MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1117, Tower Road, Schaumburg, IL 60173, U. S. A. Business Phone: (847) 885-1163 Fax: (847) 885-1932

24 hours Road Emergency Phone: 1-800-535-5053 INFOTRAC

PRODUCT TRADE NAME:

Product use:

Nikken Printing Supply U.S.A., Inc.

MOIST CLEAN EXCEL Metering Roller Cleaner

2. COMPOSITION / INFORMATION ON INGREDIENTS:

| | | | EAFOSURE LIMITS 8 III. TWA (FFWI) | |
|------------------|----------------------|------------|-----------------------------------|-----------|
| Chemical Name | <u>% by Wt Range</u> | CAS Number | OSHA PEL | ACGIH TLV |
| Aromatic naphtha | 35.00-50.00 | 64742-95-6 | 100 ppm | 100 ppm |
| 2-Butoxyethanol | 35.00-50.00 | 111-76-2 | 50 ppm | 20 ppm |

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

Clear, light yellow liquid with solvent odor. Caution! Combustible. Flash Point = 44°C. HARMFUL IF SWALLOWED. Irritant liquid and vapor. May cause eye digestive, and respiratory tract irritation. Ingestion may cause central nervous system effects, cardiopulmonary effects and kidney effects. Symptoms include: Convulsions, acidosis, coma, irregular heart beat, heat and kidney failure. This product has caused adverse birth and reproductive effects. Target Organs: Central nervous system, kidneys, heart, respiratory systems.

| | _ | HMIS HAZARD CLASS | | | |
|------------------|-----------------|-----------------------|-----------------|------------------|--|
| | | HEALTH | HEALTH (Blue) 1 | | |
| | | FLAMMABILITY | (Red) | 2 | |
| | | REACTIVITY | (Yellow) | 0 | |
| | | PROTECTIVE EQ | UIPMENT | В | |
| HAZARD INDEX: | - | B: Safety glasses and | gloves | | |
| 0=Minimal Hazard | 1=Slight Hazard | 2=Moderate Hazard | | 3=Serious Hazard | |

POTENTIAL HEALTH EFFECTS

EYES: Exposure may cause eye irritation, stinging, tearing, redness, and swelling.

SKIN CONTACT: Exposure may cause skin irritation. Prolonged and repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking, skin burns, and skin damage.

<u>INGESTION:</u> May cause nausea and vomiting. Toxicity effects may include paralysis of eye muscles, convulsions, rapid heart beat, kidney abnormalities, and possible cardiac failure. This material can enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage. <u>INHALATION:</u> May cause respiratory tract irritation. Heated or misted substance may cause headache, irregular eye movements, and possible coma. <u>CHRONIC (CANCER) INFORMATION:</u> May cause kidney injury. This product has not been identified as possible cancer hazard by NTP, IARC, or OSHA.

<u>ACUTE EFFECTS:</u> May cause skin, eye and digestive tract irritation. <u>OTHER HEALTH HAZARDS:</u> None.

4. FIRST AID MEASURES:

EYES: Immediately flush eyes with water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical attention immediately. Do not allow victim to rub or keep eyes closed.

<u>SKIN</u>: Wash off in flowing water or shower for 15 minutes while removing contaminated clothing and shoes. Get medical help if irritation develops and persists. Remove contaminated clothing.

<u>INGESTION</u>: Do not induce vomiting. This material is an aspiration hazard. If individual is drowsy or unconscious, place on left side with the head down. Get medical attention.

<u>INHALATION:</u> Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Get medical attention.

NOTE TO PHYSICIAN: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES:

FLASH POINT: 44°C, TCC.

FLAMMABLE LIMITS, % Volume in air: LFL: 1.00 ; UFL: 15.00

EXTINGUISHING MEDIA: Use dry chemical. Water or foam may cause frothing.

<u>FIRE FIGHTING INSTRUCTIONS:</u> Firemen should wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

FIRE & EXPLOSION HAZARDS: This product is combustible and may be ignited by heat or flame.

6. ACCIDENTAL RELEASE MEASURES: ***Large Spills*** Eliminate potential sources of ignition. Wear appropriate respirator and other protective clothing. Shut off source of leak only if it is safe to do so. Prevent from entering drains, sewer, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to a non-leaking containers and seal tightly for proper disposal. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

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7. HANDLING AND STORAGE: Cause eye and skin irritation. Do not get in eyes, on skin, on clothing. Avoid ingestion and inhalation. Wash thoroughly after handling. Keep away from sources of ignition. "Empty containers retain product residue, (liquid and / vapor), and can be dangerous". Do not cut, weld, pressurize, braze, solder, grind, drill, or expose such containers to heat, sparks or open flames. Empty drums should be completely drained, properly bunged, and promptly returned and disposed of. Prevent build up of vapors to explosive concentration. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Use with adequate ventilation. Maintain good housekeeping. FOR INDUSTRIAL USE ONLY. "KEEP OUT OF REACH OF CHILDREN".

