



EUCO # 452 EPOXY SYSTEM MV

Version 1

Print Date 10/22/2008

REVISION DATE: 06/13/2005

This is a kit that contains the following components:

EUCO 452/352 MV PART A

EUCO 452 LV/MV PART B



EUCO 452/352 MV PART A

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SECTION 1 - PRODUCT IDENTIFICATION

Trade name : EUCO 452/352 MV PART A
 Product code :
 COMPANY : Euclid Chemical Company
 19218 Redwood Road
 Cleveland, OH 44110
 Telephone : 1-800-321-7628
 Emergency Phone: : U.S. only: 1-800-255-3924
 International Users Call Collect: 1-813-248-0585

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview

White. Liquid solution. Vapor may irritate respiratory tract. May cause nausea, headaches, and dizziness. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry

Inhalation : Vapor may irritate respiratory tract. May cause nausea, headaches, and dizziness.
 Eyes : Direct contact may cause mild irritation. May cause temporary injury.
 Ingestion : May cause gastrointestinal irritation, nausea, and vomiting.
 Skin : May cause sensitization resulting in irritation, itching and redness.

Aggravated Medical Conditions

Pre-existing eye, skin, liver, kidney, and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

Prolonged or repeated exposure to epoxy resin can cause irritation to skin, eyes, skin sensitization, temporary eye injury. Certain epoxy resins are reported to be mutagenic in some laboratory tests. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

Target Organs: Skin, Eye, Ingestion, Lung

SECTION 3 - PRODUCT COMPOSITION

Chemical Name	CAS-No.	Weight %
Epichlorohydrin polymer	25068-38-6	> 60.0

SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation : Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get

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	medical attention.
Eye contact	: Flush with water for 15 minutes. If irritation persists, get medical attention.
Skin contact	: Wash area of contact thoroughly with hand cleaner followed by soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
Ingestion	: Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point	: > 200 °F, > 93 °C
Method	: Setaflash Closed Cup
Lower explosion limit	: 1.40 %(V) Solvent
Upper explosion limit	: Not available.
Autoignition temperature	: Not available.
Extinguishing media	: If water fog is ineffective, use carbon dioxide, dry chemical or foam.
Hazardous combustion products	: Smoke, fumes. Carbon monoxide and carbon dioxide can form.
Protective equipment for firefighters	: Water may be used to cool containers to minimize pressure build-up. Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
Fire and explosion conditions	: Closed container, may burst when exposed to extreme heat. Empty containers may contain ignitable vapors. Vapor concentrations in enclosed areas may ignite explosively. Vapors may travel to sources of ignition and flashback.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area.

SECTION 7 - HANDLING AND STORAGE

Store under dry warehouse conditions away from heat and all ignition sources. Store in a cool, well ventilated area. Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. Do not smoke, weld, generate sparks, or use flame near container. Change soiled work clothes frequently. Clean hands thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**Personal protection equipment**



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- Respiratory protection : Wear appropriate, properly fitted NIOSH/MSHA approved organic vapor or supplied air respirator when airborne contaminant level(s) are expected to exceed exposure limits indicated on the MSDS. Follow manufacturer's directions for respirator use.
- Hand protection : Use suitable impervious nitrile or neoprene gloves and protective apparel to reduce exposure.
- Eye protection : Chemical splash goggles.
- Protective measures : Use professional judgment in the selection, care, and use.
- Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed areas. Use general ventilation and/ or local exhaust to reduce the airborne contaminant concentration below the exposure limit listed in the MSDS

Exposure Limits

No known components with exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid solution
- Color : White
- Odor : Solvent
- pH : Not available.
- Vapour pressure : Not available.
- Vapor density : Heavier than air
- Melting point/range : Not available.
- Freezing point : Not available.
- Boiling point/range : > 500 °F, > 260 °C
- Water solubility : Negligible
- Specific Gravity : 1.17
- % Volatile Weight : 0 %

SECTION 10 - REACTIVITY / STABILITY

- Substances to avoid : Epoxy curing agents. Amines and oxidizing agents.
- Stability : Material is stable under normal storage, handling, and use.
- Hazardous polymerization : Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

No Data Available



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SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Method : Recycle or dispose of in compliance with local, provincial and federal regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA

TDG / DOT Shipping Description:

NOT REGULATED

SECTION 15 - REGULATORY INFORMATION

North American Inventories:

All components are listed or exempt from the TSCA inventory.
This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

U.S. Federal Regulations:

SARA 313 Components : None present or none present in regulated quantities.

