
* MATERIAL SAFETY DATA SHEET *

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

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

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

EMERGENCY PHONE NUMBER PREPARER: CRAIG POGGENPOHL DATE OF PREPARATION
(816) 587-8178 REGULATORY COMPLIANCE MGR. REVISED 03/19/04/CP

REVISIONS: SECTION III.

=====
SECTION I--PRODUCT IDENTIFICATION
=====

PRODUCT CODE : PN-301
LABEL IDENTITY: POLYDYNE OPAQUE BLACK
PRODUCT CLASS : ULTRAVIOLET CURABLE SCREEN INK

=====
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	
ACRYLATE ESTERS (TS)	NE	NE	< 1
ACRYLATED AMINE (TS)	NE	NE	< 1
CARBON BLACK (1333-86-4)	3.5mg/m ³	3.5mg/m ³	NA
PHOTOINITIATORS (TS)	5 ² mg/m ³	NE	< 1

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

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

² RECOMMENDED BY MANUFACTURER

=====
SECTION III -- PHYSICAL AND CHEMICAL CHARACTERISTICS
=====

BOILING RANGE: > 150 C.
DENSITY: 9.72 LB./GAL.
VOLATILE ORGANIC COMPOUNDS: LESS THAN 2% BY WEIGHT.
VAPOR DENSITY: HEAVIER THAN AIR.
EVAPORATION RATE: SLOWER THAN DIETHYL ETHER.
APPEARANCE AND ODOR: BLACK, MOBILE LIQUID, ACRYLATE ODOR.

=====
SECTION IV -- PHYSICAL HAZARD DATA
=====

FLAMMABILITY CLASSIFICATIONS: OSHA: CLASS III B DOT: NOT REGULATED
CLOSED CUP FLASH POINT: >200 DEG F. EXPLOSIVE LIMITS: UNKNOWN

EXTINGUISHING MEDIA: "CLASS B" FIRE EXTINGUISHERS USED PER

INSTRUCTIONS ("ALCOHOL" FOAM, CO2, DRY CHEMICAL, WATER FOG).

UNUSUAL FIRE AND EXPLOSION HAZARDS:
HIGH TEMPERATURES/INHIBITOR DEPLETION/ACCIDENTAL IMPURITIES/EXPOSURE TO RADIATION/OXIDIZERS MAY CAUSE SPONTANEOUS POLYMERIZING REACTION, GENERATING HEAT/PRESSURE. CLOSED CONTAINERS MAY RUPTURE/EXPLODE DURING RUNAWAY POLYMERIZATION.

SPECIAL FIREFIGHTING PROCEDURES:
DO NOT ENTER FIRE AREA WITHOUT PROPER PROTECTION. SEE SECTION ON DECOMPOSITION PRODUCTS POSSIBLE. FIGHT FIRE FROM SAFE DISTANCE/PROTECTED LOCATION. HEAT/IMPURITIES MAY INCREASE TEMPERATURE/BUILD PRESSURE/RUPTURE CLOSED CONTAINERS, SPREADING FIRE, INCREASING RISK OF BURNS/INJURIES. WATER MAY BE INEFFECTIVE IN FIREFIGHTING DUE TO LOW SOLUBILITY. USE WATER SPRAY/FOG FOR COOLING. PRESSURE RELIEF SYSTEM MAY PLUG WITH SOLIDS, INCREASING RISK OF OVERPRESSURE. NOTIFY AUTHORITIES IF LIQUID ENTERS SEWER/PUBLIC WATERS.

=====
SECTION V -- EMERGENCY AND FIRST-AID PROCEDURES
=====

PRIMARY ROUTES OF ENTRY ARE DERMAL.

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.

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 OVEREXPOSURE
=====

ACUTE EFFECTS:
SWALLOWING: CONTAINS MATERIAL CONSIDERED SLIGHTLY TOXIC. MAY CAUSE GASTRIC DISTURBANCES.

SKIN ABSORPTION: CONTAINS MATERIALS THAT MAY BE SLIGHTLY TOXIC. EXPOSURE TO THIS MATERIAL CAN RESULT IN ABSORPTION THROUGH SKIN CAUSING HEALTH HAZARD.

INHALATION: NO SIGNIFICANT SIGNS OR SYMPTOMS INDICATIVE OF ANY ADVERSE HEALTH HAZARD ARE EXPECTED TO OCCUR AT STANDARD CONDITIONS DUE TO THE LOW VOLATILITY OF THIS PRODUCT. HOWEVER, AEROSOLS, OR VAPORS WHICH MAY BE GENERATED AT ELEVATED PROCESSING TEMPERATURES, MAY CAUSE RESPIRATORY TRACT IRRITATION. SYMPTOMS OF IRRITATION MAY INCLUDE COUGHING, MUCOUS PRODUCTION AND SHORTNESS OF BREATH.

