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WOLSTENHOLME INTERNATIONAL, INC. MATERIAL SAFETY DATA SHEET

HAZARD RATING SYSTEMS:

KEY: 0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE

HMS RATING

HEALTH - 1
FLAMMABILITY - 1
REACTIVITY - 0
PERSONAL PROTECTION: B
(CHEMICAL RESISTANT GLOVES , SAFETY GLASSES)

THE INFORMATION ON THIS FORM IS PROPRIETARY AND IS SOLELY FOR THE USE OF OUR CUSTOMERS. THE OSHA HAZARD COMMUNICATION STANDARD 29CFR1910.1200 REQUIRES THAT THE INFORMATION CONTAINED ON THESE SHEETS BE MADE AVAILABLE TO YOUR EMPLOYEES. PLEASE INSTRUCT YOUR EMPLOYEES TO HANDLE THIS PRODUCT PROPERLY.

WOLSTENHOLME PRODUCT NUMBER: Project 99-100

DATE OF PREPARATION: September, 2002

PREPARED BY: JAY E. BROOKS

SECTION I - PRODUCT INFORMATION

MANUFACTURER'S NAME: WOLSTENHOLME INTERNATIONAL, INC., 830 HAWTHORNE LANE, WEST CHICAGO, ILLINOIS 60185-1966 U.S.A.
EMERGENCY PHONE #: (630) 231-7000 FAX #: (630) 231-7623 PRODUCT CLASS: Carbon Dispersion for Lithographic Ink
TRADE NAME: N/A MANUFACTURER'S CODE IDENTIFICATION: 9-100

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT: HYDROTREATED PETROLEUM DISTILLATE (SEE % VOLATILE WEIGHT) AND CARBON BLACK.

HAZARD DATA: PETROLEUM DISTILLATE COMBUSTIBLE LIQUID CLASS III-B: CAS #64742-46-7. OSHA PEL/ACGIH TLV STATES OIL MIST, MINERAL @ 5 mg/M3 (OSHA 29CFR1910-1000), THE SAME REGULATION LISTS STODDARD SOLVENT @ 2,900 mg/M3. TO THE BEST OF OUR KNOWLEDGE THE FRACTIONS USED IN THIS BASE SHOULD BE CONSIDERED SOMEWHERE BETWEEN THESE FIGURES.
CARBON BLACK: CAS #1333-86-4. OSHA PEL/ACGIH TLV = 3.5 mg/M3 TWA 8 HOURS/DAY, 40 HOURS/WEEK (THIS IS AS A DRY POWDER).

SECTION III - PHYSICAL DATA

BOILING RANGE: 520 - 550 VAPOR DENSITY: HEAVIER VS AIR LIQUID DENSITY: HEAVIER VS WATER
TYPE OF ODOR: MILD RESIN ODOR APPEARANCE: VISCOUS BLACK PASTE EVAPORATION RATE: SLOWER VS BUTYL ACETATE
% VOLATILE WEIGHT (VOC'S): 18.5% METHOD OF DETERMINATION: METHOD - 24 (ASTM-2369-81)
SPECIFIC GRAVITY: 1.17 POUNDS PER GALLON: 9.754

SECTION IV - FIRE & EXPLOSION DATA

FLAMMABILITY CLASSIFICATION: COMBUSTIBLE LIQUID OSHA: III-B DOT: NONREGULATED FLASH POINT #: >200
METHOD USED: PM CLOSED CUP LEL: 1.1% EXTINGUISHING MEDIA: FOAM CO2 DRY CHEMICAL WATER FOG
UNUSUAL FIRE & EXPLOSION HAZARDS: DENSE SMOKE MAY BE GENERATED WHEN BURNING. CO AND CO2 ARE GENERATED AS COMBUSTION PRODUCTS. CLOSED CONTAINERS MAY EXPERIENCE PRESSURE BUILD-UP DUE TO HEAT EXPOSURE. WATER SPRAY MAY BE USED TO COOL UNRUPTURED CONTAINERS. SPECIAL FIREFIGHTING PROCEDURES: SELF CONTAINED BREATHING APPARATUS RECOMMENDED FOR FIRE FIGHTERS. WATER SPRAY MAY BE USED WITH CAUTION.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: SOLVENT PORTION OF THIS PRODUCT WHEN PRESENT AS A MIST, SPRAY OR VAPOR HAS A PEL OF SOMEWHERE BETWEEN 5 mg/M3 AND 2,900 mg/M3. THIS ONLY OCCURS IF HEATED. 1. EYES: CAN CAUSE IRRITATION. 2. SKIN: PROLONGED CONTACT OR REPEATED EXPOSURE MAY CAUSE SKIN IRRITATION. 3. INHALATION: EXCESSIVE INHALATION AS MIST AND/OR VAPOR MAY CAUSE DIZZINESS, NAUSEA OR IRRITATION OF NASAL AND RESPIRATORY PASSAGE. MAY HAVE ANESTHETIC AND OTHER CENTRAL NERVOUS SYSTEM EFFECTS. 4. INGESTION: CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA AND VOMITING. ASPIRATION INTO THE LUNGS CAN CAUSE PNEUMONITIS.

