

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:

23691-5076

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  
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

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  
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  
Ingestion: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 EYE 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 TRA

CE OF MATL REMAINS. INGEST:NOT LIKELY UNDER NORMAL USE. IF INGEST SHOULD OCCUR, GET IMMEDIATE MED ATTENTION. DRINK LARGE QUANTITY OF WATER. EXPOSURE IN FIRE:REMOVE VICTIM FROM FIRE HAZARD AREA TO FRESH AIR. SEEK MEDICAL ATTENTION.

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

Flash Point:NOT KNOWN  
Extinguishing Media:IN BULK STORAGE USE CO<sub>2</sub>, FOAM OR DRY POWDER. WATER MAY CAUSE ELECTRICAL SHORTS.  
Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT .

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 WITH SHOVELS/SIMILAR EQUIP. WHEN ACCUMULATING LARGE QUANTITY OF UNDISCHARGED BATTERIES FOR DISPOSAL PACK IN NON-CONDUCTIVE INSULATING MATERIAL. AVOID HEAT & WATER. USE RUBBER GLOVES FOR CLEANING UP SPILLS/HANDLING (SUPPLEMENTAL 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 (>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:RUBBER GLOVES TO HANDLE INTERNAL COMPONENTS.  
Eye Protection:CHEMICAL WORKERS GOGGLES IF CELLS OPENED.  
Other Protective Equipment:NONE REQUIRED UNDER NORMAL USE.  
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.  
Supplemental Safety and Health  
HAZARD DECOMPOSITION: ZINC CHLORIDE FUMES MAY BE EMITTED. SPILL PROCEDURE:INTERNAL PARTS OF CELLS. USE ADEQUATE VENTILATION AND AVOID CONTACT OF CELL INTERNAL COMPONENTS WITH SKIN OR EYES.

=====

===== 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 (HEAT  
ING 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.

Disclaimer (provided with this information by the compiling agencies):

This inf

ormation 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.