

Valid 02/2001 - 04/2001

Riedel-de Haen  
3050 Spruce St.  
St. Louis, MO 63178 USA  
Tel: 314-289-6000

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1. - - - - - CHEMICAL IDENTIFICATION- - - - -

CATALOG #: 15780

NAME: N-METHYL-2-PYRROLIDONE, 99.5% GC

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

CAS #: 872-50-4

MF: C5H9NO

EC NO: 212-828-1

SYNONYMS

N-METHYLPYRROLIDINONE \* N-METHYL-2-PYRROLIDINONE \* 1-METHYL-2-PYRROLIDINONE \* 1-METHYL-5-PYRROLIDINONE \* N-METHYLPYRROLIDONE \* N-METHYL-ALPHA-PYRROLIDONE \* N-METHYL-2-PYRROLIDONE \* 1-METHYL-2-PYRROLIDONE \* M-PYROL \* NMP \*

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -

LABEL PRECAUTIONARY STATEMENTS

IRRITANT

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

COMBUSTIBLE.

TARGET ORGAN(S):

SPLEEN

BONE MARROW

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

IN CASE OF FIRE AND/OR EXPLOSION DO NOT BREATHE FUMES.

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

SECTION 4. - - - - - FIRST-AID MEASURES- - - - -

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -

EXTINGUISHING MEDIA

WATER SPRAY.

CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

COMBUSTIBLE LIQUID.

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES- - - - -

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, 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.

SECTION 7. - - - - - HANDLING AND STORAGE- - - - -

REFER TO SECTION 8.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -

MECHANICAL EXHAUST REQUIRED.

SAFETY SHOWER AND EYE BATH.

WASH THOROUGHLY AFTER HANDLING.

DO NOT BREATHE VAPOR.

AVOID CONTACT WITH EYES, SKIN AND CLOTHING.

AVOID PROLONGED OR REPEATED EXPOSURE.

NIOSH/MSHA-APPROVED RESPIRATOR.

COMPATIBLE CHEMICAL-RESISTANT GLOVES.

CHEMICAL SAFETY GOGGLES.

KEEP TIGHTLY CLOSED.

STORE IN A COOL DRY PLACE.

MOISTURE SENSITIVE

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

APPEARANCE AND ODOR

LIQUID.

PHYSICAL PROPERTIES

BOILING POINT: 81 - 82 C

MELTING POINT: -24 C

FLASHPOINT 187 F

86 C

EXPLOSION LIMITS IN AIR:

UPPER 9.5 %

LOWER 1.3 %

VAPOR PRESSURE: 0.99 MMHG

SPECIFIC GRAVITY: 1.028

VAPOR DENSITY: 3.4 G/L

SECTION 10. - - - - - STABILITY AND REACTIVITY - - - - -

STABILITY

STABLE.

INCOMPATIBILITIES

PROTECT FROM MOISTURE.

STRONG ACIDS

STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

CARBON MONOXIDE, CARBON DIOXIDE

HAZARDOUS POLYMERIZATION

WILL NOT OCCUR.

SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -

ACUTE EFFECTS

CAUSES SKIN IRRITATION.

MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

CAUSES EYE IRRITATION.

MAY BE HARMFUL IF INHALED.

MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER

RESPIRATORY TRACT.

MAY BE HARMFUL IF SWALLOWED.

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND

TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

CHRONIC EFFECTS

TARGET ORGAN(S):

BONE MARROW

THYMUS

SPLEEN

LYMPHATIC SYSTEM

RTECS #: UY5790000

2-PYRROLIDINONE, 1-METHYL-

IRRITATION DATA

EYE-RBT 100 MG MOD

FCTOD7 26,475,1988

TOXICITY DATA

ORL-RAT LD50:3914 MG/KG

ARZNAD 26,1581,1976

IPR-RAT LD50:2472 MG/KG

ARZNAD 26,1581,1976

SCU-RAT LD50:>2 GM/KG

USXXAM #4882359

IVN-RAT LD50:80500 UG/KG

IYKEDH 18,922,1987

UNR-RAT LD50:7 GM/KG

34ZIAG -,408,1969

ORL-MUS LD50:5130 MG/KG

EPASR\* 8EHQ-1087-0695

IPR-MUS LD50:3050 MG/KG

EPASR\* 8EHQ-1087-0695

IVN-MUS LD50:54500 UG/KG

IYKEDH 18,922,1987

IVN-DOG LD50:63300 UG/KG

IYKEDH 18,922,1987

SKN-RBT LD50:8 GM/KG

NPIRI\* 1,84,1974

TARGET ORGAN DATA

EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (CENTRAL NERVOUS SYSTEM)

SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)

EFFECTS ON NEWBORN (GROWTH STATISTICS)

EFFECTS ON NEWBORN (DELAYED EFFECTS)

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES

(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR

COMPLETE INFORMATION.

SECTION 12. - - - - - ECOLOGICAL INFORMATION - - - - -  
DATA NOT YET AVAILABLE.

SECTION 13. - - - - - DISPOSAL CONSIDERATIONS - - - - -  
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF  
THIS MATERIAL.

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 ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - TRANSPORT INFORMATION - - - - -  
CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - REGULATORY INFORMATION - - - - -

EUROPEAN INFORMATION

EC INDEX NO: 606-021-00-7

IRRITANT

R 36/38

IRRITATING TO EYES AND SKIN.

S 41

IN CASE OF FIRE AND/OR EXPLOSION DO NOT BREATHE FUMES.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

OEL-DENMARK: TWA 50 PPM (200 MG/M3), JAN1999

OEL-FINLAND: TWA 2 PPM, JAN1999

OEL-GERMANY: MAK 100 PPM (400 MG/M3), JAN1993

OEL-THE NETHERLANDS: MAC-TGG 100 PPM (400 MG/M3), JAN1999

OEL-NORWAY: TWA 50 PPM (200 MG/M3), JAN1999

OEL-RUSSIA: STEL 100 MG/M3, JAN1993

OEL-SWEDEN: NGV 50 PPM (200 MG/M3), KTV 75 PPM (300 MG/M3), JAN1999

OEL-UNITED KINGDOM: LTEL 100 PPM (400 MG/M3), JAN1993

NOHS 1974: HZD M1569; NIS 30; TNF 2458; NOS 43; TNE 25255

NOES 1983: HZD M1569; NIS 63; TNF 3902; NOS 73; TNE 85169; TFE 23478

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, OCTOBER 2000

U.S. INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - OTHER INFORMATION - - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA 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.

COPYRIGHT 1999 SIGMA-ALDRICH CO.

LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY