MATERIAL SAFETY DATA SHEET

MSDS# A021

IDENTITY: D'UR-A-L INK # 20, # 25, # 100 - ALL COLORS

MANUFACTURER
LA-CO INDUSTRIES, INC/MARKAL COMPANY
250 N. WASHTENAW AVE.
CHICAGO, IL, 60612

EMERGENCY TELEPHONE: NO. 312-826-1700
DATE PREPARED: JUNE 3, 1993
SUPERSDES ISSUE DATE: 06/01/90

LABELING
HMIS: 240
NFPA: 230
WHMIS(CANADA): D-2B, B-2
EPA HAZARDS: ACUTE, CHRONIC
D.O.T. & U.P.S: CONSUMER COMMODITY ORM-D
BILL OF LADING: MARKERS - FELT TIP INK DRAWING

SECTION 2 - HAZARDOUS INGREDIENTS

INGREDIENT C.A.S.# OSHA PEL ACGIH TLV RQ %
TOLUENE 1,2,3,4,5 108-88-3 200 ppm/skin 100 ppm/skin 1000 lbs. 30-35
XYLENE 1,3,4,5 1330-20-7 100 ppm 1000 lbs. 30-35
OTHER AROMATICS 100 ppm N.A. N.A. 5-20
CRESOL 1,3,4,5 1319-77-3 5 ppm N.A. 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.

2. THE INDICATED CHEMICAL(S) APPEAR ON CALIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT'S LIST OF CARCINOGENS.
3. THE INDICATED CHEMICAL(S) APPEAR ON THE MASSACHUSETTS SUBSTANCES LIST.
4. THE INDICATED CHEMICAL(S) APPEAR ON THE NEW JERSEY RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST.
5. THE INDICATED CHEMICAL(S) APPEAR ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST.

******** SECTION 3 - PHYSICAL / CHEMICAL CHARACTERISTICS ********
BOILING POINT: 232 deg. F FOR TOLUENE SPECIFIC GRAVITY(H2O=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.

VVVVVVVVVV

CONTINUED ON BACK PAGE

VVVVVVVVVV
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.

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

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MSDS# A021 PRODUCT: D U R A - I N K # 2 0 , # 2 5 , # 1 0 0 ALL COLORS
IDENTITY: DURA-INK #50 -- ALL COLORS

MANUFACTURER: LA-CO INDUSTRIES, INC./MARKAL COMPANY
250 N. WASHTENAW AVE.
CHICAGO, IL 60612

EMERGENCY TELEPHONE NO.: 312-826-1700
INFORMATION TELEPHONE NO.: 312-826-1700
DATE PREPARED: JUNE 3, 1993
SUPERSEDES ISSUE DATE: 06/01/92

LABELING:
MMIS: 220
NFPA: 220
WHMIS(CANADA): 0-28, 0-3
EPA HAZARDS: ACUTE, CHRONIC, FLAMMABLE D.O.T.& U.P.S.: CONSUMER COMMODITY ORM-
BILL OF LADING: MARKERS - FELT TIP INK DRAWING

SECTION 2 - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>C.A.S.#</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>RQ</th>
<th>%</th>
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<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOETHYL ETHER</td>
<td>1,2,3,4,5</td>
<td>SKIN</td>
<td>SKIN</td>
<td>1000 lbs.</td>
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<td></td>
<td>110-80-5</td>
<td>200ppm</td>
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</tr>
<tr>
<td>ETHYLENE GLYCOL MONOMETHYL ETHER</td>
<td>2,3,4,5</td>
<td>SKIN</td>
<td>SKIN</td>
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</tr>
<tr>
<td></td>
<td>109-86-4</td>
<td>25ppm</td>
<td>5ppm</td>
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</tr>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER</td>
<td>3,4,5</td>
<td>SKIN</td>
<td>SKIN</td>
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<tr>
<td></td>
<td>111-76-2</td>
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<td>BENZYL ALCOHOL</td>
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<td></td>
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<tr>
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<td>100-51-6</td>
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<td>ETHYL ALCOHOL</td>
<td>3,4,5</td>
<td>1000ppm</td>
<td>1000ppm</td>
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<td>64-17-5</td>
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</table>

THE INFORMATION ON THIS MSDS REFERS TO THE INKS USED IN THESE PENS AND MARKERS AS IT APPLIES TO HANDLING THESE INKS IN BULK. THE INK IN THESE PENS OR MARKERS IS CONTAINED IN A CAPILLARY RESERVOIR AND TIP AND WILL NOT LEAK UNDER NORMAL CONDITIONS.

