

HAYNES INTERNATIONAL INC SUB OF CABOT CORP -- H3095-0 ALLOYS, HASTELLOY X ALLOY  
N06002 -- 3439-01-031-5253

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

Product ID:H3095-0 ALLOYS, HASTELLOY X ALLOY N06002

MSDS Date:09/01/1993

FSC:3439

NIIN:01-031-5253

MSDS Number: CFVWS

=== Responsible Party ===

Company Name:HAYNES INTERNATIONAL INC SUB OF CABOT CORP

Address:1020 W PARK AVE

Box:9013

City:KOKOMO

State:IN

ZIP:

46902-9013

Country:US

Info Phone Num:317-456-6625

Emergency Phone Num:800-424-9300(CHEMTREC)/317-456-6894

Preparer's Name:SAFETY DEPT

CAGE:80357

=== Contractor Identification ===

Company Name:HAYNES INTERNATIONAL INC SUB OF CABOT CORP

Address:1020 W PARK AVE

Box:9013

City:KOKOMO

State:IN

ZIP:46904-9013

Country:US

Phone:318-263-2002;765-456-6614

CAGE:80357

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

Ingred Name:BORON (% IS MAX AMT)

CAS:7440-42-8

RTECS #:ED7350000

Fracti

on by Wt: 0.008%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:10 MG B203/M3  
ACGIH TLV:10 MG B2O3/M3

Ingred Name:COBALT (SARA 313)  
CAS:7440-48-4  
RTECS #:GF8750000  
Fraction by Wt: 1.5%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:0.1 MG/M3  
ACGIH TLV:0.02 MG/M3; A3; 9596

Ingred Name:CHROMIUM (SARA 313) (CERCLA)  
CAS:7440-47-3  
RTECS #:GB4200000  
Fraction by Wt: 22%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:1 MG/M3  
ACGIH TLV:0.5 MG/M3; 9596  
EPA Rpt Qty:1 LB  
DOT Rpt Qty:1 LB

Ingred Name:IRON  
CAS:7439-89  
-6  
RTECS #:NO4565500  
Fraction by Wt: 18%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:MANGANESE (SARA 313)  
CAS:7439-96-5  
RTECS #:OO9275000  
Fraction by Wt: 1% MAX  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:C, 5 MG/M3 (FUME)  
ACGIH TLV:0.2 MG/M3; 9596

Ingred Name:MOLYBDENUM  
CAS:7439-98-7  
RTECS #:QA4680000  
Fraction by Wt: 9%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:10 PPM.  
ACGIH TLV:10 PPM.

Ingred Name:NICKEL (SARA 313) (CERCLA)  
CAS:7440-02-0  
RTECS #:QR5950000  
Fraction by Wt: 47%  
Other REC Lim

its:NONE RECOMMENDED  
OSHA PEL:1 MG/M3  
ACGIH TLV:1 MG/M3; 9596

Ingred Name:SILICON  
CAS:7440-21-3  
RTECS #:VW0400000  
Fraction by Wt: 1% MAX  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:10 MG/M3 TDUST; 9596

Ingred Name:TUNGSTEN,AS W,SOLUBLE COMPOUNDS.  
CAS:7440-33-7  
RTECS #:YO7175000  
Fraction by Wt: 0.6%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:NOE ESTABLISHED  
ACGIH TLV:1 MG/M3/3 STEL; 9596

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

LD50 LC50 Mix  
ture:NONE SPECIFIED BY MANUFACTURER.  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:YES  
Health Hazards Acute and Chronic:INHAL:METAL DUST/FUME/POWDER MAY  
RESULT FROM MELT/DROSS HNDLG/CAST/WELD/THERM  
CUT/FRINK/CRUSH/SIMILAR OPERATIONS WHICH GENERATE AIRBORNE METAL  
PARTICULATE DURING MATLS USE.INGEST:HAND/CLOTH/FOOD/DRINK CONTACT  
W/METAL DUST/FUME/POWDER CAN CAUSE PARTICULATE INGEST DURING HAND  
TO MOUTH ACTIVITIES  
(DRINK/SMOKE/(SUPPLEMENTA)  
Explanation of Carcinogenicity:PER MSDS:CR(VI)/NI CMPDS CARC BY  
OSHA/IARC/NTP.WELD FUME/CO CARC BY OSHA/IARC.CHEMS KNOWN TO STATE  
OF CALIFORNIA CARC.  
Effects of Overexposure:INGREDS METAL DUST/FUME IRRIT SKIN/EYE/MUC  
MEMB.CR/CO/CU/NI CONTACT CAUSE ALLERGIC SKIN RX.IRRIT  
SKIN/DERM,INJURY TO EYE FRM IRRIT/MECHAN INJURY TO CORNEA/CONJ BY  
DUST/PARTIC.EXCESS AL,CO,CU,MN,NI RES P  
IRRIT,COUGH,BRON,CHILLS,FUME FEVER,ASTHMA-LIKE SYMPT.RESP  
DISEASE,CN

S DEPRESS,GI DISORDER,LUNG CHANGES.

