

MATERIAL SAFETY DATA SHEET

For screen printing inks as required under 29 VCFR 1910.1200(g).

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HMIS RATINGS
HEALTH ----- 2
FLAMMABILITY -- 2
REACTIVITY ---- 0

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DATE OF PREPARATION
REVISED 2/20/01

SECTION I -- PRODUCT IDENTIFICATION

PRODUCT CODE: VERSISOL VMP 8000
LABEL IDENTITY: VMPSLRE SLOW RETARDER
PRODUCT CLASS: SCREEN INK REDUCER

SECTION II -- HAZARDOUS INGREDIENTS

COMMON NAME CAS #	RECOMMENDED EXPOSURE LIMITS (PPM)* ACGIH TLV-TWA OSHA PEL	VAPOR PRESSURE (mm Hg @ 20 C)*
DIMETHYL GLUTARATE 1119-40-0	ORAL / LD 50	<1
DIMETHYL ADIPATE 627-93-0	8.191 MG/KG (RAT)	<1
DIMETHYL SUCCINATE 106-65-0	(RAT)	<1
METHONAL 67-56-1	200 PPM - 8 HRS	<1
HYDROGEN CYANIDE 74-90-8	10 PPM 8 -12 HRS	<1

NA - NOT APPLICABLE NE - NOT ESTABLISHED UKN - UNKNOWN TS - TRADE SECRET

* UNLESS NOTED OTHERWISE, THE UNITS ARE PPM AND mm Hg @ 20 C,
RESPECTIVELY, FOR EXPOSURE LIMITS AND VAPOR PRESSURES.

SECTION III -- PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING RANGE: 200-230 C.
SPECIFIC GRAVITY (H2O = 1) 1.09 @ 20' C
SOLUBILITY IN WATER: 5.0% WT @ 20'C
VAPOR DENSITY : NA
APPEARANCE AND ODOR: COLORLESS, SWEET ODOR.

SECTION IV -- PHYSICAL HAZARD DATA

FLAMMABILITY CLASSIFICATIONS: OSHA: CLASS 3 DOT: COMBUSTIBLE LIQUID
CLOSED CUP FLASH POINT: 235'F / 112'C

EXTINGUISHING MEDIA: "CLASS B" FIRE EXTINGUISHERS USED PER INSTRUCTIONS

"ALCOHOL" FOAM CO2 DRY CHEMICAL WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT AND OPEN FLAMES.
CLOSED CONTAINERS MAY RUPTURE OR EXPLODE WHEN EXPOSED TO EXTREME HEAT. APPLICATION TO HOT

SURFACES REQUIRES SPECIAL PRECAUTIONS. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CONSTITUTE A HEALTH HAZARD. SYMPTOMS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION.

SPECIAL FIREFIGHTING PROCEDURES:

FULL PROTECTIVE EQUIPMENT IS RECOMMENDED TO PROTECT FIRE FIGHTERS FROM ANY HAZARDOUS DECOMPOSITION PRODUCTS. WATER MAY BE UNSUITABLE FOR USE ON BURNING LIQUIDS. IF WATER MUST BE USED, FOG NOZZLES ARE HIGHLY PREFERABLE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTO-IGNITION, EXPLOSION, OR RUPTURE WHEN EXPOSED TO EXTREME HEAT.

SECTION V -- EMERGENCY AND FIRST-AID PROCEDURES

PRIMARY ROUTES OF ENTRY ARE DERMAL AND INHALATION.

FOR SWALLOWING:

DRINK TWO GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CONSULT PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. TREAT SYMPTOMATICALLY. BE PREPARED TO PROVIDE THE ATTENDING PHYSICIAN WITH A COPY OF THIS DOCUMENT.

FOR SKIN CONTACT:

REMOVE CONTAMINATED CLOTHING. WASH THOROUGHLY WITH MILD SOAP AND WARM WATER. CONSULT A PHYSICIAN IF THERE IS ANY PERSISTING IRRITATION.

FOR INHALATION:

REMOVE VICTIM TO A WELL VENTILATED AREA. GIVE OXYGEN OR ARTIFICIAL RESPIRATION AS REQUIRED. TREAT SYMPTOMATICALLY AND CONSULT PHYSICIAN.

FOR EYE CONTACT:

FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST FIFTEEN MINUTES. CONSULT PHYSICIAN FOR MEDICAL TREATMENT, IF NECESSARY.

SPECIAL NOTES TO ATTENDING PHYSICIAN:

THERE IS NO SPECIFIC ANTIDOTE. TREATMENT OF OVEREXPOSURE SHOULD BE DIRECTED AT CONTROL OF THE SYMPTOMS AND THE CLINICAL CONDITION.

SECTION VI -- SIGNS AND SYMPTOMS OF OVER-EXPOSURE

ACUTE EFFECTS:

SWALLOWING:

MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT, NAUSEA, VOMITING AND DIARRHEA. SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE). ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING OR INGESTION CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

SKIN ABSORPTION:

PROLONGED OR WIDESPREAD CONTACT WITH SKIN MAY LEAD TO ABSORPTION OF HARMFUL AMOUNTS OF MATERIAL WITH ACCOMPANYING SIGN AND SYMPTONS OF TOXICITY AS DESCRIBED FOR SWALLOWING.

INHALATION:

EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, SIGNS OF NERVOUS SYSTEM DEPRESSION, POSSIBLE UNCONSCIOUSNESS, AND EVEN ASPHYZIATION. MAY CAUSE BLOOD DISORDERS.

SKIN CONTACT:

PROLONGED OR REPEATED CONTACT WITH SKIN MAY LEAD TO MODERATE IRRITATION AND DEFATTING.

