ATTN: SAFETY DIRECTOR
UNIVERSITY OF WISCONSIN WHITewater
P.O. BOX 296
WHITewater WI 53190

DATE: 06/06/89

CUST # 523216 P.O. # Q C 1700

MATERIAL SAFETY DATA SHEET PAGE: 1

---------------------------- IDENTIFICATION -----------------------------

PRODUCT #: 10817-0
NAME: NITROMETHANE, 96%
CAS #: 75-52-5
MF: CH3NO2
SYNONYMS
NITROCARBOL * NITROMETHAN (POLISH) * NITROMETHANE * NITROMETHANE
(AGF19, D7O, SHA) * UN 1261 (DOT) *

---------------------------- TOXICITY HAZARDS -----------------------------

RTECS #: PA9900000
METHANE, NITRO-

TOXICITY DATA

ORL-RAT LO50:940 MG/KG
ORL-MUS LO50:950 MG/KG
IPR-MUS LO50:110 MG/KG

MSHA STANDARD-AIR: TWA 100 PPM (250 MG/M3) DOTLV* 3.187, 71
OSHA: 8 HOURS TWA 100 PPM (250 MG/M3) FERAC 54,2923,89
OSHA: FINAL 8 HOURS TWA 100 PPM (250 MG/M3) FERAC 54,2923,89
EPA TSCA CHEMICAL INVENTORY, 1986
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 1989
NIOH CARCINOGENESIS STUDIES ON TEST (PRECHRONIC STUDIES), FEBRUARY 1989

TARGET ORGAN DATA
LUNGS, THORAX OR RESPIRATION (RESPIRATORY DEPRESSION)
LIVER (HEPATITIS: HEPATOCELLULAR NECROSIS, ZONAL)
KIDNEY, URETER, BLADDER (CHANGES IN BOTH TUBULES AND GLOMERULI)

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

---------------------------- HEALTH HAZARD DATA -----------------------------

ACUTE EFFECTS
MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.
MAY CAUSE IRRITATION.
ABSORPTION INTO THE BODY LEADS TO THE FORMATION OF METHEMOGLOBIN WHICH IN SUFFICIENT CONCENTRATION CAUSES CYANOSIS. ONSET MAY BE DELAYED 2 TO 4 HOURS OR LONGER.

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.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
CALL A PHYSICIAN
WASH CONTAMINATED CLOTHING BEFORE REUSE.
M A T E R I A L   S A F E T Y   D A T A   S H E E T

CATALOG #: 10317-0   NAME: NITROMETHANE, 96%

------------------------------- PHYSICAL DATA -------------------------------

MELTING POINT: -29°C
BOILING POINT: 100°C TO 102°C
SPECIFIC GRAVITY: 1.127
VAPOR DENSITY: 2.1
VAPOR PRESSURE: 27.3 mm @ 20°C
APPEARANCE: COLORLESS LIQUID

------------------- FIRE AND EXPLOSION HAZARD DATA -------------------

AUTO IGNITION TEMP.: 784°F
LOWER EXPLOSION LEVEL: 7.3% @ 33°C
FLASH POINT: 95°F

EXTINGUISHING MEDIA:
WATER SPRAY.
CARBON DIOXIDE.
ALCOHOL OR POLYMER FOAM.
DO NOT USE DRY CHEMICAL POWDER EXTINGUISHER ON THIS MATERIAL.

SPECIAL FIRE FIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.
FLAMMABLE.

UNUSUAL FIRE AND EXPLOSION HAZARDS
VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND FLASH BACK.
CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.
FORMS EXPLOSIVE MIXTURES IN AIR.
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

---------------------------- REACTIVITY DATA -------------------------------

INCOMPATIBILITIES
AMINES
STRONG ACIDS
STRONG BASES
STRONG OXIDIZING AGENTS
STRONG REDUCING AGENTS
COPPER, COPPER ALLOYS
LEAD
AND ITS ALLOYS.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE,
AND NITROGEN OXIDES.

------------------ SPILL OR LEAK PROCEDURES ---------------------

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
EVACUATE AREA.
SET UP 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.
USE NONSPARKING TOOLS.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
WASTE DISPOSAL METHOD
BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND
SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY
FLAMMABLE.

OBSERVE ALL FEDERAL, STATE & LOCAL LAWS.
--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ---

CHEMICAL SAFETY GOGGLES.
RUBBER GLOVES.
NIOSH/MSHA-APPROVED RESPIRATOR.
SAFETY SHOWER AND EYE BATH.
MECHANICAL EXHAUST REQUIRED.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
HARMFUL LIQUID AND FUMES.
KEEP TIGHTLY CLOSED.
KEEP AWAY FROM COMBUSTIBLE MATERIALS, HEAT, SPARKS, AND OPEN FLAME.
STORE IN A COOL DRY PLACE.

ADDITIONAL PRECAUTIONS AND COMMENTS

ADDITIONAL INFORMATION
NITROMETHANE CAN DETONATE IF SENSITIZED BY AMINES, ALKALIES, STRONG
ACIDS, AND HIGH TEMPERATURES. IT CAN BE DETONATED BY ADIABATIC
COMPRESSION. THE DRY ALKALI OR AMINE SALTS OF NITROMETHANE ARE SHOCK-
SENSITIVE AND THE SODIUM SALT BURSTS INTO FLAME UPON CONTACT WITH
WATER.

REGULATORY INFORMATION

NOT APPLICABLE

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
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SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.