability Hazardous polymerization

This product is stable.

Hazardous polymerization will not occur

Notes:

No Additional Information

Conditions to avoid

Do not freeze.

Incompatibility with other materials

No specific incompatibilities. Materials which are not compatible with water will not be compatible with this product. Substances that are not compatible with ordinary organic compounds (such as strong oxidizers) will not be compatible with this product. Contamination with strong acids and bases may coagulate latex.

Hazardous decomposition products

After water is evaporated, decomposition or combustion of the dry solids may generate irritating vapors, CO, CO₂, oxides of nitrogen, monomers and hydrocarbons.

Additional reactivity / stability information

None

Thermal processing emissions

Not Applicable

11 - Toxicological information

Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

Chemical Name	LC50 Inhalation	Species LD50 Oral	Species LD50 Skin Species
Water	N/E	N/E	N/E
Polymer/solids	N/E	N/E	N/E
Ethylene Glycol(1,2Ethanediol)	N/E	4000.00 mg/kg Rat/ adult	>20.00 mL/kg Rabbit/adult

As with all chemicals for which test data are limited or do not exist, caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure

No toxicity studies have been conducted on this product.

ETHYLENE GLYCOL: In pregnant laboratory animals, the oral administration of ethylene glycol caused birth defects in the offspring. These effects were not seen when ethylene glycol was administered by dermal application or by inhalation. Continuous ingestion of a diet containing 1% or 2% ethylene glycol for two years produced liver and kidney damage and bladder stones in rats

12 - Ecological information



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No ecological testing has been conducted on this product.

ETHYLENE GLYCOL is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species). Bioconcentration potential is low. Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%).

Notes: No Additional Information

13 - Disposal information

Incinerate waste product when in liquid form (i.e., as supplied) in a properly permitted (approved) incineration facility in accordance with federal, state and local regulations. Liquids cannot be disposed of in a landfill. Liquid product generally requires some pre-disposal treatment to separate the liquid from the polymeric portion. Typically, this is done by coagulating the polymer and removing the liquid. The liquid portion may be discharged to an industrial or public treatment works with approval of appropriate permitting authorities. Solid products can be sent to an approved landfill, or preferably incinerated.

US RQ

Chemical Name	-- lbs	-- -- kg --
Ethylene Glycol(1,2Ethenediol)	5000.00	2272.73

14 - Transportation information

UN/NA Number:	N/A
Hazard Class:	N/A
IMDG Class:	N/A
Packing Group:	N/A
ICAO/IATAClass:	N/A
TDG Class:	N/A

Name of Material: Not regulated

Notes: No Additional Information

15 - Regulatory information

This MSDS has been prepared in accordance with the hazard criteria of the OSHA Hazard communication Standard, 29 CFR 1910.1200

U.S. Toxic Substances Control Act:

All components of this product are either listed on the U.S. Toxic Substances Control Act (TSCA) inventory of chemicals or are otherwise compliant with TSCA regulations.

U.S. CERCLA – SARA:

SARA Title III Section 312 Hazard Category (40 CFR 311/312):

Not Hazardous

SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372:

Chemical Name	CAS #
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Ethylene Glycol(1,2Ethanediol) 0000107-21-1

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:
None known to be present or none in reportable amounts for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards:

None known to be present or none in reportable amounts for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

The chemical identity of some or all components present is confidential business information (trade secret) and is being withheld as permitted by 29CFR1910.1200 (i).

Canadian Domestic Substances List (DSL):

All components in this product are on the Canadian Domestic Substances List (DSL) or are exempt from listing.

Canadian Ingredient Disclosure List:

The following components are on the Canadian Ingredient Disclosure List (WHMIS):

None Listed

Canadian WHMIS Class:

Not controlled

Notes: No Additional Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16 - Other information

Notes: No Additional Information

Key: 0=Insignificant; 1=Slight; 2=Moderate; 3=High; 4=Extreme

HMIS Rating

NFPA Rating

Health: 1 Flammability: 1 Reactivity: 1 Personal Protection: X

Health: 1 Flammability: 1 Reactivity: 1

Hazardous Materials Identification System (HMIS), National Paint and Coating Assn. rating applies to product "as packaged" (i.e., ambient temperature). Ratings are based upon HMIS® Rating Manual 1984. Values do not reflect HMIS® III.

National Fire Protection Association (NFPA) rating identifies the severity of hazards of material during a fire emergency (i.e., "on fire").

Legend:

ACGIH: American Conference of Governmental Industrial Hygienists

A1: Confirmed human carcinogen

A2: Suspected human carcinogen

A3: Animal carcinogen

CAS No: Chemical Abstract Service Registry Number

IARC: International Agency for Research on Cancer

Group 1: Carcinogenic to humans

Group 2A: Probably carcinogenic to humans

Group 2B: Possibly carcinogenic to humans

Group 3: Unclassified as a carcinogen to humans

MSHA: Mine Safety and Health Administration

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

N/A: Not Applicable

N/E: None Established

OSHA Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

PNOC: Particulates Not Otherwise Classified

RTK: Right To Know

STEL: Short Term Exposure Limit (15 minute Time Weighted Average)

TLV: Threshold Limit Value

C: Ceiling Limit

S: Skin notation refers to the potential significant contribution to the overall exposure by the cutaneous route including mucous membranes and the eyes and by direct skin contact with the substance

WHMIS: Canadian Workplace Hazardous Materials Information System