

VAN WATERS & ROGERS INC -- P1546, TETRAHYDROFURAN -- 6810-00-982-8496

===== Product Identification =====

Product ID:P1546, TETRAHYDROFURAN

MSDS Date:05/04/1990

FSC:6810

NIIN:00-982-8496

MSDS Number: BPMJC

=== Responsible Party ===

Company Name:VAN WATERS & ROGERS INC

Address:1600 NORTON BLDG

City:SEATTLE

State:WA

ZIP:98104-1564

Country:US

Info Phone Num:408-435-8700

Emergency Phone Num:800-424-930

0(CHEMTREC)

CAGE:DO735

=== Contractor Identification ===

Company Name:VAN WATERS & ROGERS SUBSIDIARY OF UNIVAR

Address:6100 CARILLON POINT

City:KIRKLAND

State:WA

ZIP:98033

Country:US

Phone:425-889-3400

CAGE:DO735

Company Name:VAN WATERS AND ROGERS INC., UNIVAR CORP.

Address:1600 NORTON BLDG. 801 2ND AVENUE

Box:City:SEATTLE

State:WA

ZIP:98104-1564

Country:US

Phone:206-447-5911/800-424-9300(CHEMTREC)

CAGE:87664

===== Composition/Information on Ingredients =====

Ingred Name:FURA

N, TETRAHYDRO-; (TERAHDYDROFURAN)

CAS:109-99-9

RTECS #:LU5950000

Fraction by Wt: >99%

OSHA PEL:200PPM;250 PPM STEL

ACGIH TLV:200PPM;250 PPM STEL

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ingred Name:INHIBITOR

Other REC Limits:NONE SPECIFIED

Ingred Name:FIRST AID PROC:DO NOT GIVE ANYTHING BY MOUTH TO AN UNCON OR
CONVULSING PERSON.

RTECS #:9999999ZZ

Ingred Name:SPILL PROC: ORG VAP MAY BE SATIS. IN ANY EVENT, ALWAYS WEAR
EYE PROT. EXTING ALL IGNIT SOURCES & ENSURE THAT ALL (ING 5)

RTECS #

:9999999ZZ

Ingred Name:ING 4:HNDLG EQUIP IS ELECTRICALLY GROUNDED. FOR SM
SPILLS/DRIPS, MOP/WIPE UP & DISPOSE OF IN DOT-APPRVD WASTE (ING 6)

RTECS #:9999999ZZ

Ingred Name:ING 5:CONTR. FOR LG SPILLS, CNTN BY DIKING W/SOIL/OTHER
NON-COMBUSTIBLE ABSORB MATL & THEN PUMP INTO DOT-APPRVD (ING 7)

RTECS #:9999999ZZ

Ingred Name:ING 6:WASTE CONTR/ABSORB W/NON-COMBUSTIBLE SORBENT MATL.
PLACE RESIDUE IN DOT-APPRVD WASTE CONTR. KEEP OUT OF (ING 8)

RTECS #:9999999ZZ

Ingred Name:ING 7:SEWERS, S

TORM DRAINS, SURF H*2O, & SOIL. COMPLY W/ALL

APPLIC GOVT REGS ON SPILL RPTG & HNDLG & DISP OF WASTE.

RTECS #:9999999ZZ

Ingred Name:OTHER PREC: CONT W/AIR, IT MAY BE APPROP TO FILL CONTR
HEADSPACE W/AN INERT GAS, SUCH AS NITROGEN. DO NOT CUT, (ING 10)

RTECS #:9999999ZZ

Ingred Name:ING 9:GRIND/WELD/DRILL ON/NEAR CONTR. CONTR, EVEN THOSE
HAVE BEEN EMPTIED, WILL RETAIN PROD RESIDUE & VAP. (ING 11)

RTECS #:9999999ZZ

Ingred Name:ING 10:ALWAYS OBEY HAZ WARNINGS & HNDLE EMPTY CONTR AS IF

THEY WERE FULL. DISTILLATION, EVAP/EXPOSE TO LIGHT (ING 12)
RTECS #:9999999ZZ

Ingred Name:ING 11:WILL ACCELERATE PEROXIDE FORMATION. DO NOT
DISTILL/BOIL TO DRYNESS. ADDN OF REDUCING AGENTS/H*2O TENDS (ING
13)
RTECS #:9999999ZZ

