

METCO -- 81VFNS -- 3439-01-027-9242

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

Product ID:81VFNS
MSDS Date:08/15/1989
FSC:3439
NIIN:01-027-9242
MSDS Number: BGFSH
=== Responsible Party ===
Company Name:METCO
Address:1101 PROSPECT AVE
City:WESTBURY
State:NY
ZIP:11590
Country:US
Info Phone Num:516-334-1300
Emergency Phone Num:516-824-2315
CAGE:FO880

==== Contractor Identification ====

Company Name:METCO
Addre
ss:1101 PROSPECT AVE
City:WESTBURY
State:NY
ZIP:11590
Phone:(516) 334-1300
CAGE:FO880
Company Name:METCO INC, SUB OF THE PERKIN-ELMER CORP
Address:1101 PROSPECT AVENUE
Box:City:WESTBURY
State:NY
ZIP:11590-2724
Country:US
Phone:516-334-1300
CAGE:39918

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

Ingred Name:GRAPHITE, SYNTHETIC
CAS:7440-44-0
RTECS #:FF5250100
Other REC Limits:NONE SPECIFIED
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:2 MG/M3 TDUST; 9293

Ingred Name:IRON OXIDE FUME

CAS:1309-37-1
RTECS #:NO7400000
Other REC Limits:NONE SPECIFIED
OSHA PEL:10 MG/M3 (FE)
ACGIH TLV:5 MG/M3(FE),B2; 9293

Ingred Name:CHROMIUM (SARA III)
CAS:7440-47-3
RTECS #:GB4200000
Other REC Limits:NONE SPECIFIED
OSHA PEL:1 MG/M3
ACGIH TLV:0.5 MG/M3; 9293
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:MANGANESE (SARA III)
CAS:7439-96-5
RTECS #:OO9275000
Other REC Limits:NONE SPECIFIED
OSHA PEL:(C) 5 MG/M3 DUST
ACGIH TLV:5 MG/M3 DUST 9293

Ingred Name:NICKEL (SARA III)
CAS:7440-02-0
RTECS #
:QR5950000
Other REC Limits:NONE SPECIFIED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3; 9293

Ingred Name:SILICON
CAS:7440-21-3
RTECS #:VW0400000
Other REC Limits:NONE SPECIFIED
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9293

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

Routes of Entry: Inhalation:NO Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO
Health Hazards Acute and Chronic:ACUTE: INHALATION MAY CAUSE
RESPIRATORY IRRITATION, PNEUMOC

ONIOSIS, LUNG FIROSOSIS. CONTACT MAY CAUSE SKIN DERMATITIS, CONJUCTIVITIS OF EYE; SKIN AND EYE IRRITATION. HEALTH HAZARS UNKNOWN IF SWALLOWED . CHRONIC: PROLONGED OR REPEATED EXPOSURE MAY CAUSE CANCER, DERMATITIS.

Explanation of Carcinogenicity:NICKEL IS LISTED CARCINOGEN TO MAN BY NIOSH; CHROMIUM ALLOYS ARE SUSPECTED CARCINOGENS BY IARC.

Effects of Overexposure:INHALED: COUGHING, SNEZZING, SHORTNESS OF BREATH. SKIN: REDNESS, ITCHING, DISCOMFORT. EYES: REDNESS, DISCOMFORT

. INGESTED: UNKNOWN, NONE GIVEN.

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:INHALED: REMOVE TO FRESH AIR. EYES: FLUSH WITH LOTS OF WATER, HOLD LIDS OPEN. SEE DOCTOR. SKIN: WASH WITH SOAP AND WATER TO REMOVE POWDER. INGESTED: SEE DOCTOR.

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

Flash Point:NONE

Extinguishing Media:USE CLASS D FIRE EXTINGUISHER

Fire Fighti

ng Procedures:WEAR SELF-CONTAINED BREATHING APPARATUS. TREAT AS METALLIC FIRE.

Unusual Fire/Explosion Hazard:MODERATE FIRE HAZARD IN THE FORM OF DUST WHEN EXPOSED TO FLAME. NICKEL AND SILICON POWDERS ARE CLASSIFIED AS FLAMMABLE SOLIDS.

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

Spill Release Procedures:MATERIAL SPILLED ONTO THE FLOOR MAY BECOME AIRBORNE BY NORMAL PLANT ACTIVITY OR BY NORMAL HANDLING CONDITIONS. SWEEP THE AREA WITHOUT CREATING DUST.

PLACE THE CONTAMINATED POWDER IN CONTAINER FOR LATE R DISPOSAL.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:STORE AWAY FROM INCOMPATIBLES IN A COOL, DRY AREA.

Other Precautions:AVOID ORAL INGESTION AND EXCESSIVE SKIN CONTACT.

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

Respiratory Protection:A RESPIRATOR APPROVED BY NIOSH FOR DUST/FUMES/ MISTS SHOULD

BE WORN AT ALL TIMES DURING THE THERMAL SPRAY PROCESS TO PROTECT OPERATOR FROM DUST & FUMES. USE IN ACCORDANCE WITH 29 CFR 1910.134.

Ventilation: VENTILATION EQUIPMENT DESIGNED TO CREATE AN AIR VELOCITY OF 200 FPM.

Protective Gloves: ALUMINIZED GLOVES DURING PLASMA SPRAY

Eye Protection: SEE SUPPLEMENTAL DATA

Other Protective Equipment: WEAR ALUMINIZED APRON DURING PLASMA SPRAY PROCESS.

Work Hygienic Practices: WASH HANDS AFTER USE AND BEFORE EATING, DRINKING, OR SMOKING. LAUNDRY CONTAMINATED CLOTHES BEFORE REUSE.

Supplemental Safety and Health

MANUFACTURER RECOMMENDS FOLLOWING LENS SHADES: COMBUSTION SPRAYING SHADE #5, PLASMA SPRAYING UP TO 40 KW SHADE #9, 40 TO 60 KW SHADE #10 & GREATER THAN 60 KW SHADE #11. EAR PROTECTION MUST BE WORN WHEN THE OPERATOR IS SUBJECTED TO EXCESSIVE NOISE LEVEL.

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

HCC: N1

Melt/Freeze Pt: M.P/F.P Text: >2200F, >120

Spec Gravity: 2.8

Solubility in Water: NEGLIGIBLE

Appearance and Odor: METALLIC POWDER, NO ODOR

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

Stability Indicator/Materials to Avoid: YES

STRONG OXIDIZING AGENTS, STRONG MINERAL ACIDS, SULFUR, NICKEL NITRATE, WOOD, COMBUSTIBLES.

Stability Condition to Avoid: CONTACT WITH INCOMPATIBLE MATERIALS.

Hazardous Decomposition Products: OZONE AND NITRIC ACID ARE FORMED BY PLASMA FLAME (INDEPENDENT OF POWDER).

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

Waste Disposal Methods: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE & LOCAL REGULATIONS.

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.