

MSDS# K67020

FUJIFILM SERICOL USA, INC.
20 WEST 14TH AVENUE
NORTH KANSAS CITY, MISSOURI 64116
(816) 474-0650

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

* MATERIAL SAFETY DATA SHEET *

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

EMERGENCY PHONE NUMBER (816) 587-8178
PREPARER: CRAIG POGGENPOHL EHS MANAGER
DATE OF PREPARATION REVIEWED 06/09/08/CP

REVISIONS:

SECTION I--PRODUCT IDENTIFICATION

PRODUCT CODE : K67020
LABEL IDENTITY: 5100 THINNER/RETARDER
PRODUCT CLASS : SCREEN PRINTING INK REDUCER

SECTION II--HAZARDOUS INGREDIENTS

| COMMON NAME (CAS REGISTRY #) | RECOMMENDED EXPOSURE LIMITS (PPM) ¹ | | VAPOR PRESSURE (mm Hg @ 20 C) ¹ |
|-------------------------------------|---|----------------------------|---|
| | ACGIH TLV-TWA | OSHA PEL | |
| 2-BUTOXYETHYL ACETATE (112-07-2) | 20 | 5 ² (NIOSH REL) | 0.3 |

NA - NOT APPLICABLE NE - NOT ESTABLISHED UKN - UNKNOWN

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

²SKIN 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 POINT: 367 DEG.F.
DENSITY: 7.84 LBS/GAL.
VOC CONTENT OF MATERIAL: 100% OR 940 GRAMS PER LITER.
VOC CONTENT OF COATING LESS WATER AND LESS EXEMPT SOLVENTS: 940 G/L.
SOLUBILITY IN WATER: SLIGHT.
VAPOR DENSITY(AIR=1): 5.5
EVAPORATION RATE (N-BUTYL ACETATE =1): 0.03.
APPEARANCE AND ODOR: COLORLESS, MOBILE, CLEAR LIQUID. FAINT ODOR.

SECTION IV -- PHYSICAL HAZARD DATA

FLAMMABILITY CLASSIFICATIONS: OSHA: CLASS IIIA DOT: COMBUSTIBLE LIQUID
CLOSED CUP FLASH POINT: 160 F. LOWER EXPLOSIVE LIMIT: 0.9 % VOLUME
UPPER EXPLOSIVE LIMIT: 8.5 % VOLUME

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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, 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.

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SECTION V -- EMERGENCY AND FIRST-AID PROCEDURES
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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.

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SECTION VI -- SIGNS AND SYMPTOMS OF OVEREXPOSURE
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ACUTE EFFECTS:

SWALLOWING: SLIGHTLY TOXIC. CAN CAUSE IRRITATION OF THE DIGESTIVE TRACT. SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE). MAY CAUSE RED BLOOD CELL HEMOLYSIS AND POSSIBLE KIDNEY AND LIVER DAMAGE.

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

INHALATION: EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION. VAPOR MAY PRODUCE SIGNS AND SYMPTOMS OF TOXICITY SIMILAR TO THOSE DESCRIBED FOR SWALLOWING.

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

EYE CONTACT: CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, AND BLURRED VISION.

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

CHRONIC EFFECTS: REPEATED OVEREXPOSURE MAY CAUSE RED BLOOD CELL HEMOLYSIS, LEADING TO POSSIBLE KIDNEY AND LIVER DAMAGE.

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.

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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 ACIDES, STRONG ALKALIES, STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, VARIOUS HYDROCARBONS.

CONDITIONS TO AVOID: EXTREME TEMPERATURES, SPARKS, OR OPEN FLAMES.

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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. AVOID BREATHING VAPORS.
ELIMINATE ALL SOURCES OF HEAT, SPARKS, OR IGNITION.
NOTIFY PROPER AUTHORITIES IF PUBLIC WATERS OR SEWERS ARE CONTAMINATED.

WASTE DISPOSAL METHOD: 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, AND VII AND IX OF THIS DOCUMENT BEFORE ATTEMPTING ANY 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 SERICOLS' 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 -- PURCHASERS' 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.

THIS PRODUCT CONTAINS A TOXIC CHEMICAL OR 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.

CONTAINS: 2-BUTOXYETHYL ACETATE,
CAS# 112-07-2
99-100% BY WEIGHT.

THIS NOTIFICATION MUST NOT BE DETACHED FROM THE MATERIAL SAFETY DATA SHEET (MSDS) AND ANY COPYING AND REDISTRIBUTION OF THE MSDS SHALL INCLUDE COPYING AND REDISTRIBUTION OF THE NOTICE ATTACHED TO COPIES OF THE MSDS SUBSEQUENTLY REDISTRIBUTED.

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.