8. EXPOSURE CONTROLS, PERSONAL PROTECTION:

Engineering controls: Local exhaust ventilation may be necessary to keep airborne concentrations below the permissible exposure limits-SEE SECTION 2. Use explosion-proof ventilation as required to control vapor concentrations. PERSONAL PROTECTIVE EQUIPMENT (PPE): RESPIRATORY PROTECTION: Avoid prolonged or repeated breathing of vapors. If exposure may or does exceed occupational exposure limits (Sec. 2) use a NIOSH-Approved respirator to prevent overexposure. In accord with 29 CFR 1910.134. Use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors. EYE PROTECTION: Use safety glasses or goggles as appropriate (29 CFR 1910.133). SKIN: Wear solvent resistant gloves. OTHER CLOTHING AND EQUIPMENT: It is suggested that a source of clean water be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed. 9. PHYSICAL AND CHEMICAL PROPERTIES: Appearance: Clear, light yellow liquid. Odor: Solvent odor. Boiling Point: 157°C Vapor Density: >1 Solubility in Water: Miscible Specific Gravity: 0.916 pH: Not applicable Density: 7.63 lb/gallon Volatile Organic Content (VOC, EPA Method 24): 7.6 lb/gallon; 912 gm/liter. VOC Composite Partial Pressure, mm Hg at 20°C: 1.00 Photochemical Reactivity SCAQMD Rule 443: None Photochemically Reactive. 10. STABILITY AND REACTIVITY: STABILITY: Stable at room temperature in closed containers under normal storage and handling conditions. CONDITIONS TO AVOID: Ignition sources, open flame and excess heat. HAZARDOUS POLYMERIZATION: Has not been reported. INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizing agents, silver-copper wire, acid and alkalis. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide, and various hydrocarbons. 11. TOXICOLOGICAL INFORMATION: CAS Number Chemical Name LC50 PPM (Inhalation rat) LD 50 mg/kg (Oral-rat) Aromatic naphtha 64742-95-6 >700 ppm/4H >25 ml/kg (rat) 2-Butoxyethanol 111-76-2 N/A N/A 12. ECOLOGICAL INFORMATION: On soil, ethylene glycol may leach to groundwater an biodegrade rapidly. In water, ethylene glycol readily biodegrades. Ethylene glycol is not expected to bioconcentrate in marine life. 13. DISPOSAL CONSIDERATIONS: Dispose in a manner consistent with federal, state, and local regulations. Refer to latest EPA or State Regulations regarding proper disposal.

14. TRANSPORT INFORMATION: This product is hazardous material for shipping. D.O.T. SHIPPING description: Flammable Liquids, N.O.S., UN 1993, PG III (naphtha) IMO: SHIPPING NAME: Flammable liquids, N.O.S.(naphtha) HAZARD CLASS: 3 UN Number: 1993 Packing Group: III Flammable liquids, N.O.S.(naphtha) HAZARD CLASS: 3 IATA: SHIPPING NAME: UN Number: 1993 Packing Group: III

15. REGULATORY INFORMATION:

| | | | EXPOSURE LIMIT | EXPOSURE LIMITS 8 hr. TWA (PPM) | | | | |
|--|--------------------------|------------|----------------|---------------------------------|--|--|--|--|
| Chemical Name | <u>% by Wt Range</u> | CAS Number | OSHA PEL | ACGIH TLV | | | | |
| 2-Butoxyethanol | 35.00-50.00 | 111-76-2 | 50 ppm | 20 ppm | | | | |
| *U.S. Environmental Protection Agency, Office of Toxic Substances. | | | | | | | | |
| Toxic Substances Control Act Chemical Substances Inventory, | | | | | | | | |
| Initial Inventory. 6 Vols. U.S. | Environmental Protection | | | | | | | |
| Agency. Washington, D.C. 197 | 79. Listed. | | | | | | | |

16. OTHER INFORMATION: All information appearing herein is based upon Data obtained from Manufacturer and/or recognized technical sources. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the material are beyond our control and may be beyond our knowledge. For this and other reasons, we do 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, disposal of the material. It is the use's responsibility to satisfy oneself as to the suitability and completeness of this information for his own particular use. To the best of our knowledge, the information contained herein is accurate. However, neither Nikken Printing Supply U.S.A., nor any of its distributors assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.