

BOB MARTIN COMPANY -- HASTELLOY W -- 3439-00-063-5203

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

Product ID:HASTELLOY W

MSDS Date:04/01/1987

FSC:3439

NIIN:00-063-5203

MSDS Number: BCWXD

=== Responsible Party ===

Company Name:BOB MARTIN COMPANY

Address:2209 N SEAMAN AVENUE

City:SO. EL MONTE

State:CA

ZIP:91733

Info Phone Num:213-686-2220

Emergency Phone Num:213-686-2220

CAGE:JO950

=== Contractor Identifica

tion ===

Company Name:BOB MARTIN COMPANY

Address:2209 N SEAMAN AVENUE

Box:City:SO. EL MONTE

State:CA

ZIP:91733

Phone:213-686-2220

CAGE:JO950

Company Name:MARTIN BOB CO

Address:2209 N SEAMAN AVE

Box:City:SOUTH EL MONTE

State:CA

ZIP:91733-2630

Country:US

Phone:213-686-2220

CAGE:6K906

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

Ingred Name:COBALT (SARA III)

CAS:7440-48-4

RTECS #:GF8750000

Fraction by Wt: 2.5% MAX

OSHA PEL:0.1 MG/M3;AS CO

ACGIH TLV:0.05 MG/M3;DUST 9293

ingred Name:CHROMIUM (SARA III)  
CAS:7440-47-3  
RTECS #:GB4200000  
Fraction by Wt: 5.0%  
OSHA PEL:1 MG/M3  
ACGIH TLV:0.5 MG/M3; 9192  
EPA Rpt Qty:1 LB  
DOT Rpt Qty:1 LB

Ingred Name:IRON OXIDE  
CAS:1309-37-1  
RTECS #:NO7400000  
Fraction by Wt: 6.0%  
OSHA PEL:10 MG/M3 (FE)  
ACGIH TLV:5 MG/M3(FE),B2; 9293

Ingred Name:MANGANESE (SARA III)  
CAS:7439-96-5  
RTECS #:OO9275000  
Fraction by Wt: 1.0% MAX  
Other REC Limits:1.0MG/M3(FUME),ACGIH  
OSHA PEL:(C) 5 MG/M3 DUST  
ACGIH TLV:5 MG/M3 DUST 9293

Ingred Name:MOLYBDENUM  
  
CAS:7439-98-7  
RTECS #:QA4680000  
Fraction by Wt: 24%  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:10 MG/M3; 9293

Ingred Name:NICKEL (SARA III)  
CAS:7440-02-0  
RTECS #:QR5950000  
Fraction by Wt: 63.0%  
OSHA PEL:1 MG/M3  
ACGIH TLV:1 MG/M3; 9192

Ingred Name:SILICON  
CAS:7440-21-3  
RTECS #:VW0400000  
Fraction by Wt: 1.0% MAX  
Other REC Limits:5.0MG/M3;RESP. DUST  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:10 MG/M3 TDUST; 9293

Ingred Name:VANADIUM (SARA III)  
CAS:7440-62-2  
RTECS #:YW1355000  
Fraction by Wt: 0.6% MAX  
Other REC

Limits:ABOVE FIG.FOR V\*20\*5  
OSHA PEL:C,0.5 MG V2O5/M3 RD  
ACGIH TLV:0.05 MG V205/M3;9293

Ingred Name:GRAPHITE, SYNTHETIC  
CAS:7440-44-0  
RTECS #:FF5250100  
Fraction by Wt: 0.12%  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:2 MG/M3 TDUST; 9293

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO  
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:YES  
Health Hazards Acute and Chronic:ACUTE:METALLIC TASTE,NAUSEA,CHEST  
TIGHTNESS,FEVER  
,DIZZINESS,DRYNESS,EYES,NOSE,THROAT  
IRRITATION,ALLERGIC SKIN REACTIONS,IRRITATION & DERMATITIS.  
CHRONIC:BRONCHIAL ASTHMA,LUNG FIBROSIS,PNEUMOCONIOSIS.L UNG  
CANCER(CR & NI EXPOSURE).CNS DEPRESSION(MN EXPOSURE),GI  
DISORDERS(FE EXPOSURE).  
Explanation of Carcinogenicity:CHROMIUM VI IS A HUMAN CARCINOGEN.  
CHROMIUM III IS A SUSPECTED HUMAN CARCINOGEN. NICKEL IS A SUSPECTED  
HUMAN CARCINOGEN.

