

NAVAL MINE WARFARE ENGINEERING ACTIVITY -- DISCHARGED BATTERY DRY CARBON-ZINC, MK 106- -- 6135-01-067-8331

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

Product ID:DISCHARGED BATTERY DRY CARBON-ZINC, MK 106-

MSDS Date:02/08/1991

FSC:6135

NIIN:01-067-8331

MSDS Number: BMDKP

=== Responsible Party ===

Company Name:NAVAL MINE WARFARE ENGINEERING ACTIVITY

Address:CODE 60 BUILDING 1959

City:YORKTOWN

State:VA

ZIP:2

3691-5076

Country:US

Info Phone Num:804-887-4930

Emergency Phone Num:804-887-4930

Preparer's Name:ANN ALLEN

CAGE:30265

=== Contractor Identification ===

Company Name:HOECHST CELANESE CHEM GROUP

Box:City:DALLAS

State:TX

ZIP:75356-9320

Country:US

Phone:214-689-4000

CAGE:10001

Company Name:NAVAL MINE WARFARE ENGINEERING ACTIVITY

Address:CODE 60 BUILDING 1959

Box:City:YORKTOWN

State:VA

ZIP:23691-5076

Country:US

Phone:804-887-4930

CAGE:30265

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

=====

Ingred Name:MERCURY (SARA III)
CAS:7439-97-6
RTECS #:OV4550000
Fraction by Wt: 0.01%
OSHA PEL:0.1 MG/M3, S, C
ACGIH TLV:0.05 MG/M3, S
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:ZINC CHLORIDE (SARA III)
CAS:7646-85-7
RTECS #:ZH1400000
Fraction by Wt: 4.0%
OSHA PEL:1 MG/M3/2 STEL
ACGIH TLV:1 MG/M3/2STEL FUME93
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:AMMONIUM CHLORIDE (SARA III)
CAS:12125-02-9
RTECS #:BP4550000
Fraction by Wt: 4.0%
OSHA PEL:10 MG/M3;20STEL FUME
ACG
IH TLV:10 MG/M3;20STEL FUME
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:MANGANESE DIOXIDE
CAS:1313-13-9
RTECS #:OP0350000
Fraction by Wt: 29.0%
OSHA PEL:5 MG/M3 CEILING (MN)
ACGIH TLV:5 MG/M3 (MN)

Ingred Name:CARBON BLACK
CAS:1333-86-4
RTECS #:FF5800000
Fraction by Wt: 11.0%
OSHA PEL:3.5 MG/M3
ACGIH TLV:3.5 MG/M3

Ingred Name:GRAPHITE
CAS:7782-42-5
RTECS #:MD9659600
OSHA PEL:15 MPPCF RDUST
ACGIH TLV:2 MG/M3 RDUST; 9293

Ingred Name:MANGANESE (SARA III)
CAS:7439-96-5
RTECS #:OO927500

0
OSHA PEL:(C) 5 MG/M3 DUST
ACGIH TLV:5 MG/M3 DUST 9293

Ingred Name:ZINC OXIDE
CAS:1314-13-2
RTECS #:ZH4810000
OSHA PEL:15MG/M3 TDUST/5 FUME
ACGIH TLV:10MG/M3 TDUST; 9293

Ingred Name:AMMONIA (SARA III)
CAS:7664-41-7
RTECS #:BO0875000
OSHA PEL:50 PPM
ACGIH TLV:25 PPM/35 STEL; 9293
EPA Rpt Qty:100 LBS
DOT Rpt Qty:100 LBS

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

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
S
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE: INHAL:MAY CAUSE IRRIT OR METAL
FUME FEVER IN A FIRE SITUATION. INGEST:INGREDIENTS ARE POISONOUS.
SKIN:MATERIALS MAY CAUSE SKIN OR EYE IRRITATION BY VAPOR OR DIRECT
CONTACT. CHRONIC:NOT LIKELY UNDER NORMAL USE. IN A FIRE SITUATION,
CELLS MAY RELEASE HAZARDOUS SUBSTANCES.
Explanation of Carcinogenicity:NOT RELEVANT
Effects of Overexposure:SEE HEALTH HAZARDS.
Medical Cond Aggravated by Exposure:RESPIRATORY INFECTIONS AND
DISEASES. SKIN DISEASES.