2. THE INDICATED CHEMICAL(S) APPEAR ON CALIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT'S LIST OF CARCINOGENS. 
3. THE INDICATED CHEMICAL(S) APPEAR ON THE MASSACHUSETTS SUBSTANCES LIST. 
4. THE INDICATED CHEMICAL(S) APPEAR ON THE NEW JERSEY RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST. 
5. THE INDICATED CHEMICAL(S) APPEAR ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST.

SECTION 3 - PHYSICAL / CHEMICAL CHARACTERISTICS

- BOILING POINT: 250-280 deg.F 
- SPECIFIC GRAVITY\(H_2O=1\): .95
- VAPOR PRESSURE(mmHg): 4-6 AT 20 deg.C
- VAPOR DENSITY\(AIR=1\): 3-4
- MELTING POINT: N.A.
- SOLUBILITY IN WATER: SLIGHT
- EVAP. RATE\(\text{butyl acetate}=1\): .3 - .6
- APPEARANCE: COLORED LIQUID
- ODOR: ORGANIC SOLVENT

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

- FLASH POINT (method used): 125 deg. F, TOC
- FLAMMABLE LIMITS - LEL: N.D. UEL: N.D.
- EXTINGUISHING MEDIA: ALCOHOL FOAM, DRY CHEMICAL, CARBON DIOXIDE.
- SPECIAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN A POSITIVE PRESSURE.
- UNUSUAL FIRE AND EXPLOSION HAZARDS: HEAVIER THAN AIR VAPORS.
SECTION 5 - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID: NONE KNOWN.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG MINERAL ACIDS, STRONG OXIDIZERS.
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE IF BURNED.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.
CONDITIONS TO AVOID: NOT KNOWN.

SECTION 6 - HEALTH HAZARD DATA

ROUTES OF ENTRY: INHALATION? YES, SKIN? YES, INGESTION? YES.

HEALTH HAZARDS:
EYES: CAN CAUSE SEVERE IRRITATION AND CORNEAL DAMAGE.
SKIN: CAN BE MILDLY IRRITATING.
INHALATION: NASAL AND RESPIRATORY IRRITATION.
INGESTION: GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA.
CARCINOGENICITY: NTP? NO, IARC? NO, OSHA? NO

SIGNS AND SYMPTOMS OF EXPOSURE:
CHRONIC OVEREXPOSURE MAY BE FETO TOXIC, AND MAY LEAD TO DAMAGE OF LIVER, KIDNEYS AND TESTES.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NOT KNOWN.

EMERGENCY AND FIRST AID PROCEDURES:
EYES: FLUSH WITH WATER FOR 15 MINUTES - GET MEDICAL ATTENTION.
SKIN: WASH WITH SOAP AND WATER.
INHALATION: REMOVE TO FRESH AIR.
INGESTION: INDUCE VOMITING IF CONSCIOUS. GET MEDICAL ATTENTION.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

RELEASE AND SPILL PROCEDURES: ALLOW VOLATILE PORTION TO EVAPORATE IN EXHAUST HOOD AND DISPOSE OF REMAINING MATERIAL IN ACCORDANCE WITH APPLICABLE REGULATIONS.
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL REGULATIONS.
HANDLING AND STORAGE PRECAUTIONS: STORE IN COOL, DRY AREA.
OTHER PRECAUTIONS: USE WITH ADEQUATE VENTILATION.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: NONE
VENTILATION / LOCAL EXHAUST: IF NECESSARY SPECIAL: N.A.
\ MECHANICAL (GENERAL): OK OTHER: N.A.