Effects of Overexposure:SEE HEALTH HAZARDS.  
Medical Cond Aggravated by Exposure:AGGRAVAT  
ION OF EXISTING RESPIRATORY  
OR ALLERGIC CONDITIONS.HIGHER LEVEL OF LUNG RELATED PROBLEMS AMONG  
SMOKERS.SCREEN INDIVIDUALS WITH NERVOUS,CIRCULATORY,BLOOD OR KIDNEY  
CONDITIONS.

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

First Aid:REMOVE FROM EXPOSURE AND OBTAIN PROMPT MEDICAL ATTENTION.IF  
NOT BREATHING,GIVE CPR.IF UNCONSCIOUS,GIVE OXYGEN;SKIN:WASH WITH  
SOAP & WATER,IF IRR.PERSISTS,SEE DOCTOR;EYES:FLUSH WITH LARGE  
AMOUNTS OF WA TER.IF IRR.PERSISTS  
,SEE DOCTOR.DO NOT WEAR CONTACT  
LENSES;INGESTION:DRINK LARGE QUANTITIES OF WATER.INDUCE VOMIT,SEE  
DOCTOR IMMEDIATELY.

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

Extinguishing Media:USE MEDIA APPROPRIATE FOR SURROUNDING FIRE.  
Fire Fighting Procedures:IF THIS MATERIAL IS REDUCED TO POWDER  
FORM,CAUTION MUST BE USED TO PREVENT FIRE OR EXPLOSION. TO  
EXTINGUISH USE DRY SAND,DRY GRAPHITE,OR OTHER CLASS"D"EXTINGSHR  
Unusual Fire/Explosion Hazard:WELDING ARCS AN

D SPARKS CAN IGNITE  
COMBUSTIBLE PRODUCTS

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

Spill Release Procedures:IF IN SOLID FORM,SWEEP UP & PLACE IN APPROPRIATE DISPOSAL CONTAINER.IF IN POWDER FORM,VACUUM WITH HIGH EFF. PARTICULATE FILTRATION SYSTEM.MINIMIZE AIRBORNE GENERATION OF POWDER & AVOID WATER CONTAMINATION & PLACE IN APPROPRIATE DISPOSAL CONTAINER.

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

Other Precautions:TRAIN WELDER TO KEEP HIS HEAD OUT OF THE FUMES.  
MONITOR AIR TO ENSURE ACCEPTABLE EXPOSURES. AVOID ELECTRICAL SHOCK BY MAINTAINING DRY WORK AREA.

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

Respiratory Protection:FUME RESPIRATOR OR AIR SUPPLIED RESPIRATOR IN CONFINED SPACES OR WHERE VENTILATION DOES NOT KEEP EXPOSURE BELOW TLV.

Ventilation:LOCAL EXHAUST TO MAINTAIN BELOW TLV.

Protective Gloves:WELDER'S GLOVES

Eye Protection:HELMET OR FACE SHIELD WITH FILTER LENS

Other Protective Equipment:SUBSTANTIAL DARK CLOTH,ARM PROTECTOR,APRON,HAT,SHOULDER PROTECTION.

Work Hygienic Practices:WASH HANDS THOROUGHLY BEFORE EATING,SMOKING,USING SANITARY FACILITIES.

Supplemental Safety and Health

MSDS INFORMATION OBTAINED FROM MSDS BY CABOT OF 01NOV85,CAGE 7T173.

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

HCC:N1

Melt/Freeze Pt:M.P/F.P Text:2400F,1316C

Spec Gravity:9.0

Solubility in Water:INSOLUBLE

Appearance and Odor:WELDING ROD,NO ODOR

OR

Percent Volatiles by Volume:NONE

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

Stability Indicator/Materials to Avoid:YES

MINERAL ACIDS & OXIDIZING AGENTS WHICH MAY GENERATE HYDROGEN GAS,WHICH IS EXPLOSIVE.

Hazardous Decomposition Products:FUMES OF METALS AND METAL OXIDES,CO,NO\*2,O\*3.

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

Waste Disposal Methods:DISPOSE OF FUMES,FLUX OR WELD GRINDING RESIDUE FROM THE WORK AREA OR FROM FILTERS

IAW ALL APPLICABLE FEDERAL,STATE AND 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.