

MATERIAL SAFETY DATA SHEET

ChemCo Systems, Inc., 2800 Bay Road, Redwood City, CA 94063

Prepared by Dept. of Safety, Phone: 650/261-3790

24 Hour Emergency Phone: 800.424.9300 (202-483-7616) CHEMTREC

1. PRODUCT NAME:
KEMKO® 157, DA Binder, Part B
 Chemical Family: Polyamines

2. HAZARDOUS INGREDIENTS

| NAME | CAS No. | TLV | STEL | PEL | CONTENT |
|------------------------------|------------|------|------|------|---------|
| Amino Ethyl Piperazine (AEP) | 140-31-8 | none | none | none | <2% |
| Nonyl Phenol (NP) | 84852 15-3 | none | none | none | <15% |
| Polyoxypropylene diamine | 9046-10 0 | none | none | none | <15% |
| Isophoronediamine | 2855-13-2 | none | none | none | <1% |
| Benzylalcohol (Bz) | 100-51-6 | none | none | none | <1% |

reference section 7, Health Hazard Data for LD (50)

3. PHYSICAL DATA:

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|----------------------------|---------------------------|-------------------------------------|------------|
| Boiling Point: | >205C (Bz) | Water/Oil Distribution Coefficient: | N/D |
| Percent Volatile: | negligible | Solubility in Water: | slight |
| Freezing Point: | N/D | Specific Gravity: | 0.95 |
| Vapor Pressure @ 20C: | 1mm (DETA) | pH: | basic |
| Vapor Density: | Heavier than air | Evaporation Rate: | N/D |
| Odor Threshold Appearance: | N/D Straw-clear liquid | Odor: | Ammoniacal |

N/D = Not Determined

4. FIRE AND EXPLOSION HAZARD DATA:

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|---|----------------------------|----------|--|
| HMIS Flammability Rating: | 1 - (Slight Hazard) | | |
| Flash Point: | 98C (Bz) TCC | | |
| Auto Ignition Temperature: | N/D | | |
| Limits of Flammability: | LEL: 1.0% | UEL: N/D | |
| EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL & WATER FOG | | | |
| SPECIAL FIRE & UNUSUAL HAZARDS: Self-contained respirator equipment and full protective clothing are required when smoke and fumes are generated. Electrical grounding is not recommended. | | | |

5. REACTIVITY DATA:

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| HMIS Reactivity Rating: | 1 - (Slight Hazard) | | |
| STABILITY: Stable. This product must be mixed with another component to react. Mix and use in accordance with directions for safety. Not sensitive to mechanical impact. | | | |
| INCOMPATIBILITY: Strong oxidizing agents, acids, epoxy resins, isocyanates and organic peroxides may result in violent explosive reactions. | | | |
| HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and dioxide, nitrogen oxides, aldehydes and various hydrocarbons from incomplete combustion. | | | |
| HAZARDOUS POLYMERIZATION: Will not occur unless product is mixed with epoxy resins, isocyanates or urethane prepolymers. | | | |

6. ENVIRONMENTAL AND DISPOSAL INFORMATION:

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| ACTION TO TAKE FOR SPILLS AND LEAKS: Ventilate area. Wear appropriate protective gear. Contain leak/spill. Clean up residue with absorbent material. Wash down area with water and diluted acetic acid. |
| WASTE DISPOSAL METHOD: Handle disposal of waste material in manner which complies with local, state, province, and federal regulations. Landfill if solidified or incinerate at agency approved waste-disposal facility. |

The information given herein is given in good faith. No warranty, expressed or implied, is made regarding the accuracy of these data or the results obtained from the use thereof. All materials may present unknown health hazards and must be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Consult ChemCo Systems Inc. for further information.

MSDS157B 04/14**7. HEALTH HAZARD DATA:**

| | | | |
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| HMIS Hazard Rating: | 2 - (Moderate Hazard) | | |
| Primary Route Of Entry: | Dermal, eyes, ingestion. | | |
| Effects of Overexposure: | | | |
| Inhalation: | Low degree of volatility. At higher temperatures it is possible for vapors to be generated; the vapors are very disagreeable. This material may result in irritation of throat, lungs, and allergic type reaction or sensitization in some individuals. | | |
| Eyes: | Contact can cause severe burns. At higher temperatures vapors can cause severe, irritation, redness, tearing or blurred vision. Corneal injury is possible. | | |
| Skin Contact: | Short single exposure may cause moderate irritation to mild burn. Prolonged or repeated exposure may cause a severe burn. May result in an allergic reaction or sensitization response in some individuals. | | |
| Skin Absorption: | AEP may be absorbed through skin. LD (50) CAS 140-31-8 880 mg/kg (rabbit) LD (50) CAS 84852-15-3 2.14g/kg (rabbit) | | |
| Ingestion: | Intake can cause gastro-intestinal irritation, nausea, vomiting, diarrhea, headache and drowsiness. Can result in burns of mouth esophagus and stomach. LD 50 CAS 140-31-8 2140 mg/kg (rat) LD 50 CAS 84852-15-3 580 mg/kg (rat) | | |
| Chronic: | None known. | | |

8: FIRST AID:

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| Eyes: | Flush eyes with water and/or 1% boric acid, lifting upper and lower lids occasionally for 30 minutes. Seek prompt medical attention. |
| Skin: | Wash with soap and water for at least 15 minutes. Remove contaminated clothing and wash before re-use. Destroy contaminated leather. Seek medical attention if irritation persists. |
| Ingestion: | Do not induce vomiting. Give large quantities of water or vinegar diluted with water. Get immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquids into lungs. Do not give anything by mouth to an unconscious person. |
| Inhalation: | Remove victim from exposure. If difficulty with breathing; administer oxygen and seek immediate medical assistance. |

9. SPECIAL PROTECTION INFORMATION:

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| HMIS Personal Protection Rating: C (Safety Glasses, Gloves, Apron) | |
| Ventilation: | Ventilation at normal room temperature is a means of controlling vapor properly. If material is above 140 F, a positive pressure breathing apparatus is recommended. |
| Personal Protection: | Use chemical goggles. Selection of specific items such as gloves, boots and apron will depend on the operation. Wear respirator protection whenever airborne concentrations exceed TLV ceilings or TWA, use NIOSH approved respirators for listed hazard. Confined spaces, rooms or tanks are areas where concern for TLV's is especially important. Reference OSHA Regulation CFR 29 1910.134 for recommended respiratory protection. |

10. ADDITIONAL INFORMATION:

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| DOT Proper Shipping Name: | Corrosive Liquid nos (Polyoxypropylendiamine, nonylphenol mixture) |
| DOT Hazard Class or Division: | 8 |
| Identification Number: | UN 1760 |
| Packing group: | III |
| Labels Required: | CORROSIVE |
| WHMIS Classification: | Class B, Div. 3; Class D, Div. 2, Sub. A & B; Class E. |
| WHMIS Labeling: | Test tube, hand. |
| Shelf life: | 3 years, minimum. |
| Special Instructions: | Keep containers tightly sealed. Store in dry and cool area. Avoid freezing conditions. |