EYE CONTACT:

CAN CAUSE SEVERE IRRITATION, BURNING, SWELLING, REDNESS, TEARING AND BLURRED VISION.

MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED BY OVEREXPOSURE: PRE-EXISTING BLOOD, LIVER, AND/OR KIDNEY DISORDERS. RESPIRATORY SYMPTOMS ASSOCIATED WITH PRE-EXISTING LUNG DISORDERS (E.G., ASTHMA-LIKE CONDITIONS).

CHRONIC EFFECTS:

DERMATITIS. IN ANIMAL STUDIES, REPEATED OVEREXPOSURE HAS CAUSED LIVER AND KIDNEY INJURY.

ADDITIONAL KNOWN HEALTH HAZARDS: REPORTS HAVE ASSOCIATED PROLONGED AND REPEATED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

SECTION VII -- REACTIVITY DATA

THIS MIXTURE IS STABLE AND HAZARDOUS POLYMERIZATION WILL NOT OCCUR

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS, CHLORINE, STRONG ACIDS OR BASES.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE, CARBON DIOXIDE, MIXED OXIDES OF NITROGEN.

CONDITIONS TO AVOID:

EXTREME TEMPERATURES, SPARKS, OPEN FLAMES, OR ANY OTHER POSSIBLE IGNITION SOURCES.

SECTION VIII -- SPILL OR LEAK PROCEDURES

PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED:

USING NON SPARKING TOOLS, PLACE LEAKING CONTAINERS IN A WELL VENTILATED AREA. AVOID BREATHING VAPORS. ELIMINATE ALL SOURCES OF HEAT, SPARKS, OR IGNITION. NOTIFY PROPER AUTHORITIES IF PUBLIC WATERS OR SEWERS ARE CONTAMINATED.

WASTE DISPOSAL METHODS:

AS A HAZARDOUS WASTE, THIS MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL ORDINANCES. INQUIRE OF YOUR LOCAL ENVIRONMENTAL AGENCIES FOR THE EXACT LEGAL REQUIREMENTS IN YOUR AREA.

REFER TO SECTIONS IV, V, VI, VII AND IX OF THIS DOCUMENT BEFORE ATTEMPTING ANY CLEANUP.

SECTION IX -- SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION:

DO NOT BREATHE VAPORS OR SPRAY MISTS. WEAR AN APPROPRIATE, PROPERLY FITTED RESPIRATOR (NIOSH/OSHA APPROVED) DURING AND AFTER APPLICATION UNLESS AIR MONITORING DEMONSTRATES VAPOR/MIST LEVELS ARE BELOW APPLICABLE LIMITS. FOLLOW RESPIRATOR MANUFACTURER'S DIRECTIONS FOR RESPIRATOR USE.

VENTILATION REQUIREMENTS: LOCAL EXHAUST RECOMMENDED WHEN APPROPRIATE TO CONTROL EXPOSURE TO MIST OR AEROSOLS. GENERAL EXHAUST IS NORMALLY ADEQUATE TO MINIMIZE EXPOSURE TO VAPORS.

PROTECTIVE GLOVES: RUBBER OR NEOPRENE TO MINIMIZE SKIN CONTACT.

EYE PROTECTION: SAFETY GOGGLES OR FULL FACE SHIELD.

HYGIENIC SAFETY PRACTICES: WASH HANDS BEFORE EATING, USING TOBACCO PRODUCTS, OR USING THE WASHROOM. TOBACCO AND FOOD SHOULD BE CONSUMED IN DESIGNATED AREAS ONLY.

ADDITIONAL SAFETY EQUIPMENT: IMPERMEABLE APRONS AND BOOTS. SAFETY SHOWER AND EYE BATH SHOULD BE MADE AVAILABLE.

SECTION X -- SPECIAL PROCEDURES

TRANSPORTATION, STORAGE, AND HANDLING:

AVOID CONDITIONS LISTED IN SECTION VII. AVOID PROLONGED STORAGE AT TEMPERATURES IN EXCESS OF 100 F.

OTHER PRECAUTIONS: NONE

SECTION XI -- DISCLAIMER

POLYMERIC MAKES NO WARRANTY, EXPRESSED OR IMPLIED, AS TO THE ACCURACY OR RELIABILITY OF INFORMATION CONTAINED HEREIN, EXCEPT THAT SUCH INFORMATION IS, TO THE BEST OF POLYMERIC'S KNOWLEDGE AND BELIEF, ACCURATE AS OF THE DATE INDICATED ON THIS DOCUMENT. FINAL DETERMINATION OF SUITABILITY OF ANY MATERIAL IS THE SOLE RESPONSIBILITY OF THE USER. ALL MATERIALS MAY PRESENT UNKNOWN HEALTH HAZARDS AND SHOULD

BE USED WITH CAUTION. ALTHOUGH CERTAIN HAZARDS ARE DESCRIBED HEREIN, WE CANNOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

SECTION XII -- PURCHASERS' OBLIGATIONS

POLYMERIC URGES THE CUSTOMER RECEIVING THIS MATERIAL SAFETY DATA SHEET TO STUDY IT CAREFULLY TO BECOME AWARE OF HAZARDS, IF ANY, OF THE PRODUCTS INVOLVED. IN THE INTEREST OF SAFETY, YOU SHOULD (1) NOTIFY YOUR EMPLOYEES, AGENTS, AND CONTRACTORS OF THE INFORMATION ON THIS SHEET, (2) FURNISH A COPY TO EACH OF YOUR CUSTOMERS FOR THIS PRODUCT, AND (3) REQUEST YOUR CUSTOMERS TO INFORM THEIR EMPLOYEES, CUSTOMERS, AND AGENTS, AS WELL.