NAVAL MINE WARFARE ENGINEERING ACTIVITY -- DISCHARGED BATTERY DRY CARBON-ZINC, MK105-0 -- 6135-00-008-5341

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

Product ID:DISCHARGED BATTERY DRY CARBON-ZINC, MK105-0
MSDS Date:02/08/1991
FSC:6135
NIIN:00-008-5341
MSDS Number: BNMMB
=== 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 ===

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Ingred Name:MERCURY
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
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
CAS:12125-02-9
RTECS #:BP4550000
Fraction by Wt: 4.0%
OSHA PEL:10MG/M3;20STEL, FUME
ACGIH TLV:10MG/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 (AS MN DUST)

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
Other REC Limits:15 MPPCF (MFR)
OSHA PEL:15 MPPCF RDUST
ACGIH TLV:2 MG/M3 RDUST; 9293

Ingred Name:MANGANESE
CAS:7439-96-5
RTECS #:OO9275000
OSHA P

EL:(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
CAS:7664-41-7
RTECS #:BO0875000
Other REC Limits:35 MG/M3 (MFR)
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:NO I
ngestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:IN FIRE SITUATION, CELLS MAY RELEASE HAZ SUBSTANCES. ACUTE: INHAL: MAY CAUSE IRRITATION OR METAL FUME FEVER IN FIRE SITUATION. INGEST: INGREDIENTS ARE POISONOUS. CONTACT: MATERIALS MAY CAUSE SKIN OR E YE IRRITATION BY VAPOR OR DIRECT CONTACT. CHRONIC: NOT LIKELY UNDER NORMAL USE. MANGANES & ZN CHLORIDE (EFTS OF OVEREXP)
Explanation of Carcinogenicity:NOT RELEVANT.
Effects of Over
exposure:HLTH HAZ: ARE EXPERIMENTAL MUTAGENS & TUMOR PRODUCERS. ZN CHLORIDE IS AN EXPERIMENTAL TERATOGEN.
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 MED ATTN. EYES:FLUSH @ LST 15 MIN W/FRESH RUNNING H*2O, OCCAS LIFTING UPPER & LOWER LID. SEEK MED ATTN. SKIN:THORO WASH AFFECTED AREA UNTIL NO TRAC

E OF MATL REMAINS. INGEST:NOT LIKELY UNDER NORMAL
USE. IF INGEST SHOULD OCCUR, GET IMMED MED ATTN. DRINK LG QTY OF H*2O. EXPOS IN FIRE:REMOVE VICTIM FROM FIRE HAZ AREA TO FRESH AIR. SEEK MED ATTN.

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

Flash Point:NOT KNOWN
Extinguishing Media:IN BULK STORAGE USE CO*2, FOAM OR DRY POWDER. WATER MAY CAUSE ELECTRICAL SHORTS.
Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT .
Un
usual Fire/Explosion Hazard:CELLS MAY RUPTURE WHEN EXPOSED TO EXCESSIVE HEAT.

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

Spill Release Procedures:BATTERIES ARE DRY SOLID & CAN BE HNDLD EASILY W/SHOVELS/SIMILAR EQUIP. WHEN ACCUMULATING LG QTY OF UNDISCHARGED BATTERIES FOR DISP PACK IN NON-CONDUCTIVE INSULATING MATL. AVOID HEAT & H*2O. USE RUB GL OVES FOR CLEANING UP SPILLS/HNDLG (SUPPDATA)
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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========== 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 (>160F), OR OPEN CELLS. AVOID CONTACT WITH WATER.

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

Respiratory Protection:NONE NEEDED UNDER NORMAL USE. USE NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR
EXPOSURE OF CONCERN .
Ventilation:NONE NEEDED.
Protective Gloves:RUB GLOVES TO HNDLE INTERNAL COMPONENTS.
Eye Protection:CHEM WORKERS GOGGLES IF CELLS OPENED.
Other Protective Equipment:NONE REQUIRED UNDER NORMAL USE.
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health
HAZ DECOMP: ZINC CHLORIDE FUMES MAY BE EMITTED. SPILL PROC:INTERNAL PARTS OF CELLS. USE ADEQUATE VENTILATION AND AVOID CONTACT OF CELL INTERNAL COMPONENTS WITH SKIN OR EYES.

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

Boiling Pt:B.P. Text:>212F,>100C
Vapor Density:>1
Spec Gravity:>1
Evaporation Rate & Reference:>1(BUTYL ACETATE=1)
Solubility in Water:NEGLIGIBLE
Appearance and Odor:BLACK SOLID GRANULES W/POSSIBLE 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 (HEATI
NG ABOVE
160F), CHARGING.
Hazardous Decomposition Products:IN FIRE SITUATION, MERCURY VAP,
AMMONIA 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.