

MSDS# TP

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

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

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 \* MATERIAL SAFETY DATA SHEET \*  
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For screen printing inks as required under 29 CFR 1910.1200(g).

UNDER OSHA'S HAZARD COMMUNICATION STANDARD, WHERE COMPLEX MIXTURES HAVE SIMILAR HAZARDS AND CONTENTS, THE MANUFACTURER MAY PREPARE ONE MATERIAL SAFETY DATA SHEET TO APPLY TO ALL OF THESE SIMILAR MIXTURES. THIS DOCUMENT APPLIES TO ALL COLORS AND SPECIALS IN THIS INK LINE.

EMERGENCY PHONE NUMBER PREPARER: CRAIG POGGENPOHL DATE OF PREPARATION  
 (816) 587-8178 REGULATORY COMPLIANCE MGR. REVISED 09/09/03/CP

REVISIONS: ADDED TP-TW TO VOC CHART.

SECTION I--PRODUCT IDENTIFICATION

PRODUCT CODE : TP  
 LABEL IDENTITY: POLYSCREEN TP  
 PRODUCT CLASS : SOLVENT BASED EPOXY SCREEN INK

SECTION II--HAZARDOUS INGREDIENTS

| COMMON NAME<br>(CAS REGISTRY #)         | PERCENT<br>BY<br>WEIGHT | RECOMMENDED EXPOSURE<br>LIMITS (PPM) <sup>1</sup>                 |                                   | VAPOR PRESSURE<br>(mm Hg @ 20 C) <sup>1</sup> |
|---|-------------------------|---|-----------------------------------|---|
|   |                         | ACGIH TLV-TWA   | OSHA PEL                          |   |
| GLYCOL ETHER (34590-94-8)!              | 6-10                    | 100 <sup>2</sup><br>(STEL 150)                                    | 100 <sup>2</sup><br>(STEL 150)    | < 0.55  |
| GLYCOL ETHER (05131-66-8)!              | 11-18                   | NE  | NE                                | < 0.60  |
| EPOXY RESIN (TRADE SECRET)!             |                         | NE  | NE                                | NA  |
| BARIUM SULFATE (7727-43-7)!             | 20-24                   | 10 mg/m <sup>3</sup><br>5 mg/m <sup>3</sup> (RESPIRABLE FRACTION) | 10 mg/m <sup>3</sup> (TOTAL DUST) |   |
| CARBON BLACK <sup>3</sup> (1333-86-4) ! | 2-7                     | 3.5mg/m <sup>3</sup> !  | 3.5mg/m <sup>3</sup> !            | NA  |
| NA - NOT APPLICABLE                     | NE - NOT ESTABLISHED    |   | UKN - UNKNOWN                     |   |

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

<sup>2</sup> 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.

<sup>3</sup> INKS CONTAINING CARBON BLACK: TP-301 TP-SB TP-HTBK TP-HTBKT.

SECTION III -- PHYSICAL AND CHEMICAL CHARACTERISTICS

INITIAL BOILING POINT: 338 DEGREES FAHRENHEIT.  
 DENSITY: 8.919 TO 14.505 LB./GAL.  
 VOC CONTENT OF MATERIAL: 16-32 % BY WEIGHT OR 260-340 GRAMS PER LITER.  
 VOC CONTENT OF COATING LESS WATER AND LESS EXEMPT SOLVENTS: 260-340

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VAPOR DENSITY: HEAVIER THAN AIR. GRAMS/LITER.  
EVAPORATION RATE: SLOWER THAN DIETHYL ETHER.  
APPEARANCE AND ODOR: LIQUID, VARIOUS COLORS, ETHER-LIKE ODOR.

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SECTION IV -- PHYSICAL HAZARD DATA  
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FLAMMABILITY CLASSIFICATIONS: OSHA: CLASS II DOT: COMBUSTIBLE LIQUID  
CLOSED CUP FLASH POINT: 138 F. EXPLOSIVE LIMITS: UNKNOWN

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: TOXICITY IS LOW TO MODERATE. MAY CAUSE DIZZINESS, DROWSINESS,  
MENTAL CONFUSION, NAUSEA, INCOORDINATION, VOMITING, AND DIARRHEA.

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SKIN ABSORPTION: A COMPONENT IS READILY ABSORBED THROUGH THE SKIN AND MAY PRODUCE TOXIC EFFECTS.