SARA 311/312 Hazards : Acute Health Hazard

OSHA Hazardous Components :

OSHA Status: Considered : Irritant
hazardous based on the
following criteria:

OSHA Flammability : Not Regulated

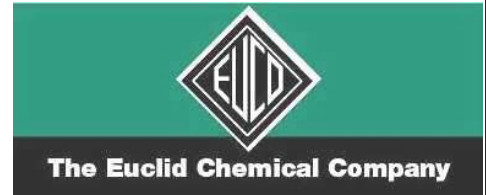
When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
0.0000 g/l

U.S. State Regulations:

Penn RTK Components : Epichlorohydrin polymer 25068-38-6

NJ RTK Components : Epichlorohydrin polymer 25068-38-6

Chemicals known to the State of California to cause cancer birth defects and/or other reproductive harm:
None known.



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SECTION 16 - OTHER INFORMATION

HMIS Rating :

Health	1
Flammability	2
Reactivity	0
PPE	

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

Further information:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Prepared by: Rich Mikol

Legend

- | | |
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| ACGIH - American Conference of Governmental Hygienists | PEL - Permissible Exposure Limit |
| CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act | RCRA - Resource Conservation and Recovery Act |
| DOT - Department of Transportation | RTK - Right To Know |
| DSL - Domestic Substance List | SARA - Superfund Amendments and Reauthorization Act |
| EPA - Environmental Protection Agency | STEL - Short Term Exposure Limit |
| HMIS - Hazardous Materials Information System | TLV - Threshold Limit Value |
| IARC - International Agency for Research on Cancer | TSCA - Toxic Substances Control Act |
| MSHA - Mine Safety Health Administration | TWA - Time Weighted Average |
| NDSL - Non-Domestic Substance List | V - Volume |
| NIOSH - National Institute for Occupational Safety and Health | VOC - Volatile Organic Compound |
| NTP - National Toxicology Program | WHMIS - Workplace Hazardous Materials Information System |
| OSHA - Occupational Safety and Health Administration | |



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SECTION 1 - PRODUCT IDENTIFICATION

Trade name : EUCO 452 LV/MV PART B
 Product code :
 COMPANY : Euclid Chemical Company
 19218 Redwood Road
 Cleveland, OH 44110
 Telephone : 1-800-321-7628
 Emergency Phone: : U.S. only: 1-800-255-3924
 International Users Call Collect: 1-813-248-0585
 Product use : Curative

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview

Gray. Liquid. Severely irritating to the respiratory tract. May cause chemical burns to the respiratory system. May cause coughing and wheezing. May cause nausea, headaches, and dizziness. Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Remove to fresh air. Get immediate medical attention.

Acute Potential Health Effects/ Routes of Entry

Inhalation : Severely irritating to the respiratory tract. May cause chemical burns to the respiratory system. May cause coughing and wheezing. May cause nausea, headaches, and dizziness.
 Eyes : Vapors or liquid may cause tearing, blurred vision, severe irritation, and possible chemical burns.
 Ingestion : May cause gastrointestinal irritation, nausea, and vomiting. May cause chemical burns to stomach, mouth, nose, and throat.
 Skin : May cause itching, reddening, inflammation. May cause severe burns, blistering and skin damage. May cause sensitization resulting in irritation, itching and redness. May cause a rash.

Aggravated Medical Conditions

Pre-existing eye, skin and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

May cause sensitization by contact. Prolonged skin contact may cause irritation, burns or dermatitis. Repeated overexposure to vapors and/or material may injure the liver, kidneys and respiratory system unless suitable engineering controls and/or personal protective equipment are used. May aggravate persons sensitized to amines Diethylenetriamine is a skin and eye irritant. Prolonged and repeated exposure can cause skin sensitization, dermatitis, asthma. Fillers are encapsulated and not expected to be released from product under normal conditions of use.

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SECTION 3 - PRODUCT COMPOSITION

Chemical Name	CAS-No.	Weight %
Epoxy curing agent	NJ TSRN# 51721300-5477P	40.0 - 70.0
Modified aliphatic amine	NJ TSRN# 51721300-5810P	15.0 - 40.0
4-tert-Butylphenol	98-54-4	15.0 - 40.0
Bisphenol A	80-05-7	1.0 - 5.0
Tetraethylene pentamine	112-57-2	1.0 - 5.0

SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation	:	Move to fresh air. If required, artificial respiration or administration of oxygen can be performed by trained personnel. Remove to fresh air. Get immediate medical attention.
Eye contact	:	Flush with water for at least 15 minutes while holding eye lids apart. Get medical attention immediately.
Skin contact	:	Clean area of contact thoroughly using soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
Ingestion	:	Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point	:	> 200 °F, > 93 °C
Method	:	Setaflash Closed Cup
Lower explosion limit	:	1.40 %(V) Solvent
Upper explosion limit	:	Not available.
Autoignition temperature	:	Not available.
Extinguishing media	:	If water fog is ineffective, use carbon dioxide, dry chemical or foam.
Hazardous combustion products	:	Carbon monoxide and carbon dioxide can form. Smoke, fumes. Nitrogen oxides can form.
Protective equipment for firefighters	:	Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
Fire and explosion conditions	:	Product may ignite if heated in excess of its flash point. Vapors may travel to sources of ignition and flashback. Vapor concentrations in enclosed areas may ignite explosively. Empty containers may contain ignitable vapors.