Ingred Name:ING 12:TO LESSEN PEROXIDE FORMATION.
RTECS #:9999999ZZ

Ingred Name:RESP PROT: SCBA IN PRESENCE DEMAND MODE, OR A NIOSH/MSHA
APPROVED SUPPLIED-AIR RESPIRATOR.
RTECS #:9999999ZZ

Ingred Name:HYGIENE PRACT: TO THE SEVERITY OF AN EYE INJURY.
RTEC
S #:9999999ZZ

===== Hazards Identification =====

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:INHAL: VAP & MISTS IRRITATE
NOSE/THROAT/RESP TRACT. INHAL OF HIGHER CONC MAY CAUSE
HDCH/NAUSA/VOMIT, DIZZ & NARC. INHAL OF VERY HIGH CONC/PRLNG EXPOS
MAY CAUSE UNCON. EYE: VAP WILL IRRITATE EYES. LIQ & MISTS WIL
L
IRRITATE & MAY BURN EYES. SKIN: BRIEF CONT MAY DRY SKIN. PRLNG/RPTD
CONT MAY IRRITATE (EFTS OF OVEREXP)
Explanation of Carcinogenicity:NOT RELEVANT
Effects of Overexposure:HLTH HAZ: SKIN, CAUSING DERM. INGEST:
SWALLOWING QTY CAUSES HDCH, NAUS, VOMIT & PERHAPS UNCON. CHRONIC:
PRLNG/RPTD OVEREXPOS MAY RESULT IN DELAYED LIVER AND/OR KIDNEY
DAMAGE.
Medical Cond Aggravated by Exposure:THIS MATERIAL, OR ITS EMISSIONS MAY
AGGRAVATE PULMONARY/BRONCHIAL DISEASE AND OR CAUSE BREA
THING
DIFFICULTY.

===== First Aid Measures =====

First Aid:INHAL:REMOVE TO FRESH AIR. GIVE ARTF RESP IF NOT BRTHG. GET
IMMED MED ATTN. EYE: IMMED FLUSH W/LOTS OF RUNNING H*2O FOR @ LST
15 MIN, LIFT LIDS OCCAS. GET IMMED MED ATTN. SKIN: IMMED WASH
W/LOTS OF SO AP & H*2O. REMOVE CONTAMD CLTHG & SHOES; WASH BEFORE
REUSE. GET MED ATTN IF IRRIT PERSISTS AFTER WASHING. INGEST: DO NOT
INDUCE VOMIT. IF CONSCIOUS, GIVE LOTS OF H*2O/MILK. GET

IMMED MED
ATTN. (ING 3)

===== Fire Fighting Measures =====

Flash Point Method:TCC
Flash Point:1F,-17C
Lower Limits:2%
Upper Limits:11.8%
Extinguishing Media:USE DRY CHEM, ALCOHOL FOAM, OR CO*2. WATER MAY BE INEFFECTIVE TO FIGHT FIRE BUT MAY BE USED FOR VAPOR SUPPRESSION.
Fire Fighting Procedures:NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT . USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.
Unusual Fire/Explosion Hazard:EXTING ALL NEARBY SOURCES OF IGNIT SINCE VAP ARE HVR/AIR & MAY TRAVEL CONSIDERABLE DIST TO IGNIT SOURCES & FLASHBACK. AVOID ACCUMULATION OF H*2O (SUPP DATA)

===== Accidental Release Measures =====

Spill Release Procedures:WEAR PROT EQUIP INCL POLYVINYL ALCOHOL BOOTS, GLOVES, & APRON, & NIOSH/MSHA APPRVD SCBA IN PRESS DEMAND MODE/NIOSH/MSHA APPRVD SUPPLIED-AIR RESP. IF SPILL/LEAK IS SM, NIOSH/MSHA APPRVD FULL FACEPIECE AIR-PURIFYING CARTRIDGE RESP EQUIPPED FOR (ING 4)
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