PROTECTIVE GLOVES: NONE
EYE PROTECTION: NONE
OTHER PROTECTIVE EQUIPMENT: N.A.
WORK/HYGIENIC PRACTICES: USE WITH ADEQUATE VENTILATION.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED

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MSDS# A053 PRODUCT: DURA-INK #50 -- ALL COLORS
IDENTITY: DURA-INK # 80 -- GREEN, BLUE, YELLOW, ORANGE

MANUFACTURER
LA-CO INDUSTRIES, INC/MARKAL COMPANY
250 N. WASHTENAW AVENUE
CHICAGO, IL 60612

EMERGENCY TELEPHONE NO. 312-826-1700
INFORMATION TELEPHONE NO. 312-826-1700
DATE PREPARED: JUNE 3, 1993
SUPERSEDES ISSUE DATE: 12/19/90

LABELING
EPA HAZARDS: ACUTE, FLAMMABLE
D.O.T. & U.P.S.: CONSUMER COMMODITY ORM-I
BILL OF LADING: MARKERS - FELT TIP INK DRAWING

INGREDIENT

C.A.S.# OSHA PEL ACGIH TLV RQ %
AROMATIC PETROLEUM SOLVENT 64742-95-6 100ppm/8HRS. N.A. N.A. 65-75

1330-20-7 100ppm 1000 lbs. 10-15


SECTION 3 - PHYSICAL / CHEMICAL CHARACTERISTICS

REPEAT TO BULK INK

BOILING POINT: 282-346 deg.F
VAPOR PRESSURE (mmHg): 20 @ 100 deg.C
VAPOR DENSITY (AIR=1): 4
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE: FELT TIP MARKER

SPECIFIC GRAVITY (H2O=1): < 1
MELTING POINT: N.A.
EVAP. RATE (butyl acetate=1): < 1
ODOR: INK HAS AROMATIC ODOR

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used): 80 deg.F, TCC
FLAMMABLE LIMITS - LEL: 1% UEL: 1%
EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER SPRAY.
SPECIAL FIRE FIGHTING PROCEDURES: USE SELF-CONTAINED BREATHING APPARATUS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: N.A.

SECTION 5 - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID: HEAT, OPEN FLAME AND SPARKS.
INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDANTS
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE AND UNIDENTIFIED ORGANIC COMBUSTION PRODUCTS.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: N.A.
SECTION 6 - HEALTH HAZARD DATA

ROUTES OF ENTRY: INHALATION? YES  SKIN? YES  INGESTION? YES

HEALTH HAZARDS:
EYES: IRRITATION.
SKIN: MAY CAUSE DERMATITIS.
INHALATION: IRRITATION TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
INGESTION: MAY AFFECT CENTRAL NERVOUS SYSTEM.

CARCINOGENICITY: NTP? NO  IARC? NO  OSHA? NO

SIGNS AND SYMPTOMS OF EXPOSURE: HEADACHE, DIZZINESS, NAUSEA, ANESTHESIA.
COUGHING, IRRITATION OF EYES, NOSE, AND THROAT.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.A.

EMERGENCY AND FIRST AID PROCEDURES:
EYES: FLUSH WITH PLENTY OF WATER. GET MEDICAL ATTENTION.
SKIN: WASH WITH SOAP AND WATER.
INHALATION: SEEK FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING.
INGESTION: GET MEDICAL ATTENTION.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

RELEASE AND SPILL PROCEDURES: REMOVE ALL IGNITION SOURCES, VENTILATE AREA.
USE ABSORBENT TO CLEAN UP SPILL.
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL REGULATIONS.
HANDLING AND STORAGE PRECAUTIONS: KEEP AWAY FROM FIRE, EXCESSIVE HEAT AND STRONG OXIDANTS. STORE AT ROOM TEMPERATURE. USE ADEQUATE VENTILATION.

OTHER PRECAUTIONS: N.A.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: NORMALLY NOT REQUIRED.
VENTILATION / LOCAL EXHAUST: N.A.  SPECIAL: N.A.
MECHANICAL(GENERAL): YES  OTHER: N.A.
PROTECTIVE GLOVES: N.A.
EYE PROTECTION: N.A.
OTHER PROTECTIVE EQUIPMENT: N.A.
WORK/HYGIENIC PRACTICES: DO NOT DELIBERATELY INHALE VAPORS. REPLACE CAP WHEN NOT IN USE.

