

## MATERIAL SAFETY DATA SHEET RINGO

DATE OF ISSUE: 08/29/2006

SUPERCEDES: 10/24/2003

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### SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms: N/A      Trade Name & Synonyms: RINGO

Chemical Family: ACIDIC SOLUTION      Formula Mixture: X

Manufacturer's Name: MANTEK, DIVISION OF NCH CORP.

Address: BOX 152170  
IRVING, TEXAS 75015

Prepared By: D Hollas/Chemist

Product Code Number: 0325

Emergency Phone Number: 800-424-9300

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### SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients): HYDROCHLORIC ACID

Hazard: CORROSIVE

TLV: 2 PPM\* 1

PEL: 5 PPM\* 2

STEL: N/E

CAS#: 7647-01-0

Chemical Name (Ingredients): NONIONIC SURFACTANT

Hazard: IRRITANT

TLV: N/E 1

PEL: N/E 2

STEL: N/E

CAS#: 68131-39-5

Chemical Name (Ingredients): \* AS CEILING LIMITS

Hazard:

TLV:

PEL:

STEL:

CAS#:

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### SECTION III - PHYSICAL DATA

Boiling Point (f): 190-212°  
Specific Gravity (H2O=1): 1.112  
Vapor Pressure (MM HG): 18  
Color: YELLOW  
Vapor Density (Air=1): 0.6  
Odor: PUNGENT ACID  
PH @ 100%: 0.7  
Clarity: OPAQUE  
Volatile by Volume: >95  
Evaporation Rate (BU A/C=1): 0.1  
H2O Solubility: COMPLETE  
Viscosity: NON-VISCOUS

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### SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: >200°F / SETAFLASH

Flammable Limits: HYDROGEN GAS LEL: 4% UEL:75%

Extinguishing Media:

Foam: X Alcohol Foam: CO2: X

Dry Chemical: X Water Spray: X Other:

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:

PROLONGED CONTACT WITH REACTIVE METALS, SUCH AS ALUMINUM, BRASS, BRONZE, CHROMIUM, MAGNESIUM, TIN, ZINC, AND ALLOYS, CAN CAUSE THE FORMATION OF FLAMMABLE HYDROGEN GAS WHICH CAN FORM AN EXPLOSIVE

MIXTURE WITH AIR. THE USE OF WATER SPRAY (FOG) WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE. USE CARE AS SPILLS MAY BE SLIPPERY.

Aerosol Level (NFPA 30B): N/A

NFPA 704 Hazard Rating:

(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)

Health: 3 Flammability: 0 Instability: 1 Special:

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## SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:

2 PPM AS CEILING LIMIT FOR HYDROCHLORIC ACID 1.

Effects of Overexposure:

-Acute(Short Term Exposure)

EYE CONTACT: CORROSIVE. CAUSES BURNS, CORNEAL DAMAGE, AND POSSIBLE BLINDNESS.

SKIN CONTACT: CORROSIVE. CAUSES BURNS AND POSSIBLE DEEP ULCERATIONS OR SCARRING.

INHALATION: CAUSES BURNS TO THE RESPIRATORY TRACT, NOSE, MOUTH, AND THROAT WITH DISCOMFORT, NASAL DISCHARGE, SNEEZING, COUGHING, RAPID HEARTBEAT, AND CHEST PAIN. INHALATION OF MIST OR VAPORS MAY CAUSE CHEMICAL PNEUMONITIS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.

INGESTION: CORROSIVE. CAUSES BURNS TO THE MOUTH, THROAT, ESOPHAGUS, AND STOMACH WITH NAUSEA AND PAIN. SYMPTOMS MAY INCLUDE VOMITING OF BLOOD. BLOOD LOSS THROUGH DAMAGED TISSUE CAN LEAD TO LOW BLOOD PRESSURE AND SHOCK, AND MAY BE FATAL.

-Chronic (Long Term Exposure)

PROLONGED OR REPEATED EXPOSURE MAY RESULT IN EROSION OF THE TEETH. MAY CAUSE BRONCHOPNEUMONIA, CHEMICAL PNEUMONITIS, PULMONARY EDEMA, AND DELAYED SCARRING OF THE AIRWAY AND OTHER AFFECTED ORGANS.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS.