===== Handling and Storage =====

Handling and Storage Precautions:KEEP AWAY FROM HEAT/SPARKS/FLAMES. STORE IN COOL, DRY, WELL-VENTD PLACE AWAY FROM INCOMPATIBLE MATL. KEEP AIR OUT OF CONTR.
Other Precautions:ELECTRICALLY GROUND ALL EQUIP WHEN HNDLG PROD & USE ONLY NON-SPARKING TOOLS. KEEP CONTR TIGHTLY CLSD WHEN NOT IN USE. DO NOT USE PRESS TO EMPTY CONTR.
DO NOT GET IN EYES, ON SKIN, OR CLTHG. SINCE PROD DEGRADES UPON STANDING & IN (ING 9)

===== Exposure Controls/Personal Protection =====

Respiratory Protection:IF USE CNDTNS GENERATE VAP/MISTS, WEAR A NIOSH/MSHA APPRVD RESP APPROP FOR THOSE EMISSIONS LEVELS. APPROP RESP MAY BE A NIOSH/MSHA APPROVD FULL FACEPIECE AIR-PURIFYING CARTRIDGE RESP EQUIPPED FOR ORG VAP/MISTS. A NIOSH/MSHA APPRVD (ING 14)
Ventilation:LOC MECH EXHAUST VENT CAPABLE OF MAINTAINING E

MISSIONS @

POINT OF USE BELOW PEL.

Protective Gloves:POLYVINYL ALCOHOL GLOVES.

Eye Protection:CHEMICAL WORKERS GOGGLES .

Other Protective Equipment:LONG-SLEEVED SHIRT, TROUSERS, SFTY SHOES,
POLYVINYL APRON. AN EYEWASH & SAFETY SHOWER SHOULD BE NEARBY &
READY FOR USE.

Work Hygienic Practices:WASH THORO AFTER HNDLG. CONT LENSES SHOULD NOT
BE WORN WHEN WORKING W/CHEM BECAUSE CONT LENSES MAY CONTRIBUTE (ING
15)

Supplemental Safety and Health

EXPLO HAZ: BECAUSE PROD WILL FLOAT ON

H*2O & MAY BE REIGNITED ON SURF

OF H*2O. EXPLO VAP-AIR MIXT MAY BE FORMED ABOVE FL PT/BETWEEN LOWER
& UPPER FLAMM LIM. HOT ORG CHEM VAP/MISTS ARE SUSCEPTIBLE TO
SUDDEN SPONT COMBUSTION WHEN MIXED W/AIR. IGNIT MAY OCCUR @ TEMP
BELOW "AUTOIGNITION" OR "IGNITION TEMPERATURE.

===== Physical/Chemical Properties =====

Boiling Pt:B.P. Text:149F,65C

Vapor Pres:129-160

Vapor Density:2.5

Spec Gravity:0.9(H*2O=1)

Evaporation Rate & Reference:>1(BUTYL ACET
ATE=1)

Solubility in Water:100

Appearance and Odor:ETHER-LIKE ODOR

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

OXIDIZERS, LITHIUM ALUMINUM HYDRIDE & ALKALINE EARTH HYDROXIDES.

Stability Condition to Avoid:HEAT, SPARKS, & OPEN FLAMES. EXPOSURE TO
LIGHT, PROLONGED EXPOSURE TO AIR.

Hazardous Decomposition Products:ON STANDING AND IN CONTACT WITH AIR
FORMS POTENTIALLY UNSTABLE PEROXIDES.

Conditions to Avoid Polymerization:P

OLYM CAN OCCUR IN PRESENCE OF

CATIONIC INITIATORS SUCH AS SELECTED LEWIS ACIDS/STRONG PROTON
ACIDS.

===== Disposal Considerations =====

Waste Disposal Methods:DISPOSE OF CONTAM PROD & MATL USED IN CLEANING
UP SPILLS/LEAKS IN MANNER APPRVD FOR MATL. CONSULT APPROP
FED/ST/LOC REGULATORY AGENCIES TO ASCERTAIN PROPER DISP PROC.
NOTE:EMPTY CONTR CAN HAVE RESIDUE /GASES & MISTS & ARE SUBJECT TO
PROPER WASTE DISP.

Disclaimer (provided with t

his information by the compiling agencies):

This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.