

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

Product ID:ANTIFREEZE-NAVY, PM-2018

MSDS Date:03/21/1991

FSC:6850

NIIN:00-181-7933

MSDS Number: BPYDM

=== Responsible Party ===

Company Name:UNION CARBIDE CORP INDUSTRIAL CHEMICALS DIV

Address:39 OLD RIDGEBURY ROAD

City:DANBURY

State:CT

ZIP:06817-0001

Country:US

Info Phone Num:800-822-4357

Emergency Phone Num:800-822-4357

CAGE:61637

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= Contractor Identification ==

Company Name:UNION CARBIDE CORP

Address:39 OLD RIDGEBURY ROAD

Box:City:DANBURY

State:CT

ZIP:06817-0001

Country:US

Phone:800-822-4357/732-563-5522 (MSDS)

CAGE:61637

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

Ingred Name:ETHYLENE GLYCOL

CAS:107-21-1

RTECS #:KW2975000

Fraction by Wt: 92%

Other REC Limits:NONE SPECIFIED BY M.

OSHA PEL:50 PPM (VAPOR)

ACGIH TLV:50 PPM

EPA Rpt Qty:1 LB

DOT Rpt Qty:1 LB

Ingred Name:DIETHYLENE GLYCOL

CAS:111-46

-6
RTECS #:ID5950000
Fraction by Wt: 5%
Other REC Limits:NONE SPECIFIED

Ingred Name:SODIUM TETRABORATE, ANHYDROUS
CAS:1330-43-4
RTECS #:VZ2240000
Fraction by Wt: 1.5%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:10 MG/M3
ACGIH TLV:1 MG/M3; 9293

Ingred Name:ADDITIVES (NON-HAZARDOUS)
Fraction by Wt: 1.5%
Other REC Limits:NONE RECOMMENDED

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

Routes of Entry: Inhalation:NO Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO
IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE-EYES: MAY CAUSE IRRITATION.
SKIN: MILD IRRITATION. INHALATION:DROWSINESS, NARCOSIS &
UNCONSCIOUSNESS UPON EXPOSURE TO HIGH CONCENTRATIONS IN POORLY
VENTILATED, CONFINED SPACES. INGESTION:HARMFUL . LIVER & KIDNEY
DAMAGE, MAY CAUSE DAMAGE TO FETUS. CHRONIC-DERMATITIS.
Effects of Overexposure:CENTRAL NERVOUS SYSTEM DEPRESSION . EYE AND
IRRITAION. ABDOMINAL DISCOMFORT, NAUSEA, VOMITING, DIZZINESS,
MALAISE, OLIGURIA, CONV
ULSION AND COMA.
Medical Cond Aggravated by Exposure:KIDNEY DISEASES.

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

First Aid:INHALATION:REMOVE TO FRESH AIR, PROVIDE CPR/OXYGEN IF NEEDED.
EYE CONTACT:FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL HELP. SKIN
CONTACT:WASH WITH SOAP AND WATER. GET MED ATTENTION IF SYMPTOMS
PERSIS T. INGESTION:INDUCE VOMITING, DRINK 1-2GLASSES OF WATER. GET
MEDICAL HELP IMMEDIATELY.

===== Fire Fighting Measure

S =====

Flash Point Method:COC

Flash Point:255F,124C

Lower Limits:3.2

Upper Limits:15.3

Extinguishing Media:FOAM, CO2 OR DRY CHEMICAL. NFPA CLASS B FIRE
EXTINGUISHERS.

Fire Fighting Procedures:SELF CONTAINED BREATHING APPARATUS WITH FULL
FACE PIECE & PROTECTIVE CLOTHING

Unusual Fire/Explosion Hazard:WATER SPRAY MAY BE INEFFECTIVE, USE FOG
NOZZLES, DO NOT ENTER CONFINED AREAS WITHOUT FULL BUNKER GEAR

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

Spill Release Procedures:WEAR SKIN, EYE & RESPIRATORY PROTECTION DURING
CLEAN-UP. CONTAIN SPILL & KEEP OUT OF SEWERS & DRAINS, SOAK UP
LIQUID WITH ABSORBENT & SHOVEL INTO WASTE CONTAINER.

Neutralizing Agent:NONE

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

Handling and Storage Precautions:KEEP CONTAINERS CLOSED WHEN NOT IN
USE.

Other Precautions:HARMFUL OR FATAL IF SWALLOWED. KEEP OUT OF REACH OF
CHILDREN. AVOID CONTACT WITH EYES. WASH THOROUGHLY AFTER HANDLING.

DO NOT STORE IN OPEN OR UNLABELED CONTAINERS.

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

Respiratory Protection:NONE UNDER NORMAL USE. USE NIOSH APPROVED
SELF-CONTAINED BREATHING APPARATUS IF TLV IS EXCEEDED OR WHEN
SPRAYING OR USING IN CONFINED SPACES.

Ventilation:LOCAL EXHAUST, RECOMMENDED

Protective Gloves:IMPERVIOUS GLOVES

Eye Protection:GOGGLES OR FACE SHIELD AND OR EYE WASH

Other Protective Equipment:APRON-COVER ARMS, DEPENDING UPON CONDITIONS
OF USE.

Work Hygienic Practices:PREVENT SKIN AND EYE CONTACT. OBSERVE TLV
LIMITATIONS.

Supplemental Safety and Health

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

HCC:N1

Boiling Pt:B.P. Text:>387F,>197C

Decomp Temp:Decomp Text:NA

Vapor Pres:0.08

Vapor Density:2.1

Spec Gravity:1.125

Evaporation Rate & Reference:0.01 (BU AC=1)

Solubility in Water:COMPLETE

Appearance and Odor:LIGHT GREEN LIQUID, MILD ODOR.

Corrosion Rate:NA

===== Stability and R

Reactivity Data =====

Stability Indicator/Materials to Avoid: YES

OXIDIZING AGENTS, STRONG ACIDS AND BASES.

Stability Condition to Avoid: NONE

Hazardous Decomposition Products: CARBON MONO AND DIOXIDES

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

Waste Disposal Methods: SMALL QUANTITIES CAN BE FLUSHED INTO SEWERS.

FOLLOW LOCAL, STATE AND FEDERAL REGULATIONS FOR DISPOSAL OF LARGE QUANTITIES.

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