PRIMARY ROUTES OF ENTRY: DERMAL INHALATION
INHALATION MAY OCCUR WHEN PRODUCT IS PRESENT AS A MIST, SPRAY OR VAPOR.

EMERGENCY FIRST AID PROCEDURES: 1. IN EYES: FLUSH WITH WATER FOR 15 MINUTES OR UNTIL IRRITATION SUBSIDES. IF IRRITATION PERSISTS, CONTACT PHYSICIAN. 2. ON SKIN: WASH WITH WATERLESS HAND CLEANER FOLLOWED BY WASHING WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND WASH THOROUGHLY BEFORE RE-USING. 3. INHALATION: REMOVE PERSON TO FRESH AIR. IF BREATHING STOPPED APPLY ARTIFICIAL RESPIRATION AND ADMINISTER OXYGEN, SEEK MEDICAL ATTENTION.

4. INGESTION: IF SWALLOWED, DO NOT INDUCE VOMITING, SEEK MEDICAL ATTENTION.

SECTION VI - REACTIVITY DATA

PRODUCT STABILITY: STABLE CONDITIONS TO AVOID: AVOID CONTACT WITH STRONG OXIDIZING AGENTS SUCH AS LIQUID CHLORINE, CONCENTRATED OXYGEN, NA OR CA HYPOCHLORITE, ETC.

SECTION VII - SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED: PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN. SEE PERSONAL PROTECTION SECTION FOR PPE REQUIREMENTS. STOP LEAK AS SOON AS POSSIBLE. REMOVE ALL SOURCES OF IGNITION. FLOOR MAY BE SLIPPERY, USE CARE TO AVOID FALLING. ABSORB SPILLS WITH FLOOR ABSORBENT, VERMICULITE SAND OR OTHER SUITABLE

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ABSORBENT MATERIAL. VENTILATE CONFINED SPACES OR OTHER POORLY VENTILATED AREAS. KEEP PRODUCT AWAY FROM SEWERS BY DIKING. PREVENT ENTRY INTO SEWERS AND WATERWAYS. FOR SMALL SPILLS, WIPE UP WITH PAPER OR CLOTH WIPERS AND DISPOSE ONLY IN CONTAINERS APPROVED FOR OILY WASTE. **WASTE DISPOSAL METHOD:** SWEEP UP ABSORBENT MATERIAL AND DISPOSE IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION VIII - SPECIAL PROTECTION/PERSONAL PROTECTION EQUIPMENT INFORMATION

VENTILATION: NORMAL ROOM VENTILATION IS ADEQUATE UNDER NORMAL CONDITIONS. WHEN PRODUCT IS HEATED, LOCAL MECHANICAL EXHAUST AT SITE OF VAPOR GENERATION IS RECOMMENDED TO KEEP VAPOR AND/OR OIL MIST CONCENTRATION BELOW MAXIMUM ACCEPTABLE LEVELS. USE GENERAL MECHANICAL VENTILATION REQUIREMENTS IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

PROTECTIVE GLOVES: USE CHEMICAL RESISTANT GLOVES WHEN HANDLING THIS PRODUCT.

RESPIRATORY PROTECTION: USE A NIOSH/MSHA APPROVED (OR EQUIVALENT) RESPIRATOR FOR ORGANIC VAPORS, WHEN VAPOR AND/OR MIST IS CREATED (SUCH AS MIGHT OCCUR IF PRODUCT IS HEATED).

EYE PROTECTION: USE CHEMICAL SPLASH GOGGLES AND FACE SHIELD (ANSI Z87.1 OR APPROVED EQUIVALENT), WHEN SPLASHING AND/OR MISTING MAY OCCUR.

OTHER PROTECTIVE EQUIPMENT: USE A NIOSH/MSHA APPROVED (OR EQUIVALENT) FULL FACE AIR RESPIRATOR IN POSITIVE PRESSURE MODE OR SELF CONTAINED BREATHING APPARATUS WITH POSITIVE PRESSURE, WHEN HIGH CONCENTRATION MIST IS ENCOUNTERED.

DEFINITIONS: OSHA: U.S. OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION. ACGIH: AMERICAN CONFERENCE OF GOVERNMENT INDUSTRIAL HYGIENISTS. NIOSH: U.S. NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH. MSHA: MINE SAFETY AND HEALTH ADMINISTRATION. ASTM: AMERICAN STANDARD TESTING METHOD. PEL: PERMISSIBLE EXPOSURE LIMIT. TLV: THRESHOLD LIMIT VALUE. TWA: TIME WEIGHTED AVERAGE. PPM: PARTS PER MILLION. VOC: VOLATILE ORGANIC COMPOUND.

