

**MATERIAL SAFETY DATA SHEET**

MSDS# A021

\*\*\*\*\* SECTION 1 - IDENTIFICATION \*\*\*\*\*

IDENTITY: DURA-INK MARKER #20 AND #25 ALL COLORS  
 MANUFACTURER: MARKAL COMPANY/ LA-CO INDUSTRIES  
 250 N. WASHTENAW AVE.  
 CHICAGO, IL, 60612

EMERGENCY TELEPHONE NO. 312-826-1700  
 INFORMATION TELEPHONE NO. 312-826-1700  
 DATE PREPARED: 9/19/89

**LABELING**

HMIS: 240      NFPA: 230      WHMIS(CANADA): D-2B, B-2  
 EPA HAZARDS: ACUTE, CHRONIC      D.O.T.:  
 BILL OF LADING:      U.P.B.:

\*\*\*\*\* SECTION 2 - HAZARDOUS INGREDIENTS \*\*\*\*\*

INGREDIENT	C.A.S.#	OSHA PEL	ACGIH TLV	SUPERFUND RQ	
TOLUENE*	108-88-3	200ppm/skin	100ppm/skin	1000 lbs.	30-35
XYLENE*	1330-20-7	100ppm	100ppm	1000 lbs.	30-35
OTHER AROMATICS		100ppm	N.A.	N.A.	5-20
CRESOL*	1319-77-3	5ppm	5ppm	1000 lbs.	0-2

NOTE: THE INFORMATION ON THIS MATERIAL SAFETY DATA SHEET REFERS TO THE INKS IN THESE PENS OR MARKERS AND IT APPLIES TO HANDLING THIS INK IN BULK. THE INK IN THE PENS OR MARKERS IS CONTAINED IN A CAPILLARY RESERVOIR AND TIP AND WILL NOT SPILL OR LEAK UNDER NORMAL CONDITIONS.

\* THE INDICATED TOXIC CHEMICALS ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372.

\*\*\*\*\* SECTION 3 - PHYSICAL / CHEMICAL CHARACTERISTICS \*\*\*\*\*

BOILING POINT: 232 deg.F FOR TOLUENE      SPECIFIC GRAVITY(H<sub>2</sub>O=1): .88-.91  
 VAPOR PRESSURE(mmHg): 22 AT 68 deg.F FOR TOLUENE MELTING POINT: N.A.  
 VAPOR DENSITY(AIR=1): 3.6 FOR XYLENE EVAP. RATE(ethyl ether=1): 4.5 FOR TOLUENE  
 SOLUBILITY IN WATER: INSOLUBLE  
 APPEARANCE: COLORED LIQUID      ODOR: AROMATIC SOLVENT ODOR

\*\*\*\*\* SECTION 4 - FIRE AND EXPLOSION HAZARD DATA \*\*\*\*\*

FLASH POINT (method used): 45F FOR TOLUENE FLAMMABLE LIMITS - LEL: 1.2% UEL: 7  
 EXTINGUISHING MEDIA: FOAM, CARBON DIOXIDE, DRY CHEMICAL  
 SPECIAL FIRE FIGHTING PROCEDURES: SELF CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE - DEMAND OR OTHER POSITIVE PRESSURE MODE.  
 UNUSUAL FIRE AND EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND AND BE IGNITED BY REMOTE IGNITION SOURCES.

\*\*\*\*\* SECTION 5 - REACTIVITY DATA \*\*\*\*\*

STABILITY: STABLE  
 CONDITIONS TO AVOID: N.A.  
 INCOMPATIBILITY (MATERIALS TO AVOID): OXIDIZING AGENTS  
 HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE  
 HAZARDOUS POLYMERIZATION: WILL NOT OCCUR  
 CONDITIONS TO AVOID: N.A.

VVVVVVVVVV

CONTINUED ON BACK PAGE

VVVVVVVVVV

\*\*\*\*\* SECTION 6 - HEALTH HAZARD DATA \*\*\*\*\*

ROUTES OF ENTRY: INHALATION? SKIN? INGESTION?  
 HEALTH HAZARDS: EYES: SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION.  
 SKIN: PROLONGED CONTACT CAN CAUSE MODERATE IRRITATION.  
 INHALATION: CAN CAUSE NASAL AND RESPIRATORY IRRITATION, WEAKNESS, NAUSEA, ETC.  
 INGESTION: NAUSEA, GASTROINTESTINAL IRRITATION.  
 CARCINOGENICITY: NTP? NO IARC? NO OSHA? NO  
 SIGNS AND SYMPTOMS OF EXPOSURE: SEE "HEALTH HAZARDS" ABOVE.  
 MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NOT KNOWN  
 EMERGENCY AND FIRST AID PROCEDURES: EYES: FLUSH WITH LARGE AMOUNTS OF WATER AND GET MEDICAL ATTENTION.  
 SKIN: WASH WITH SOAP AND WATER.  
 INHALATION: REMOVE TO FRESH AIR.  
 INGESTION: DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION.

\*\*\*\*\* SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE \*\*\*\*\*

RELEASE AND SPILL PROCEDURES: ABSORB MATERIAL ON PAPER OR OTHER ABSORBENT MATERIAL AND TRANSFER TO EXHAUST HOOD.  
 WASTE DISPOSAL METHOD: ALLOW TO DRY AND DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.  
 HANDLING AND STORAGE PRECAUTIONS: USE WITH ADEQUATE VENTILATION.  
 OTHER PRECAUTIONS: N.A.

\*\*\*\*\* SECTION 8 - CONTROL MEASURES \*\*\*\*\*

RESPIRATORY PROTECTION: NONE  
 VENTILATION LOCAL EXHAUST: OK SPECIAL: N.A.  
 MECHANICAL(GENERAL): NONE OTHER: N.A.  
 PROTECTIVE GLOVES: NONE EYE PROTECTION: GLASSES  
 OTHER PROTECTIVE EQUIPMENT: N.A.  
 WORK/HYGIENIC PRACTICES: USE WITH ADEQUATE VENTILATION.

N.A. = NOT APPLICABLE N.D. = NOT DETERMINED  
 The information contained herein is based on data available to us and is accurate and reliable to the best of our knowledge and belief. However, LA-CO Industries, Inc./Markal Co. makes no representations as to its completeness or accuracy. Information is supplied upon condition that persons receiving such information will make their own determination as to its suitability for their purposes prior to use. In no event will LA-CO Industries, Inc./Markal Co. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information contained herein. NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF ANY NATURE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE MADE HEREIN WITH RESPECT TO THE INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

MSDS# A021 PRODUCT: DURA INK #20 AND #25 ALL COLORS

REPRODUCED FROM THE ORIGINAL DOCUMENT BY THE COMPANY TO WHICH IT IS LOANED. THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF THE COMPANY AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.