

MSDS# K12005

* MATERIAL SAFETY DATA SHEET *

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

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HMIS RATINGS
HEALTH-----1
FLAMMABILITY-----2
REACTIVITY-----0

EMERGENCY PHONE NUMBER PREPARER: CRAIG POGGENPOHL DATE OF PREPARATION
(816) 587-8178 EHS MANAGER REVISED 02/02/09/CP

REVISIONS:

SECTION I--PRODUCT IDENTIFICATION

PRODUCT CODE: K12005
PRODUCT NAME: RETARDER
PRODUCT CLASS: SCREEN PRINTING INK REDUCER

SECTION II--HAZARDOUS INGREDIENTS

COMMON NAME (CAS REGISTRY #)	PERCENT BY WEIGHT	RECOMMENDED EXPOSURE LIMITS (PPM) ¹ ACGIH TLV-TWA OSHA PEL	VAPOR PRESSURE (MM HG @ 20 C) ¹
PETROLEUM HYDROCARBON (8008-20-6)	! 90-100	200 ³ mg/m ³ ! 100 ² mg/m ³ !(as total hydrocarbon vapor)	<5
NA - NOT APPLICABLE	NE - NOT ESTABLISHED	UKN - UNKNOWN	

¹ UNLESS NOTED OTHERWISE, THE UNITS ARE PPM AND mm hg @ 20 C, RESPECTIVELY, FOR EXPOSURE LIMITS AND VAPOR PRESSURES.

² NIOSH RECOMMENDED EXPOSURE LIMIT.

³ SKIN ABSORPTION MAY CONTRIBUTE TO THE OVERALL ABSORPTION OF THIS MATERIAL. APPROPRIATE MEASURES SHOULD BE TAKEN TO PREVENT ABSORPTION SO THAT THE TLV AND/OR PEL ARE NOT INVALIDATED.

SECTION III -- PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING RANGE: 320-550 DEG. F.
DENSITY: 6.834 LB./GAL.
VOC CONTENT OF MATERIAL: 100% BY WEIGHT OR 820 GRAMS PER LITER.
VOC CONTENT OF COATING LESS WATER AND EXEMPT SOLVENTS: 820 G/L.
SOLUBILITY IN WATER: NEGLIGIBLE.
EVAPORATION RATE (nBuAc=1): 0.04
VAPOR DENSITY (AIR=1): 4.7
APPEARANCE AND ODOR: CLEAR LIQUID, BLUE COLOR, MILD KEROSENE ODOR.

SECTION IV -- PHYSICAL HAZARD DATA

FLAMMABILITY CLASSIFICATIONS: OSHA: CLASS II DOT: COMBUSTIBLE LIQUID
TAG CLOSED CUP FLASH POINT: 100 DEG. F.
EXPLOSIVE LIMITS: LOWER(% VOLUME): 0.9 UPPER(% VOLUME): 7.0.

EXTINGUISHING MEDIA: "CLASS B" FIRE EXTINGUISHERS USED IN ACCORDANCE

WITH MANUFACTURERS INSTRUCTIONS.

"ALCOHOL" FOAM CO2 DRY CHEMICAL WATER FOG

UNUSUAL FIRE OR EXPLOSION HAZARDS: KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, SPARKS, AND OPEN FLAMES. CLOSED CONTAINERS MAY RUPTURE WHEN EXPOSED TO EXTREME HEAT. WATER MAY BE USED TO COOL UNRUPTURED CONTAINERS.

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

SPECIAL FIREFIGHTING PROCEDURES: WATER MAY BE UNSUITABLE FOR USE ON BURNING LIQUIDS. FULL PROTECTIVE EQUIPMENT IS RECOMMENDED TO PROTECT FIRE FIGHTERS FROM ANY HAZARDOUS DECOMPOSITION PRODUCTS. WATER SPRAY MAY BE INEFFECTIVE. 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 OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT.

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SECTION V -- EMERGENCY AND FIRST-AID PROCEDURES
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PRIMARY ROUTES OF ENTRY ARE DERMAL AND INHALATION.

SWALLOWING: THIS MATERIAL IS AN ASPIRATION HAZARD. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. IF INDIVIDUAL IS DROWSY OR UNCONSCIOUS, PLACE ON LEFT SIDE WITH THE HEAD DOWN. SEEK MEDICAL ATTENTION. IF POSSIBLE, DO NOT LEAVE INDIVIDUAL UNATTENDED.

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

INHALATION: IF RESPIRATORY SYMPTOMS OR OTHER SYMPTOMS OF EXPOSURE DEVELOP, MOVE VICTIM AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF SYMPTOMS PERSIST, SEEK IMMEDIATE MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING, ARTIFICIAL RESPIRATION SHOULD BE ADMINISTERED. IF BREATHING DIFFICULTIES DEVELOP, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

EYE CONTACT: MOVE VICTIM AWAY FROM EXPOSURE TO VAPORS AND INTO FRESH AIR. IF IRRITATION OR REDNESS DEVELOPS, SEEK MEDICAL ATTENTION. FOR DIRECT CONTACT, HOLD EYELIDS APART AND FLUSH THE AFFECTED EYE(S) WITH CLEAN WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION.

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.