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SECTION 6 - ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area.

SECTION 7 - HANDLING AND STORAGE

Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. Do not smoke, weld, generate sparks, or use flame near container. Do not use in confined or poorly ventilated areas. Personal protective equipment must be worn during maintenance or repair of contaminated mixer, reactor, or other equipment. Store under dry warehouse conditions away from heat and all ignition sources.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protection equipment

- Respiratory protection : Wear NIOSH/MSHA approved vapor respirator with appropriate cartridge when the vapor concentration is expected to exceed exposure limits indicated on the MSDS. Follow manufacturer's directions for respirator use.
- Hand protection : Use suitable impervious nitrile or neoprene gloves and protective apparel to reduce exposure.
- Eye protection : Wear chemical safety goggles and/or face shield to prevent eye contact. Do not wear contact lenses. Do not touch eyes with contaminated body parts or materials. Have eye washing facilities readily available.
- Skin and body protection : Prevent contact with shoes and clothing. Use rubber apron and overshoes.
- Protective measures : Inspect and replace equipment at regular intervals. Use professional judgment in the selection, care, and use.
- Engineering measures : Use only in well ventilated areas. Provide maximum ventilation in enclosed areas. Use local exhaust when the general ventilation is inadequate.

Exposure Limits

No known components with exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid
- Color : Gray
- Odor : Amine
- pH : Not available.
- Vapour pressure : Not available.
- Vapor density : Heavier than air

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Melting point/range	: Not available.
Freezing point	: Not available.
Boiling point/range	: > 500 °F, > 260 °C
Water solubility	: Negligible
Specific Gravity	: 0.99
% Volatile Weight	: 0 %

SECTION 10 - REACTIVITY / STABILITY

Substances to avoid	: Oxidizing agents.Epoxies.Isocyanates.Acids.
Stability	: Material is stable under normal storage, handling, and use.
Hazardous polymerization	: Will not occur under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Bisphenol A, CAS-No.: 80-05-7	
Acute oral toxicity (LD-50 oral)	3,300 mg/kg (Rat)
Tetraethylene pentamine, CAS-No.: 112-57-2	
Acute oral toxicity (LD-50 oral)	2,100 mg/kg (Rat)
Acute dermal toxicity (LD-50 dermal)	660 mg/kg (Rabbit)

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Method : Dispose of hazardous waste according to all local, state, federal and provincial regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA**TDG / DOT Shipping Description:**

CORROSIVE LIQUID, N.O.S. (Contains Diethylenetriamine), 8, UN1760, PG II

SECTION 15 - REGULATORY INFORMATION**North American Inventories:**

All components are listed or exempt from the TSCA inventory.

This product or its components are listed on, or exempt from the Canadian Domestic Substances List.



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U.S. Federal Regulations:

SARA 313 Components : Bisphenol A 80-05-7

SARA 311/312 Hazards : Acute Health Hazard

OSHA Hazardous Components :
 Bisphenol A 80-05-7

OSHA Status: Considered : Irritant
 hazardous based on the
 following criteria:

OSHA Flammability : Not Regulated

When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
 0.0000 g/l

U.S. State Regulations:

MASS RTK Components : Bisphenol A 80-05-7
 Tetraethylene pentamine 112-57-2

Penn RTK Components : Epoxy curing agent NJ TSRN# 51721300-5477P
 Modified aliphatic amine NJ TSRN# 51721300-5810P
 4-tert-Butylphenol 98-54-4
 Bisphenol A 80-05-7
 Tetraethylene pentamine 112-57-2

NJ RTK Components : Epoxy curing agent NJ TSRN# 51721300-5477P
 Modified aliphatic amine NJ TSRN# 51721300-5810P
 4-tert-Butylphenol 98-54-4
 Bisphenol A 80-05-7
 Tetraethylene pentamine 112-57-2

Chemicals known to the State of California to cause cancer birth defects and/or other reproductive harm:
 1333-86-4 Carbon Black

SECTION 16 - OTHER INFORMATION

HMIS Rating :

Health	2
Flammability	2
Reactivity	0
PPE	

0 = Minimum
 1 = Slight
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 4 = Severe



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Further information:

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Prepared by: Rich Mikol

Legend

ACGIH - American Conference of Governmental Hygienists
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
DOT - Department of Transportation
DSL - Domestic Substance List
EPA - Environmental Protection Agency
HMIS - Hazardous Materials Information System
IARC - International Agency for Research on Cancer
MSHA - Mine Safety Health Administration
NDSL - Non-Domestic Substance List
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit
RCRA - Resource Conservation and Recovery Act
RTK - Right To Know
SARA - Superfund Amendments and Reauthorization Act
STEL - Short Term Exposure Limit
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
V - Volume
VOC - Volatile Organic Compound
WHMIS - Workplace Hazardous Materials Information System