

MARATHON POWER TECHNOLOGIES -- BATTERY STORAGE PN: MA7 -- 6140-00-768-1729

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

Product ID:BATTERY STORAGE PN: MA7

MSDS Date:03/26/1990

FSC:6140

NIIN:00-768-1729

MSDS Number: BRTBC

=== Responsible Party ===

Company Name:MARATHON POWER TECHNOLOGIES

Address:8301 IMPERIAL DRIVE

Box:8233

City:WACO

State:TX

ZIP:76714-8233

Country:US

Info Phone Num:817-776-0650

Emergency Phone Num:817-776-0650 OR 800-424-9300(CHEMT)

Preparer's Name:T.

MESSING

CAGE:74025

=== Contractor Identification ===

Company Name:MARATHON POWER TECHNOLOGIES CO

Address:8301 IMPERIAL DR

Box:City:WACO

State:TX

ZIP:76712-6588

Country:US

Phone:254-741-5405

CAGE:74025

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

Ingred Name:CADMIUM (SARA III) BP-765F, SG-8.642, MP-320.9F,  
INSOLUBLE NO ODOR

CAS:7440-43-9

RTECS #:EU9800000

Other REC Limits:NONE RECOMMENDED

OSHA PEL:SEE 1910.1027

ACGIH TLV:0.01 MG/M3 DUST;9394

EPA Rpt Qty:10 LBS

DOT

Rpt Qty:10 LBS

Ingred Name:CADMIUM HYDROXIDE BP-N/A, SG-4.79, DECOMPOSES 300C,  
INSOLUBLE  
CAS:21041-95-2  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:0.1 MG/M3 (CD FUME)  
ACGIH TLV:0.05 MG/M3 (CD FUME)

Ingred Name:NICKEL (SARA III) BP-2730 F, SG 8.90, MP 1455F, INSOLUBLE  
CAS:7440-02-0  
RTECS #:QR5950000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:1 MG/M3  
ACGIH TLV:1 MG/M3; 9293

Ingred Name:NICKEL HYDROXIDE (SARA III) SG-4.15, DECOMPOSES 230F,  
INSOLUBLE  
CAS:12054-48-7  
RTECS #:QR7040000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:1 MG NI/M3  
ACGIH TLV:0.1 MG NI/M3; 9293  
EPA Rpt Qty:10 LBS  
DOT Rpt Qty:10 LBS

Ingred Name:POTASSIUM HYDROXIDE (SARA III) BP-1322F, SG-2.044,  
MP-360F, SOLUBLE 52% W/W  
CAS:1310-58-3  
RTECS #:TT2100000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:C, 2 MG/M3  
ACGIH TLV:C 2 MG/M3; 9293  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS

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

Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES  
Repor

ts of Carcinogenicity:NTP:YES IARC:YES

Health Hazards Acute and Chronic:LOW LEVEL EXPOSURE TO CADMIUM

COMPOUNDS MAY CAUSE IRRIVERSIBLE LUNG INJURY, KIDNEY DISEASE AND OTHER ADVERSE EFFECTS. EXPOSURE TO POTASSIUM HYDROXIDE (KOH) MAY DAMAGE UPPER RESPIRATORY TRACT AND LUN G TISSUE WHICH COULD PRODUCE CHEMICAL PNEUMONIA.

Explanation of Carcinogenicity:NICKEL LISTED BY IARC & NTP. CADMIUM LISTED BY NTP.

Effects of Overexposure:IRRITATION OF MUCOUS MEMBRANES, DRYNESS OF

MOUTH/THROAT, HEADACHE, NAUSEA AND DIZZINESS. ALLERGIC SKIN RASHES/SENSITIVITY.

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:FLUSH EYES FOR 15 MIN WITH WATER AND WASH SKIN WITH WATER. IF INGESTED AND PERSON CONSCIOUS GIVE LARGE QUANTITIES OF WATER. DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION.

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

Flash Point:NON

FLAMMABLE

Lower Limits:NOT APPLICAE

Upper Limits:NOT APPLICAE

Extinguishing Media:USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

Fire Fighting Procedures:FIRE FIGHTER SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF CONTAINED BREATHING APPARATUS WITH FULL FACE-PIECE OPERATED IN POSITIVE PRESSURE MODE.

Unusual Fire/Explosion Hazard:CONTACT WITH STRONG OXIDIZING AGENTS, NITRATES, NITRIC ACID

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

Spill Rele

ase Procedures:USE INDUSTRIAL ABSORBENT TO COLLECT LIQUID POTASSIUM HYDROXIDE

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:DO NOT INVERT. AVOID BREAKING CRUSHING OR OTHERWISE DESTROYING THE PHYSICAL INTEGRITY OF THE CELL OR BATTERY

Other Precautions:USE ADAQUATE LOCAL EXHAUST VENTILATION WHEN HANDLING THE LIQUID IN THE BATTERY I.E. POTASSIUM HYDROXIDE SOLUTION, WEAR A

RESPIRAATOR, EYE GOGGLES AND FACE SHIELD, RUBBER GLOVES, PROTECTIVE CLOTHING TO MINIMIZE SKIN CONTACT.

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

Respiratory Protection:CONTACT LOCAL SAFETY/INDUSTRIAL HYGIENE OFFICE TO DETERMINE IF RESPIRATORY PROTECTION IS REQUIRED  
Ventilation:CONTACT LOCAL SAFETY/INDUSTRIAL HYGIENE OFFICE TO DETERMINE IF LOCAL EXHAUST VENTILATION IS NEEDED  
Protective Gloves:RUBBER GLOVES  
Eye Protection:CHEMICAL SAFETY GLASSES/GOGGLES  
Other Protective Equipment:PROTECTIVE CLOTHING  
Work Hygienic Practices:WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING, DRINKING OR SMOKING. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.  
Supplemental Safety and Health

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

Boiling Pt:B.P. Text:765F,407C  
Melt/Freeze Pt:M.P/F.P Text:UNK  
Decomp Temp:Decomp Text:230F,110C  
Vapor Pres:UNK  
Vapor Density:UNK  
Spec Gravity:UNK  
pH:UNK  
Evaporation Rate & Reference:UNK  
Solubility in  
Water:KAOH 52%  
Appearance and Odor:NICAD BATT CONTAINS:CD & NI-SILVER METAL,CDOH & KOH-WHITE SALT,NIOH GRN-BLK SAL  
Percent Volatiles by Volume:UNK  
Corrosion Rate:UNK

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

Stability Indicator/Materials to Avoid:YES  
STRONG OXIDIZING AGENTS, NITRATES, NITRIC ACID  
Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.  
Hazardous Decomposition Products:NONE

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

Waste Disposal Methods:DISPOSAL MUST BE IN ACCORDANCE WITH ALL  
APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. COORDINATE WITH  
SUPPORTING INSTALLATION AND/OR MACOM ENVIRONMENTAL OFFICE PRIOR TO  
DISPOSAL

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  
di

sclaims 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.