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SECTION VI -- SIGNS AND SYMPTOMS OF OVEREXPOSURE
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ACUTE EFFECTS:
SWALLOWING: THIS MATERIAL HAS A LOW DEGREE OF TOXICITY. INGESTION OF EXCESSIVE QUANTITIES MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT AND SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., DROWSINESS, DIZZINESS, LOSS OF COORDINATION AND FATIGUE). ASPIRATION HAZARD - THIS MATERIAL CAN ENTER LUNGS DURING SWALLOWING OR VOMITING AND CAUSE LUNG INFLAMMATION AND DAMAGE.

SKIN ABSORPTION: NO HARMFUL EFFECTS FROM SKIN ABSORPTION HAVE BEEN REPORTED.

INHALATION: THIS MATERIAL HAS A LOW DEGREE OF TOXICITY BY INHALATION.

BREATHING HIGH CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE IRRITATION OF THE NOSE AND THROAT AND SIGNS OF NERVOUS SYSTEM DEPRESSION. RESPIRATORY SYMPTOMS ASSOCIATED WITH PRE-EXISTING LUNG DISORDERS (E.G., ASTHMA - LIKE CONDITIONS) MAY BE AGGRAVATED BY EXPOSURE TO THIS MATERIAL.

SKIN CONTACT: SKIN IRRITANT. CONTACT MAY CAUSE REDNESS AND BURNING OF THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE DRYING AND CRACKING OF THE SKIN AND SEVERE SKIN DAMAGE.

EYE CONTACT: CONTACT MAY CAUSE MILD EYE IRRITATION INCLUDING STINGING, WATERING, AND REDNESS.

CONDITIONS KNOWN TO BE AGGRAVATED BY OVEREXPOSURE: SKIN DISORDERS AND RESPIRATORY (ASTHMA LIKE) DISORDERS.

CHRONIC EFFECTS: LIFETIME SKIN PAINTING STUDIES HAVE SHOWN THAT SIMILAR PRODUCTS BOILING BETWEEN 350-700 DEGREES F. USUALLY PRODUCE SKIN TUMORS AND/OR SKIN CANCER IN LABORATORY MICE. THE DEGREE OF CARCINOGENIC RESPONSE WAS WEAK TO MODERATE WITH A RELATIVELY LONG LATENT PERIOD. THE IMPLICATIONS OF THESE RESULTS FOR HUMANS HAVE NOT BEEN DETERMINED.

CARCINOGENCITY: NTP? NO IARC? NO OSHA? NO

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

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SECTION VII -- REACTIVITY DATA
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THIS MIXTURE IS STABLE AND HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION IN THE PRESENCE OF AIR MAY YIELD CARBON MONOXIDE AND/OR CARBON DIOXIDE, ALDEHYDES, AND SULFUR OXIDES.

CONDITIONS TO AVOID: EXTREME TEMPERATURES, SPARKS, OPEN FLAMES OR ANY OTHER IGNITION SOURCES.

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SECTION VIII -- SPILL OR LEAK PROCEDURES
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STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED: USING NON-SPARKING TOOLS, PLACE LEAKING CONTAINERS IN A WELL VENTILATED AREA. ELIMINATE ALL SOURCES OF HEAT, SPARKS, OR IGNITION. NOTIFY PROPER AUTHORITIES IF PUBLIC WATERS OR SEWERS ARE CONTAMINATED. WEAR APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATORY PROTECTION EQUIPMENT WHEN ENTERING THE SPILL AREA. SHUT OFF LEAK IF IT CAN BE DONE SAFELY. VENTILATE THE AREA. DIKE AND PUMP OFF LARGE SPILLS INTO SALVAGE OR STORAGE CONTAINERS. TAKE UP RESIDUE OR SMALL SPILLS WITH ABSORBENT MATERIAL SUCH AS CLAY OR VERMICULITE. SCOOP UP ALL CONTAMINATED SOIL AND DISPOSE OF IN SAME MANNER AS THE PRODUCT. WASTE DISPOSAL METHOD: 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 CLEANUP.

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SECTION IX -- SAFE HANDLING AND USE INFORMATION
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RESPIRATORY PROTECTION: WHERE CONCENTRATIONS IN AIR MAY EXCEED THE LIMITS GIVEN IN SECTION II AND ENGINEERING, WORK PRACTICE OR OTHER MEANS OF EXPOSURE REDUCTION ARE NOT ADEQUATE, NIOSH/MSHA APPROVED RESPIRATORS MAY BE NECESSARY TO PREVENT OVEREXPOSURE.
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.

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SECTION X -- SPECIAL PROCEDURES
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TRANSPORTATION, STORAGE AND HANDLING: AVOID CONDITIONS LISTED IN SECTION VII. AVOID PROLONGED STORAGE AT TEMPERATURES IN EXCESS OF 100 F.

OTHER PRECAUTIONS: NONE.

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SECTION XI -- DISCLAIMER
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SERICOL, INC. 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 SERICOL'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.

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SECTION XII -- PURCHASER'S OBLIGATIONS
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SERICOL, INC. 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.

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SECTION XIII -- REGULATORY INFORMATION
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TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS: THE INGREDIENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY.

SARA TITLE III SECTION 313 INFORMATION: THIS PRODUCT DOES NOT CONTAIN TOXIC CHEMICALS SUBJECT TO THE ANNUAL REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

STATE OF CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (PROPOSITION 65): THIS PRODUCT DOES NOT CONTAIN CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR REPRODUCTIVE TOXICITY.