

MATERIAL SAFETY DATA SHEET: NM-2000

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DATE OF ISSUE
5/28/2003SUPERSEDES
5/12/2003

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms N/A	Trade Name & Synonyms NM-2000
Chemical Family: AQUEOUS INORGANIC ACID	Formula Mixture --> X
Manufacturer's Name: CORRIFIED LABS, DIV. OF NCH CORP.	
Address: BOX 15277 IRVING, TEXAS 75015	
Prepared By: C Williamson/Chemist	Product Code Number 0364
	Emergency Phone Number 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
HYDROGEN CHLORIDE \$ CRILING LIMIT AS HYDROGEN CHLORIDE	CORROSIVE	N/E	1. 5 PPM	2. 2 PPM C\$ 1	7647-01-0

SECTION III - PHYSICAL DATA

Boiling Point (F):	220°	Specific Gravity (H2O=1):	1.07
Vapor Pressure (MM HG):	16.09	Color:	LIGHT AMBER
Vapor Density (Air=1):	0.7	Odor:	PUNGENT ACID
PH @ 100% :	<0.5	Clarity:	SLIGHTLY HAZY
% Volatile by Volume:	89.3	Evaporation Rate (BU A/C=1):	0.61
H2O Solubility:	COMPLETE	Viscosity:	NON-VISCIOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point NON-FLAM / SHARP FLASH	Flammable Limits HYDROGEN GAS	LEL 4%	UEL 75%
Extinguishing Media X <-- Foam X <-- Alcohol Foam X <-- CO2 X <-- Dry Chemical X <-- Water Spray <-- Other			
Special Fire Fighting Procedures: FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.			
Unusual Fire and Explosion Hazards: PROLONGED CONTACT WITH REACTIVE METALS CAN CAUSE THE FORMATION OF FLAMMABLE HYDROGEN GAS WHICH CAN FORM AN EXPLOSIVE MIXTURE WITH AIR.			
Aerosol Level (NPPA 30B)	N/A		
NPPA 704 Hazard Rating 1 <-- Health 1 <-- Flammability 0 <-- Reactivity <-- Special	(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)		

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: NOT ESTABLISHED.
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 SCABBING. 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, SHOCK, AND MAY BE FATAL. INHALATION: CAUSES BURNS TO THE RESPIRATORY TRACT, NOSE, THROAT AND CHEST, WITH DISCOMFORT, NASAL DISCHARGE, SNEEZING, COUGHING, RAPID HEARTBEAT, AND CHEST PAIN. INHALATION OF MIST OR VAPORS MAY CAUSE CHEMICAL PNEUMONITIS WHICH CAN CAUSE

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SECTION V - HEALTH HAZARD DATA (Continued)

DAMAGE AND MAY BE FATAL.

-Chronic (Long Term Exposure)

NO HUMAN CHRONIC EFFECTS KNOWN.

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

TARGET ORGANS: NONE KNOWN.

Primary Routes of Entry: X <--Inhalation <--Ingestion <--Absorption

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:

IMMEDIATELY RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYES AND FLUSH WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

-Skin Contact:

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. GET IMMEDIATE MEDICAL ATTENTION. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:

THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY. PROBABLE MUCOSAL DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC--> NO NTP--> NO CRR--> NO ACGIH--> NO OTHER--> NO

VOC CONTENT: 0.3% BY WEIGHT; 0.3% BY VOLUME; 2.6 G/L

HYDROGEN CHLORIDE

ORL-RBT LD50: 900 MG/KG 3.
 IHL-RAT LC50: 3124 PPM/1H 3.
 SKN-HMN SDT: 4%/24H MILD 3.
 EYE-RBT RINSED WITH WATER: 5 MG/30S MILD 3.

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. BABYMONS 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. 4.

TWO STUDIES ON RATS WERE CONDUCTED TO DETERMINE IF HYDROCHLORIC ACID INCREASED THE FORMATION OF NASAL TUMORS OR INCREASED THE CARCINOGENIC POTENTIAL OF FORMALDEHYDE. IN BOTH STUDIES 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. 4.

SECTION VII - REACTIVITY DATA

Stability: X <--Stable <--Unstable

Conditions to Avoid:

NONE KNOWN.

Incompatibility (Materials to Avoid):

BASES, CYANIDE, LITHIUM SULFIDE, METALS, MERCURIC SULFATE, PERCHLORIC ACID, CARBIDES OF CALCIUM, CESIUM, RUBIDIUM; ACETYLIDES OF CESIUM AND RUBIDIUM; PHOSPHIDES OF CALCIUM AND URANIUM.

Hazardous Decomposition Products:

TOXIC AND CORROSIVE HYDROGEN CHLORIDE GAS.

Hazardous Polymerization: <--May Occur X <--Will Not Occur

Conditions to Avoid:

N/A

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.

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SECTION VIII - SPILL OR LEAK PROCEDURES (Continued)

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.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF FUMES OR 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 LEVELS, A NIOSH APPROVED HALF-FACEMASK RESPIRATOR EQUIPPED WITH APPROPRIATE CHEMICAL CARTRIDGES MAY BE USED. FOR CONCENTRATIONS GREATER THAN 10 TIMES THE TLV AND/OR PEL, CONSULT THE NIOSH RESPIRATOR DEFINITION GUIDE FOUND IN PUBLICATION NO. 87-116 OR ANSI Z88.2-1992.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.136.

Eye Protection:

CHEMICAL GOGGLES AND A FACE SHIELD SHOULD BE WORN. 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.

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 NEAR ALKALIES OR IN ALUMINUM CONTAINERS. EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUES WHICH MAY EXHIBIT THE HAZARDS OF THE PRODUCT.

Other Precautions:

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

SECTION XI - REGULATORY INFORMATION

Chemical Name

NONE

CAS NumberUpper & Limit

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

Please call 1-800-527-2219 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACCIB, 2003.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, (OSHPD-04), 2003.
4. VENDOR'S MSDS.

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, PLAM/PLAMM: PLAMMABLE, COMB: COMBUSTIBLE, CORR: CORROSIVE, CARC: CARCINOGENIC, TOX: TOXIC, N/A: NOT APPLICABLE, N/B: NOT ESTABLISHED, C: CLEVELAND OPEN CUP, M: MUMFORD-PENSKY-MARTIN CLOSED CUP, T: TAGLIABUR CLOSED CUP, LEL: LOWER EXPLOSION LIMIT, UEL: UPPER EXPLOSION LIMIT, NFA: NATIONAL FIRE PROTECTION ASSOCIATION, IARC: INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP: NATIONAL TOXICOLOGY PROGRAM, OSHA: OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACSG: 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: ASPHYXANT, PNO3: PARTICLES (INCOMBUSTIBLE) NOT OTHERWISE SPECIFIED, SD: STANDARD DRAZE TEST, ORL: ORAL, IHL: INHALATION, HMN: HUMAN

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