TARGET ORGANS: NONE KNOWN. THERE IS NO PRIMARY ROUTE OF ENTRY INTO THE BODY. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Primary Routes of Entry: Inhalation: Ingestion: Absorption:

Emergency and First Aid Procedures:

-Inhalation:

MOVE PERSON TO FRESH AIR. IF PERSON IS NOT BREATHING, CALL 911 OR AN AMBULANCE, THEN GIVE ARTIFICIAL RESPIRATION, PREFERABLY BY MOUTH-TO-MOUTH, IF POSSIBLE. CALL A POISON CONTROL CENTER OR DOCTOR FOR FURTHER TREATMENT ADVICE.

**-Eye Contact:**

HOLD EYE OPEN AND RINSE SLOWLY AND GENTLY WITH WATER FOR 15-20 MINUTES. REMOVE CONTACT LENSES, IF PRESENT, AFTER THE FIRST 5 MINUTES, THEN CONTINUE RINSING EYE. CALL A POISON CONTROL CENTER OR DOCTOR FOR TREATMENT ADVICE.

**-Skin Contact:**

TAKE OFF CONTAMINATED CLOTHING. RINSE SKIN IMMEDIATELY WITH PLENTY OF WATER FOR 15-20 MINUTES. CALL A POISON CONTROL CENTER OR DOCTOR FOR TREATMENT ADVICE.

**-Ingestion:**

CALL A POISON CONTROL CENTER IMMEDIATELY FOR TREATMENT ADVICE. HAVE PERSON SIP A GLASS OF WATER IF ABLE TO SWALLOW. DO NOT INDUCE VOMITING UNLESS TOLD TO DO SO BY THE POISON CONTROL CENTER OR DOCTOR. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

**-Notes to Physician:**

PROBABLE MUCOSAL DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE.

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## SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: No            NTP: No            OSHA: No            ACGIH: No            OTHER: No

VOC CONTENT: 0.1% BY WEIGHT, 0.1% BY VOLUME, 1.1 G/L

### HYDROCHLORIC ACID

ORL-RBT LD50: 900 MG/KG 4.

IHL-RAT LC50: 3124 PPM/1H 4.

SKN-HMN SDT: 4%/24H MILD 4.

EYE-RBT RINSED WITH WATER: 5 MG/30S MILD 4.

EXPOSURES OF 100 PPM FOR 6 HRS A DAY FOR 50 DAYS CAUSED ONLY SLIGHT UNREST AND IRRITATION TO THE EYES AND NOSE OF RABBITS, GUINEA PIGS AND PIGEONS. THE HEMOGLOBIN CONTENT OF THE BLOOD WAS ALSO SLIGHTLY DIMINISHED.

## MONKEYS

RECEIVING 20 EXPOSURES OF 33 PPM FOR 6 HRS DID NOT DISPLAY ANY ADVERSE EFFECTS. HIGHER EXPOSURES HAVE CAUSED WEIGHT LOSS WHICH PARALLELED THE SEVERITY OF EXPOSURE. BABOONS EXPOSED TO 500, 5000, OR 10,000 PPM FOR 15 MINUTES DID NOT HAVE SIGNIFICANT ALTERATIONS IN ANY PULMONARY FUNCTION PARAMETERS 3 DAYS OR 3 MONTHS AFTER EXPOSURE. IN HUMANS, LONG TERM OVEREXPOSURES HAVE BEEN ASSOCIATED WITH EROSION OF TEETH. 3.

TWO STUDIES ON RATS WERE CONDUCTED TO DETERMINE IF HYDROGEN CHLORIDE INCREASED THE FORMATION OF NASAL TUMORS OR INCREASED THE CARCINOGENIC POTENTIAL OF FORMALDEHYDE. IN BOTH STUDIEDS THE RATS WERE EXPOSED TO 10 PPM FOR 6 HOURS A DAY, 5 DAYS A WEEK. ONE STUDY LASTED 84 WEEKS WHILE THE OTHER LASTED THE ANIMALS' LIFETIME. HYDROGEN CHLORIDE DID NOT CAUSE AN INCREASE IN NASAL TUMORS AND DID NOT INCREASE THE CARCINOGENICITY OF FORMALDEHYDE. 3.

## NONIONIC SURFACTANT

ORL-RAT LD50: 2000 MG/KG 4.