SECTION IX - SPECIAL PRECAUTIONS

HANDLING & STORING: STORE ONLY IN TIGHTLY CLOSED CONTAINERS, AWAY FROM HEAT, OPEN FLAME, OR OXIDIZING MATERIALS. KEEP CONTAINERS CLOSED WHEN NOT IN USE & DO NOT TRANSFER TO UNMARKED CONTAINERS. "EMPTY" CONTAINERS RETAIN RESIDUE & CAN BE DANGEROUS. NEVER PRESSURIZE, CUT, WELD, DRILL, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME OR SPARKS. CONTAINERS MAY EXPLODE & CAUSE INJURY OR DEATH. EMPTY DRUMS SHOULD BE DRAINED, CLOSED & RETURNED TO DRUM RECONDITIONER OR DISPOSE OF IN COMPLIANCE WITH FEDERAL, STATE & LOCAL REGULATIONS. **OTHER PRECAUTIONS:** AS WITH ANY INDUSTRIAL PRODUCT, PROPER PERSONAL HYGIENE PROCEDURES SHOULD BE FOLLOWED AT ALL TIMES.

SECTION X - REGULATORY INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT): DOT SHIPPING NAME: NOT DESIGNATED AS A HAZARDOUS MATERIAL BY THE FEDERAL DOT
DOT HAZARD CLASS: NONREGULATED **DOT IDENTIFICATION:** NONREGULATED

U.S. TOXIC SUBSTANCES CONTROL ACT (TSCA) AND CANADIAN DOMESTIC SUBSTANCES LIST (DSL):
OUR BLACK BASES, AS SUCH, ARE NOT LISTED IN THE TSCA INVENTORY AND THE CANADIAN DSL, HOWEVER, TO THE BEST OF OUR KNOWLEDGE ALL OF OUR RAW MATERIALS OR THEIR BASIC CHEMICALS ARE, THEREFORE, WE ARE IN COMPLIANCE.

U.S. CLEAN AIR ACT, 1990: OUR BLACK BASES DO NOT CONTAIN CLASS I OR CLASS II OZONE DEPLETING CHEMICALS AS DEFINED UNDER THE 1990 AMENDMENTS TO THE ACT.

CALIFORNIA PROPOSITION 65: OUR BLACK BASES DO NOT CONTAIN ANY CHEMICALS REPORTABLE UNDER CAL PROPOSITION 65.

U.S. SARA TITLE III - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA): SECTION 302 (40CFR 355.30): THIS PRODUCT DOES NOT CONTAIN SUBSTANCES IDENTIFIED UNDER SECTION 302 AS EXTREMELY HAZARDOUS. SECTION 311/312 (40CFR 370): THIS PRODUCT IS SUBJECT TO EPA'S "HAZARDOUS CHEMICAL REPORTING AND COMMUNITY RIGHT-TO-KNOW" AND THE NEED TO ANNUALLY SUBMIT TIER 1 AND/OR TIER II REPORTS IF PRESENT AT A FACILITY AT ANY ONE TIME IN AMOUNTS EQUAL TO OR GREATER THAN 10,000 LBS. SECTION 313 (40CFR 372): TO THE BEST OF OUR KNOWLEDGE OUR BLACK BASES DO NOT CONTAIN ANY OF THE CHEMICALS LISTED IN SECTION 313 HIGHER THAN THE REPORTABLE DE MINIMIS QUANTITIES.

COALITION OF NORTHEASTERN GOVERNORS (CONEG): FROM TIME TO TIME WE HAVE AN ANALYSIS* PERFORMED ON ONE OF OUR BLACK BASES & THEY CONFIRM TYPICAL TRACE AMOUNTS OF THE NAMED HEAVY METALS DO NOT EXCEED 2.0 PPM IN TOTAL. THIS IS WAY BELOW THE 100 PPM EFFECTIVE JAN. 1994. *IF YOU WOULD LIKE A COPY OF OUR MOST RECENT ANALYSIS, PLEASE CONTACT US.

CHEMICAL ABSTRACT SERVICE (CAS) REGISTRY #: VIRTUALLY ALL OF OUR PRODUCTS CONTAIN CARBON BLACK: CAS #1333-86-4, ROSIN MODIFIED AND/OR HYDROCARBON RESINS: CAS #68333-69-7, CAS #68240-01-7 N.J. **TRADE SECRET # 121307-5086F** AND DRYING OIL ALKYDS AND/OR ALKALI REFINED SOYBEAN OIL: CAS #67700-81-6, CAS #8001-22-7. WITH THE EXCEPTION OF 100% SOLIDS ("0" VOC'S) BASES, ALL CONTAIN: PETROLEUM MIDDLE DISTILLATE HYDROCARBONS: CAS #64742-46-7 OR FUNCTIONAL EQUIVALENTS.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HERE ARE ACCURATE AND RELIABLE TO THE BEST OF OUR KNOWLEDGE AS OF THIS DATE. WOLSTENHOLME INTERNATIONAL, INC. DOES NOT WARRANT OR GUARANTEE THEIR ACCURACY OR RELIABILITY. THIS MSDS WAS PREPARED AND IS TO BE USED ONLY FOR THIS PRODUCT. IF THIS PRODUCT IS USED AS A COMPONENT IN ANOTHER PRODUCT, THE MSDS INFORMATION MAY NOT BE APPLICABLE. THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE AND DISPOSAL OF THIS PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WOLSTENHOLME INTERNATIONAL, INC. DOES NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT. THIS MSDS HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).