N.A. = NOT APPLICABLE  N.D. = NOT DETERMINED

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MSDS# A057  PRODUCT: DURA INK #80 - GREEN, BLUE, YELLOW, ORANGE
MATERIAL SAFETY DATA SHEET

SECION 1 - IDENTIFICATION

IDENTITY: DURA-INK #80 -- BLACK

MANUFACTURER: LA-CO INDUSTRIES, INC/MARKAL COMPANY
250 N. WASHINGTO AVE.
CHICAGO, IL 60612

EMERGENCY TELEPHONE NO. 312-826-1700
INFORMATION TELEPHONE NO. 312-826-1700
DATE PREPARED: JUNE 3; 1993
SUPERSEDES ISSUE DATE: 12/19/90

LABELING:
HMIS: 230
EPA HAZARDS: ACUTE, FLAMMABLE
BILL OF LADING: MARKERS - FELT TIP INK DRAWING

SECION 2 - HAZARDOUS INGREDIENTS

<table>
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<tr>
<th>INGREDIENT</th>
<th>C.A.S.#</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>RQ</th>
<th>%</th>
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<td>DIACETONE ALCOHOL</td>
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<td>.50ppm</td>
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<td>PROPYLENE GLYCOL MONOMETHYL ETHER</td>
<td>107-98-2</td>
<td>N.A.</td>
<td>100ppm</td>
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</table>

SECION 3 - PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT: 248-337 deg.F
VAPOR PRESSURE (mmHg): 10 @ 25 deg.C
VAPOR DENSITY AIR=1: > 1
SOLUBILITY IN WATER: PARTIAL
APPEARANCE: FELT TIP MARKER
ODOR: INK HAS ETHEREAL ODOR

SECION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used): 89 deg.F, ICC
FLAMMABLE LIMITS - LEL: N.A. UEL: N.A.
EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER SPRAY.
SPECIAL FIRE FIGHTING PROCEDURES: USE SELF-CONTAINED BREATHING APPARATUS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: N.A.

SECION 5 - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID: HEAT, OPEN FLAME AND SPARKS.
INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDANTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide and unidentifed organic combustion products.
Hazardous Polymerization: will not occur
CONDITIONS TO AVOID: N.A.

CONTINUED ON BACK PAGE
SECTION 6 - HEALTH HAZARD DATA

ROUTES OF ENTRY: INHALATION? YES  SKIN? YES  INGESTION? YES

HEALTH HAZARDS:

EYES: IRRITATION.
SKIN: MAY CAUSE DERMATITIS.
INHALATION: IRRITATION TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
INGESTION: MAY AFFECT CENTRAL NERVOUS SYSTEM.

CARCINOGENICITY: NTP? NO  IARC? NO  OSHA? NO

SIGNALS AND SYMPTOMS OF EXPOSURE: HEADACHE, DIZZINESS, NAUSEA, ANESTHESIA.
COUGHING, IRRITATION OF EYES, NOSE, AND THROAT.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.A.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: FLUSH WITH PLENTY OF WATER. GET MEDICAL ATTENTION.
SKIN: WASH WITH SOAP AND WATER.
INHALATION: SEEK FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING.
INGESTION: GET MEDICAL ATTENTION.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

RELEASE AND SPILL PROCEDURES: REMOVE ALL IGNITION SOURCES, VENTILATE AREA, USE ABSORBENT TO CLEAN UP SPILL.

WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL REGULATIONS.

HANDLING AND STORAGE PRECAUTIONS: KEEP AWAY FROM FIRE, EXCESSIVE HEAT AND STRONG OXIDANTS. STORE AT ROOM TEMPERATURE. USE ADEQUATE VENTILATION.

OTHER PRECAUTIONS: N.A.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: NORMALLY NOT REQUIRED.
VENTILATION
LOCAL EXHAUST: N.A.
MECHANICAL (GENERAL): YES
SPECIAL: N.A.

OTHER: N.A.

PROTECTIVE GLOVES: N.A.

EYE PROTECTION: N.A.

OTHER PROTECTIVE EQUIPMENT: N.A.

WORK/HYGIENIC PRACTICES: DO NOT DELIBERATELY INHALE VAPORS. REPLACE CAP WHEN NOT IN USE.

