Product ID:METCO 73F-NS-1 MSDS Date:02/03/1993 FSC:3439 NIIN:01-380-6737 MSDS Number: BYCSD === Responsible Party === Company Name: METCO PERKIN-ELMER Address:1101 PROSPECT AVENUE Box:1006 City:WESTBURY State:NY ZIP:11590-0201 Country:US Info Phone Num:516-334-1300;202-483-7616 Emergency Phone Num:516-334-1300;800-424-9300(CHEMTREC) CAGE:FO877 === Contractor Identificati on === 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 Company Name: METCO PERKIN-ELMER Address:1101 PROSPECT AVENUE Box:1006 City:WESTBURY State:NY ZIP:11590-0201 Phone: (516) 334-1300 CAGE:FO877 Company Name:SULZER METCO (US) INC Address:1101 PROSPECT AVE Box:City:WESTBURY State:NY ZIP:11590-2724 Country:US Phone:516-334-1300 CAGE:01FK3

======= Composition/Information on I

ngredients =========

Ingred Name:TUNGSTEN CARBIDE CAS:12070-12-1 RTECS #:YO7250000 Fraction by Wt: 82% % Other REC Limits:NONE RECOMMENDED OSHA PEL:5 MG W/M3 ACGIH TLV:5 MG W/M3

Ingred Name:COBALT (SARA III) CAS:7440-48-4 RTECS #:GF8750000 Fraction by Wt: 17% % Other REC Limits:NONE RECOMMENDED OSHA PEL:0.05 MG/M3 ACGIH TLV:0.05 MG/M3;DUST 9192

Ingred Name:IRON CAS:7439-89-6 RTECS #:NO4565500 Fraction by Wt: 1% % Other REC Limits:NONE RECOMMENDED

LD50 LC50 Mixture:NOT GIVEN FOR PRODUCT AS A WHOLE.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:INHALATION MAY CAUSE LUNG DAMAGE, PNEUMONIA, SIDEROSIS AND RESPIRATORY TRACT IRRITATION. SKIN AND EYE CONTACT MAY CAUSE IRRITATION.MAY CAUSE ALLERGIC DERMATITIS, ECZEMA.
Explanation of Carcinogenicity:COBALT IS FOUND TO BE A CONFIRMED CARCINOGEN BY OTHER REFEREN
CE GUIDE SOURCES SUCH AS VAN NOSTRAND.
Effects of Overexposure:EYE IRRITATION, SKIN IRRITATION, DERMATITIS, ECZEMA, LUNG DAMAGE, RESPIRATORY TRACT IRRITATION, COUGH, WHEEZING, SHORTNESS OF BREATH, BENIGN PNEUMOCONIOSIS.
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

First Aid:EYE: FLUSH WITH SUFFICIENT AMOUNTS OF WATER. IF IRRITATION PERSISTS, CONSULT A PHYSICIAN. SKIN: WASH WITH SOAP AND WATE R.

## INHALATION: EXPOSE TO FRESH AIR. CONSULT A PHYSICIAN IF IRRITATION OR RESPIRAT ORY DISTRESS PERSISTS. INGESTION: CONSULT A PHYSICIAN.

Flash Point:NONFLAMMABLE Lower Limits:NOT GIVEN Upper Limits:NOT GIVEN Extinguishing Media:USE CLASS D FIRE EXTINGUISHER. Fire Fighting Procedures:TREAT AS A METALLIC FIRE. Unusual Fire/Explosion Hazard:FINE METAL DUSTS ARE FLAMMABLE AND MAY EXPLODE WHEN EXPOSED TO HEAT, FLAME OR STRONG OXIDIZERS.

Spill Release Procedures: VACUUM LOOSE POWDER ONLY WITH VACUUMS EQUIPPED WITH HEPA FILTRATION. VACUUMS APPROPRIATE FOR USE WITH METALLIC DUSTS SHOULD BE UTILIZED. WIPE THE AREA CLEAN. DO NOT USE WATER FOR CLEAN UP OPERATIONS. DO NOT SWEEP. AVOID GENERATING AIRBORNEDUST. Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Handlin

g and Storage Precautions:STORE AWAY FROM INCOMPATIBLES. STORE PRODUCT CONTAINERS IN A WELL-VENTILATED, CLEAN, COOL, DRY AREA. MINIMIZE PHYSICAL DAMAGE.

Other Precautions: AVOID INGESTION, INHALATION AND EXCESSIVE SKIN CONTACT. AVOID CONTACT OF POWDER WITH WATER AND OXIDIZERS.

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

Respiratory Protection: A RESPIRATOR APPROVED BY NIOSH WITH FILTER CARTRIDGES APPROVED FOR DUST/FUMES/MISTS SHOULD BE WORN AT ALL TIME

S DURING THE THERMAL SPRAY PROCESS TO RPOTECT THE OPERATOR FROM EXPOSURE TO DUST AND FUMES .

Ventilation: PRODUCT SHOULD BE USED WITH THE APPROPRIATE LOCAL EXHAUST VENTILATION PROVIDED.

Protective Gloves: ALUMINIZED GLOVES DURING PROCESSING

Eye Protection: CHEMICAL WORKER'S GOGGLES

Other Protective Equipment: HEARING PROTECTION, ALUMINIZED APRON,

APPROPRIATE CLOTHING TO PREVENT SKIN CONTACT.

Work Hygienic Practices: WASH HANDS THOROUGHLY WITH SOAP AND WATER BEFORE EATING, DRINKING, SM OKING OR USING TOILET FACILITIES. Supplemental Safety and Health EYE WASH STATIONS ARE RECOMMENDED.

HCC:N1 Boiling Pt:B.P. Text:NOT GIVEN Melt/Freeze Pt:M.P/F.P Text:2200-2300F Vapor Pres:NOT GIVEN Vapor Density:NOT GIVEN Spec Gravity:4.5 - 6.3 Viscosity:NOT GIVEN Evaporation Rate & amp; Reference:NOT GIVEN Solubility in Water:NOT GIVEN Appearance and Odor:POWDER, NO ODOR Percent Volatiles by Volume:NIL

Stability Indicator/Materials to Avoid:YES OXIDIZERS, ACIDS, SULFUR, NI(NO3)2, COMBUSTIBLES. Stability Condition to Avoid:HEAT, FLAME, IGNITION SOURCES Hazardous Decomposition Products:OZONE AND NITRIC ACID ARE FORMED BY THE PLASMA FLAME.

Waste Disposal Methods: EMPTY PRODUCT CONTAINERS, PRODUCT WASTE AND CLEANING MEDIA SHOULD BE STORE AND DISPOSED OF ACCORDING TO THE A

PPROPRIATE LOCAL, STATE AND FEDERAL REGULATORY GUIDELINES.

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