SKIN CONTACT: CONTAINS MATERIALS THAT MAY CAUSE SEVERE SKIN INJURY (REDDENING AND SWELLING) AND/OR SENSITIZATION. PROLONGED CONTACT MAY CAUSE BLISTER FORMATION (BURNS). SINCE IRRITATION MAY NOT OCCUR IMMEDIATELY,

CONTACT CAN GO UNNOTICED.

EYE CONTACT: MAY CAUSE SEVERE EYE IRRITATION, BURNING SENSATION, SWELLING, TEARING, REDNESS.

MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED BY OVEREXPOSURE: LUNG CONDITIONS, SENSITIZATIONS, OR ALLERGIES, SKIN AND EYE CONDITIONS.

CHRONIC EFFECTS: NONE KNOWN.

ADDITIONAL KNOWN HEALTH HAZARDS: NONE KNOWN.

=====
SECTION VII -- REACTIVITY DATA
=====

THIS MIXTURE IS POTENTIALLY UNSTABLE AND HAZARDOUS POLYMERIZATION MAY OCCUR IF EXPOSED TO MATERIALS AND CONDITIONS TO BE AVOIDED.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG ACIDS, OXIDIZERS, ALKALI METAL HYDROXIDES, POLYMERIZATION INITIATORS, PEROXIDES, INERT GASES.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, MIXED OXIDES OF NITROGEN.

CONDITIONS TO AVOID: EXTREME TEMPERATURES, DIRECT SUNLIGHT, X-RAY SOURCES, ELECTRON BEAM SOURCES, OR ULTRAVIOLET RADIATION SOURCES.

=====
SECTION VIII -- SPILL OR LEAK PROCEDURES
=====

PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED:
SPILLED/RELEASED MATERIAL MAY POLYMERIZE AND RELEASE HEAT/GASES. EXTINGUISH ALL IGNITION SOURCES. BLANKET WITH FIREFIGHTING FOAM. IMPOUND/RECOVER LARGE LAND SPILL; SOAK UP SMALL SPILL WITH INERT SOLIDS. ON WATER, CONTAIN/MINIMIZE DISPERSION/COLLECT. REPORT PER REGULATORY REQUIREMENTS.

WASTE DISPOSAL METHODS:
CONTAMINATED PRODUCT/SOIL/WATER MAY BE RCRA/OSHA HAZARDOUS WASTE DUE TO POTENTIAL FOR INTERNAL HEAT GENERATION (SEE 40 CFR 261 AND 29 CFR 1910). LANDFILL SOLIDS AT PERMITTED SITES. USE REGISTERED TRANSPORTERS. BURN CONCENTRATED LIQUIDS IN SYSTEMS THAT USE COMPATIBLE FUEL. DILUTE WITH CLEAN, LOW VISCOSITY FUEL. AVOID FLAMEOUTS. ASSURE EMISSIONS COMPLY WITH APPLICABLE REGULATIONS. DILUTE AQUEOUS WASTE MAY BIODEGRADE. AVOID OVERLOADING/POISONING PLANT BIOMASS. ASSURE EFFLUENT COMPLIES WITH APPLICABLE REGULATIONS.

=====
SECTION IX -- SAFE HANDLING AND USE INFORMATION
=====

RESPIRATORY PROTECTION: DUE TO LOW VAPOR PRESSURE, INHALATION IS NOT CONSIDERED AN OCCUPATIONALLY SIGNIFICANT ROUTE OF EXPOSURE, HOWEVER, A NIOSH-APPROVED RESPIRATOR IS RECOMMENDED FOR OPERATIONS RESULTING IN EXCESS ORGANIC VAPORS IN THE BREATHING ZONE.

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 WHENEVER A SPLASH HAZARD IS PRESENTED.

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: LEATHER GLOVES, APRONS, BELTS, OR BOOTS MAY BE PERMEATED BY THESE MATERIALS, CAUSING DELAYED AND PERSISTENT IRRITATION OR CHEMICAL BURNS. LEATHER ITEMS SHOULD BE DISPOSED OF, ONCE CONTAMINATED.

=====
SECTION XI -- DISCLAIMER
=====

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.

=====
SECTION XII -- PURCHASERS' OBLIGATIONS
=====

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.

=====
SECTION XIII -- REGULATORY INFORMATION
=====

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.