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

First Aid:INHAL:REMOVE TO FRESH AIR, USE ARTF RESP IF NEEDED. SEEK MD .
EYE:FLUSH AT LEAST 15 MIN W/FRESH RUNNING H*2O, OCCAS LIFTING UPPER
& LOWER EYELID. SEEK MD ATTEN. SKIN:THORO WASH AFFECTED AREA UNTIL
NO TRACE OF MATL REMAINS. INGEST:NOT LIKELY UNDER NORM USE. IF
INGEST SHOULD OCCUR, GET IMMED MD ATTEN. DRINK LG QTYS OF H*2O.
EXPOS IN FIR

E:REMOVE VICTIM FROM FIRE HAZ AREA TO FRESH AIR. SEEK MD.

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

Extinguishing Media:IN BULK STORAGE USE CO*2, FOAM OR DRY POWDER. WATER MAY CAUSE ELECTRICAL SHORTS.

Fire Fighting Procedures:IN BULK STORAGE AREAS, WEAR NIOSH/MSHA APPROVED SCBA AND PROTECTIVE CLOTHING TO AVOID INHALATION AND CONTACT WITH HAZARDOUS DECOMPOSITION PRODUCTS.

Unusual Fire/Explosion Hazard:CELLS MAY RUPTURE WHEN EXPOSED TO EXCESSIVE HEAT.

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

Spill Release Procedures:BATTERIES ARE DRY SOLID & CAN BE HANDLED EASILY W/SHOVELS OR SIMILAR EQUIP. WHEN ACCUMULATING LG QUANTITIES OF UNDISCHARGED BATTERIES FOR DISPOSAL PACK IN NON-CONDUCTIVE INSULATING MATERIAL. AVOID HEAT & WATER. USE RUB GLOVES FOR CLEANING (SUPP DATA)

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and

Storage Precautions:DO NOT STORE UNPACKAGED CELLS TOGETHER SO CONTACTS CAN TOUCH. THIS SITUATION WILL RESULT IN CELL SHORTING AND HEAT BUILD-UP.

Other Precautions:DO NOT CHARGE, OVERHEAT (GREATER THAN 160 F), OR OPEN CELLS.

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

Respiratory Protection:NONE NEEDED UNDER NORMAL USE. NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN .

Ventilation:NONE NEEDED.

Protective Gloves:NONE REQ UNDER NORM USE;USE (SUPP DATA)

Eye Protection:CHEMICAL WORKERS GOGGLES .

Other Protective Equipment:NONE REQUIRED UNDER NORMAL USE.

Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

HAZ DECOMP PROD:AND ZINC CHLORIDE FUMES MAY BE EMITTED. PROTECTIVE GLOVES:RUBBER GLOVES TO HANDLE INTERNAL CELL COMPONENTS. SPILL PROC:UP SPILLS OR HANDLING INTERNAL PARTS OF CELLS. USE ADEQUATE VENT AND AVOID CONTACT OF CELL INTERNAL COMPONENTSWITH SKIN OR EYES.

===== P

hysical/Chemical Properties =====

Boiling Pt:B.P. Text:>212F,>100C

Vapor Density:>1

Spec Gravity:>1

Evaporation Rate & Reference:>1

Solubility in Water:NEGLIGIBLE

Appearance and Odor:BLACK SOLID GRANULES WITH POSS AMMONIA ODOR,
ENCASED IN BATTERY ASSEMBLY.

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

Stability Indicator/Materials to Avoid:YES

KEEP AWAY FROM WATER.

Stability Condition to Avoid:EXCESSIVE HEAT AND FIRE (HEATING ABOVE 160
F), CHARG

ING

Hazardous Decomposition Products:IN A FIRE SITUATION, MERCURY VAP,
AMMONIUM CHLORIDE, AMMONIA, NITROUS OXIDES, CHLORINE, MANGANESE,
ZINC OXIDE(SUPP DATA)

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

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL,
STATE, AND LOCAL REGULATIONS. DISPOSAL BY LANDFILL MAY BE ILLEGAL
IN SOME AREAS.

Disclaimer (provided with this 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.