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## SECTION VII - REACTIVITY DATA

Stability:            Stable: X      Unstable:

Conditions to Avoid: NONE KNOWN.

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; STRONG BASES, PVD COATED SURFACES, AND PORCELAIN ENAMELED SURFACES. BLEACH AND OTHER SOURCES OF CHLORINE. PROLONGED CONTACT WITH REACTIVE METALS, SUCH AS ALUMINUM, BRASS, BRONZE, CHROMIUM, MAGNESIUM, TIN, ZINC, AND ALLOYS, CAN CAUSE THE FORMATION OF FLAMMABLE HYDROGEN GAS WHICH CAN FORM AN EXPLOSIVE MIXTURE WITH AIR.

Hazardous Decomposition Products:

OXIDES OF CARBON AND NITROGEN, HYDROGEN CHLORIDE, AND CHLORINE GAS.

Hazardous Polymerization:

May Occur:      Will Not Occur: X

Conditions to Avoid: N/A

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## SECTION VIII - SPILL OR LEAK PROCEDURES

**Steps to be Taken if Material is Released or Spilled:**

**WEAR APPROPRIATE PROTECTIVE CLOTHING. VENTILATE THE AREA. USE CARE AS SPILLS MAY BE SLIPPERY. DIKE AND CONTAIN SPILL. ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. PREVENT PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER. FLUSH AREA WITH WATER.**

**Waste Disposal Method(s):**

**DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.**

**Neutralizing Agent:**

**USE SODIUM BICARBONATE OR SODA ASH. ADD CAUTIOUSLY WHILE MIXING. WEAR APPROPRIATE PROTECTIVE EQUIPMENT.**

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**SECTION IX - SPECIAL PROTECTION INFORMATION**

**Required Ventilation:**

**LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF VAPORS OR MISTS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.**

**Respiratory Protection:**

**RESPIRATORS SHOULD BE SELECTED BY AND USED UNDER THE DIRECTION OF A TRAINED HEALTH AND SAFETY PROFESSIONAL FOLLOWING REQUIREMENTS FOUND IN OSHA'S RESPIRATOR STANDARD (29 CFR 1910.134) AND ANSI'S STANDARD FOR RESPIRATORY PROTECTION (Z88.2-1992). FOR CONCENTRATIONS ABOVE THE TLV AND/OR PEL BUT LESS THAN 10 TIMES THESE LIMITS, A NIOSH APPROVED HALF-FACEPIECE RESPIRATOR EQUIPPED WITH APPROPRIATE CHEMICAL CARTRIDGES MAY BE USED. FOR CONCENTRATIONS GREATER THAN 10 TIMES THE TLV AND/OR PEL, CONSULT THE NIOSH RESPIRATOR DECISION LOGIC FOUND IN PUBLICATION NO. 87-116 OR ANSI Z88.2-1992.**

**Glove Protection:**

**NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN WHEN HANDLING. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.138.**

**Eye Protection:**

**CHEMICAL GOGGLES AND A FACE SHIELD SHOULD BE WORN WHEN HANDLING. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.**

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE.

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SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature:   Indoors: X                   Outdoors:                   Heated:                   Refrigerated:

Minimum Temperature: 35°F                   Maximum Temperature: 120°F

Precautions to be taken in Handling and Storing:

ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT STORE OR TRANSFER IN UNLINED METAL CONTAINERS. KEEP FROM FREEZING. IF PRODUCT FREEZES ALLOW IT TO SLOWLY WARM TO ROOM TEMPERATURE AND STIR THOROUGHLY BEFORE USING.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

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SECTION XI - REGULATORY INFORMATION

Chemical Name                   CAS Number   Upper % Limit

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

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SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2006.

2. OSHA PEL.

3. VENDOR'S MSDS.

4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFOWeb, 2006.

ALL THE COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM

LISTING.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, TOX:TOXIC, IHL:INHALATION, COMB: COMBUSTIBLE, CORR:CORROSIVE, CARC:CARCINOGENIC, N/A:NOT APPLICABLE, N/E: NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, HMN:HUMAN, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, ORL:ORAL, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV: THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIAN, PNOC:PARTICULATES NOT OTHERWISE CLASSIFIED, PNOR: PARTICULATES NOT OTHERWISE REGULATED, PNOS:PARTICLES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST

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