N.A. = NOT APPLICABLE  N.D. = NOT DETERMINED

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MSDS# A055  PRODUCT: DURA-INK #8.0 -- BLACK
MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

IDENTITY: DUR-A-INK # 80 -- RED

MANUFACTURER: LA-CO INDUSTRIES, INC/MARKAL COMPANY
250 N. WASHTENAW AVE.
CHICAGO, IL, 60612

EMERGENCY TELEPHONE NO.: 312-826-1700
INFORMATION TELEPHONE NO.: 312-826-1700
DATE PREPARED: JUNE 4, 1993
SUPERSEDES ISSUE DATE: 12/19/90

LABELING
HMIS: 230 NFPA: 230
WHMIS(CANADA): D-2B, B-2
EPA HAZARDS: ACUTE, FLAMMABLE
D.O.T.& U.P.S.: CONSUMER COMMODITY ORM-
BILL OF LADING: MARKERS - FELT TIP INK DRAWING

SECTION 2 - HAZARDOUS INGREDIENTS

SUPERFUND

INGREDIENT C.A.S.# OSHA PEL ACGIH TLV RQ %
AROMATIC PETROLEUM SOLVENT 64742-95-6 100ppm N.A. N.A. 40
MINERAL SPIRITS 64742-88-7 500ppm N.A. N.A. 25
XYLOL * 1330-20-7 100ppm 100ppm 1000 1 lbs. 5


SECTION 3 - PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT: 282-358 deg.F.
VAPOR PRESSURE(mmHg): 20 @ 100 deg.C
VAPOR DENSITY(AIR=1): 4
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE: FELT TIP MARKER
ODOR: INK HAS AROMATIC ODOR

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used): 80-85 deg.F, TCC
FLAMMABLE LIMITS - LEL: 1%
UEL: 1%
EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER SPRAY.
SPECIAL FIRE FIGHTING PROCEDURES: USE SELF-CONTAINED BREATHING APPARATUS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: N.A.

SECTION 5 - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID: HEAT, OPEN FLAME AND SPARKS.
INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDANTS
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE AND UNIDENTIFIED ORGANIC COMBUSTION PRODUCTS.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: N.A.

CONTINUED ON BACK PAGE
SECTION 6 - HEALTH HAZARD DATA

ROUTES OF ENTRY: INHALATION? YES  SKIN? YES  INGESTION? YES

HEALTH HAZARDS:

EYES: IRRITATION.
SKIN: MAY CAUSE DERMATITIS.
INHALATION: IRRITATION TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
INGESTION: MAY AFFECT CENTRAL NERVOUS SYSTEM.
CARCINOGENICITY: NTP? NO  IARC? NO  OSHA? NO
SIGNS AND SYMPTOMS OF EXPOSURE: HEADACHE, DIZZINESS, NAUSEA, ANESTHESIA,
COUGHING, IRRITATION OF EYES, NOSE, AND THROAT.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.A.
EMERGENCY AND FIRST AID PROCEDURES:
EYES: FLUSH WITH PLENTY OF WATER. GET MEDICAL ATTENTION.
SKIN: WASH WITH SOAP AND WATER.
INHALATION: SEEK FRESH AIR. GIVE ARTIFICIAL RESPIRATION OF NOT BREATHING.
INGESTION: GET MEDICAL ATTENTION.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

RELEASE AND SPILL PROCEDURES: REMOVE ALL IGNITION SOURCES, VENTILATE AREA,
USE ABSORBENT TO CLEAN UP SPILL.
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL REGULATIONS.
HANDLING AND STORAGE PRECAUTIONS: KEEP AWAY FROM FIRE, EXCESSIVE HEAT AND
STRONG OXIDANTS. STORE AT ROOM TEMPERATURE. USE ADEQUATE VENTILATION.
OTHER PRECAUTIONS: N.A.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: NORMALLY NOT REQUIRED.
VENTILATION / LOCAL EXHAUST: YES  MECHANICAL (GENERAL): N.A.
PROTECTIVE GLOVES: N.A.
EYE PROTECTION: N.A.
OTHER PROTECTIVE EQUIPMENT: N.A.
WORK/HYGIENIC PRACTICES: DO NOT DELIBERATELY INHALE VAPORS. REPLACE CAP WHEN
NOT IN USE.

N.A. = NOT APPLICABLE  N.D. = NOT DETERMINED

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