INHALATION: EXCESSIVE INHALATION OF VAPORS MAY CAUSE NASAL AND RESPIRATORY IRRITATION, CENTRAL NERVOUS SYSTEM EFFECTS INCLUDING DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE AND POSSIBLE UNCONSCIOUSNESS AND EVEN ASPHYXIATION.

SKIN CONTACT: PROLONGED OR REPEATED SKIN CONTACT CAN CAUSE IRRITATION, DEFATTING, DERMATITIS.

EYE CONTACT: CAN CAUSE SEVERE IRRITATION, POSSIBLE CORNEAL INJURY.

CONDITIONS KNOWN TO BE AGGRAVATED BY OVEREXPOSURE: NO DATA.

CHRONIC EFFECTS: OVEREXPOSURE TO THIS MATERIAL (OR ITS COMPONENTS) HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS: LIVER ABNORMALITIES.

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 OXIDIZING MATERIAL.

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

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

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 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.

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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: PROTECT AGAINST THE INHALATION OF DUST OR PARTICLES GENERATED BY SANDING, BLASTING, OR ABRADING OF THE DRIED COATING.

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 USERS. 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 -- CUSTOMER'S 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 MAY CONTAIN TRACE AMOUNTS OF EPICHLOROHYDRIN (LESS THAN 1 PPM), A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

STATE OF CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (PROPOSITION 65): THIS PRODUCT MAY CONTAIN TRACE AMOUNTS OF BENZENE (LESS THAN 50 PPM), A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

VOC CONTENT

! ! ! ! !

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| DESCRIPTION                | ! % VOC<br>! BY WT | ! WPG INK<br>! IN LBS | ! LBS VOC<br>! PER GAL | ! GRAMS VOC!<br>! PER LITRE! |
|----------------------------|--------------------|-----------------------|------------------------|------------------------------|
| TP-064 YELLOW GS           | 23.9               | 10.742                | 2.57                   | 308                          |
| TP-066 YELLOW RS           | 25.4               | 10.603                | 2.70                   | 324                          |
| TP-114 ORANGE              | 24.9               | 10.672                | 2.65                   | 318                          |
| TP-121 RED YS              | 23.2               | 10.917                | 2.53                   | 304                          |
| TP-127 VIOLET              | 26.5               | 10.549                | 2.79                   | 336                          |
| TP-155 RUBINE              | 26.3               | 10.741                | 2.82                   | 338                          |
| TP-160 RHODAMINE           | 25.3               | 11.123                | 2.81                   | 338                          |
| TP-164 RED BS              | 24.6               | 10.707                | 2.64                   | 317                          |
| TP-165 MAGENTA             | 26.0               | 10.594                | 2.76                   | 331                          |
| TP-230 BLUE                | 24.5               | 10.812                | 2.65                   | 318                          |
| TP-301 BLACK               | 26.9               | 11.038                | 2.97                   | 356                          |
| TP-311 WHITE               | 15.6               | 13.661                | 2.13                   | 256                          |
| TP-312 WHITE               | 16.6               | 14.459                | 2.40                   | 288                          |
| TP-325 GREEN               | 24.5               | 11.074                | 2.71                   | 326                          |
| TP-SB SHADING BLACK        | 26.6               | 10.552                | 2.81                   | 337                          |
| TP-MX MIXING CLEAR         | 31.9               | 8.919                 | 2.84                   | 341                          |
| TP-TW TINTING WHITE        | 25.7               | 10.42                 | 2.68                   | 322                          |
| TP-HTY H/T YELLOW          | 24.9               | 10.825                | 2.69                   | 323                          |
| TP-HTR H/T RED             | 25.0               | 10.782                | 2.69                   | 323                          |
| TP-HTB H/T BLUE            | 25.2               | 10.752                | 2.71                   | 325                          |
| TP-HTBK H/T BLACK          | 25.7               | 10.764                | 2.77                   | 332                          |
| TP-HTEX H/T BASE           | 26.3               | 10.690                | 2.81                   | 337                          |
| TPS17292 SP WHITE          | 16.6               | 14.505                | 2.41                   | 289                          |
| TPS17735 PMS 551 BLUE      | 15.8               | 13.608                | 2.16                   | 259                          |
| TPS17736 PMS 342 GREEN     | 23.5               | 11.291                | 2.65                   | 319                          |
| TPS17758 PMS 445C DK GREEN | 23.3               | 11.135                | 2.60                   | 312                          |
| TPS17826 PMS 4725 CORDOVA  | 21.3               | 11.522                | 2.46                   | 295                          |
| TPS17827 PMS 194C RED      | 27.5               | 9.893                 | 2.72                   | 326                          |