ATTN: SAFETY DIRECTOR
UNIVERSITY OF WISCONSIN-WHITEWATER
800 W MAIN ST

WHITEWATER WI 53190
JOYCE KILBY/RISK MRMNT & SAFETY

DATE: 02/05/91
CUST#: 523216
PO#: LETTER 1/31/91

MATERIAL SAFETY DATA SHEET

PRODUCT #: 22581-9
CAS #: 10217-52-4
MF: H4N2

SYNONYMS
HYDRAZINE HYDRATE * IDRAZINA IDRATA (ITALIAN) *

TOXICITY HAZARDS

RTECS NO: MV8050000
HYDRAZINE, MONOHYDRATE

TOXICITY DATA
O.RL-RAT LD50: 129 MG/KG
O.RL-MUS LD50: 83 MG/KG
I.PR-MUS LD50: 156 MG/KG
O.RL-RAT LD50: 55 MG/KG
O.RL-GPG LD50: 40 MG/KG

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HYSAV 30(7-9, 191, 65
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HYSAV 30(7-9, 191, 65
HYSAV 30(7-9, 191, 65

REVIEWS, STANDARDS, AND REGULATIONS
NIOSH REL TO HYDRAZINES-AR:CG 0.04 MG/M3/2H MMWR** 37(S-7),16,88
NOES 1973: HZD 84613; NIS 4; TNE 108; NOS 63; TNE 1973
NOES 1983: HZD 84613; NIS 11; TNE 465; NOS 28; TNE 14621; TFE 1432

TARGET ORGAN DATA
PATERNAL EFFECTS (SPERMATOGENESIS)
EFFECTS ON FERTILITY (PRE-IMPLANTATION MORTALITY)
EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)
EFFECTS ON NEONATAL (BIOCHEMICAL AND METABOLIC)

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

ACUTE EFFECTS
MAY BE FATAL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY BE FATAL AS A RESULT OF SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI; CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, Nausea AND VOMITING.
MAY CAUSE ALLERGIC REACTION.
CAN CAUSE CNS DEPRESSION.
MAY CAUSE CONVULSIONS.
EXPOSURE CAN CAUSE:

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--- HEALTH HAZARD DATA ---

DAMAGE TO THE EYES
DAMAGE TO THE LIVER
DAMAGE TO THE KIDNEYS
DAMAGE TO THE LUNGS
BLOOD EFFECTS

CHRONIC EFFECTS
CARCINOGEN:
MAY ALTER GENETIC MATERIAL:

TARGET ORGAN(S):
NERVES
BLOOD
LIVER, KIDNEYS

FIRST AID
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH copious
AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED
CLOTHING AND SHOES.
ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS
WITH FINGERS.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
DISCARD CONTAMINATED CLOTHING AND SHOES.

SPECIFIC GRAVITY: 1.029
VAPOR DENSITY: >1
VAPOR PRESSURE: 5 MM @ 25 C

APPEARANCE AND ODOR
COLORLESS LIQUID

--- FIRE AND EXPLOSION HAZARD DATA ---

FLASHPOINT: 204 °F
LOWER EXPLOSION LEVEL: 3.5%
UPPER EXPLOSION LEVEL: 99.99%

EXTINGUISHING MEDIA
WATER SPRAY
CARBON DIOXIDE
DRY CHEMICAL POWDER.

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MATERIAL SAFETY DATA SHEET

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------------- FIRE AND EXPLOSION HAZARD DATA -------------
SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.

COMBUSTIBLE.
UNUSUAL FIRES AND EXPLOSIONS HAZARDS
UNDER FIRE CONDITIONS, MATERIAL MAY DECOMPOSE
TO FORM FLAMMABLE AND/OR EXPLOSIVE MIXTURES IN AIR.

------------- REACTIVITY DATA -------------
INCOMPATIBILITIES
OXIDIZING AGENTS
OXGEN
COPPER
ZINC
ORGANIC MATERIALS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
NITROGEN OXIDES

------------- SPILL OR LEAK PROCEDURES -------------
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
EVACUATE AREA.
SHUT OFF ALL SOURCES OF IGNITION.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.
ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR
DISPOSAL.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

WASTE DISPOSAL METHOD
DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A
CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
 observe all federal, state, and local laws.

----- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE -----
WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
USE ONLY IN A CHEMICAL FUMEC HOD.
SAFETY SHOWER AND EYE BATH.
FACE SHIELD (8-INCH MINIMUM).

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--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ---

DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
READILY ABSORBED THROUGH SKIN.
WASH THOROUGHLY AFTER HANDLING.
HIGHLY TOXIC.
CORROSIVE.
CARCINOGEN.
MUTAGEN.
KEEP TIGHTLY CLOSED.
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
STORE IN A COOL DRY PLACE.

REGULATORY INFORMATION
55.0% HYDRAZINE 302-01-2
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

--- ADDITIONAL PRECAUTIONS AND COMMENTS ---

ADDITIONAL INFORMATION
WARNING: HYDRAZINE VAPOR IN AIR IS FLAMMABLE AT 4.7 TO 100% HYDRAZINE
BY VOLUME - HANDLE UNDER NITROGEN! SOME METALS AND ALLOYS INCLUDING
MONEL, BRONZE, BRASS, CADMIUM, GOLD, MOLYBDENUM AND STAINLESS STEEL
WITH MORE THAN 0.5% MOLYBDENUM OR RUST CAUSE DECOMPOSITION OF
HYDRAZINE.

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE
ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ALDRICH SHALL NOT BE HELD
LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE
ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL
TERMS AND CONDITIONS OF SALE.

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