Medical Cond Aggravated by Exposure:ALLERGIC RX/SENS TO METALS  
ENCOUNTER SKIN RASH/DERM.IMPAIRED PULM FUNCTION/AIRWAY  
DISEASE/CONDITIONS LIKE ASTHMA,EMPHY,CHRONIC BRON,ETC FURTHER  
DISABILITY.NERV,CIRC,BLOOD,KID DMG/DISEASE NEED SCREENIG

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

First Aid:INHAL:BREATH DIFFI MOVE TO FRESH AIR.STOP BREATH PERFORM ART  
RESP.GET MED ATTN IMMED.INGGEST:SWALLOW LG QUANT OF WATER,ATTEMPT

TO INDUCE VOMIT IF CONSC.GET MED ATTN IMMED.SKIN:CUT/ABRASION TREAT  
BY ST D 1ST AID:CONTAM REMOVE BY WASHING W/SOAP/WATER.IRRIT PERSIST  
GET MED ATTN.EYE:FLUSH W/COPIOUS AMTS OF CLEAN WATER.IRRIT PERSIST  
GET MED ATTN.CONTACT LENSES SHOULDNT BE WORN WHEN WORK W/METAL  
DUST/POWD

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

Flash Point:NONE

Autoignition Temp:Autoignition Temp Text:NP

Lower Limits:NONE

Upper Limits:NONE

Extinguishing Media:THESE ALLOYS ARE NON

-COMBUSTIBLE.USE EXTINGUISHING

MEDIA APPROPRIATE TO SURROUNDING FIRE.

Fire Fighting Procedures:IF THESE MATLS REDUCED TO POWDER FORM CAUT  
MUST BE USED TO PREVENT FIRE/EXPLO.TO EXT METAL POWDER FIRE USE DRY  
SAND,DRY GRAPHITE,OTHER CLASS D FIRE EXT POWDER.

Unusual Fire/Explosion Hazard:NO USUSUAL FIRE OR EXPLO HAZARDS ARE  
ASSOCIATED WITH THESE MATLS.

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

Spill Release Procedures:SOLID FORM MATL POSE NO SPEC CLEANUP

PROBLEMS.MATL POWDER/DUST FORM CLEANUP SHOULD BE CONDUCTED W/VACUUM  
SYS UTILIZING HEPA FILT SYS.CAUT SHOULD BE TAKEN TO MIN AIRBORNE  
GENERATION OF POWDER/DUST,AVOID CONTAM OF AIR/WATER.PROPERLY LABEL  
COLLECT MATL.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:HNDL ACCORDING TO  
SIZE/SHAPE/QUANT.SOLID-USE HOIST,CRANE,ETC.POWDER-SPILL/RELEASE  
POT.SOLID NO SPEC STORAGE

PROBLEM.STORE METAL/POWDER IN DRY AREA.

Other Precautions:DONT STORE ADJ TO MINERAL ACIDS.KEEP FINE METAL POWDER AWAY FLAME/IGN.EXPO TO ELEMENTS BEST DETERMINE BY AIR SMPLS FRM WORKER BREATH ZONE/WORK AREA/DEPT.LUNG FUNCT TEST/CHEST X-RAY/ROUTINE PHYS EXAM U SEFUL-DETERMINE EFFEFT OF DUST/FUME EXPO

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

Respiratory Protection:NIOSH APPROV RESP AS SPEC BY INDUSTR HYG/QUAL SAF PROF.LUNG FUNCTION TESTS RECOMMENDED FOR USERS OF NEG PRESSURE

DEVICES.USE FUME RESP OR AIR SUPPL RESP WHERE LOC EXHAU/VENTI DOESNT KEEP EXPO BEL OSHA LIMITS FOR AIR CONTAMINANTS.

Ventilation:LOC EXHAU VENTI SHOULD BE USED TO CONTROL EXPO TO AIRBORNE DUST & FUME WHENEVER POSSIBLE.

Protective Gloves:GLOVES PREVENT METAL CUT/SKIN ABRASIONS

Eye Protection:SAF GLASSES WHEN RISK OF EYE INJURY PRES

Other Protective Equipment:POT CLOTH(UNIFORMS,DISPO COVERALLS,SAF SHOES,ETC)MAY BE REQUIRED DURING METAL HDNLG OPERATIONS AS APP ROP

TO EXPO CIRCUM.

Work Hygienic Practices:CONTAINS SEC 313 EPCRA CHEMS.HEALTH HAZ INFO GIVEN IN MSDS H-1072 FOR WELDING PRODUCTS ALSO APPLY.

Supplemental Safety and Health

HEALTH:NAIL BITE,ETC).SKIN:CONTACT MAY CAUSE IN SOME SENS PEOPLE ALLERGIC RESPONSE IF ELEMENTS LIKE CR,CO,CU,NI PRESENT.METAL DUST/POWDER CONTACT/ABRASION CAUSE IRRIT,DERM.EYE:PARTICU METAL DANGEROUS TO EYE/SURROUNDING TISSUE.AIRBORNE PARTIC POT PROBLEM AS WELL AS INSERTING FINGER INTO EYE IF HAND/CL OTH CONTAM W/PARTIC

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

HCC:N1

Boiling Pt:B.P. Text:NA

Melt/Freeze Pt:M.P/F.P Text:-2300F,-129

Decomp Temp:Decomp Text:NP

Vapor Pres:NA

Vapor Density:NA

Spec Gravity:0.297=DENSITY

pH:NP

Viscosity:NP

Evaporation Rate & Reference:NA

Solubility in Water:NONE

Appearance and Odor:SOLID-SILVER GRAY COLOR, NO ODOR

Percent Volatiles by Volume:NONE

Corrosion Rate:NP

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

Stability Indicator/Materials to Avoid: YES  
AVOID CONTACT W/MINERAL ACIDS & OXIDIZING AGENTS WHICH MAY GENERATE  
HYDROGEN GAS; EVOLUTION OF HYDROGEN MAY BE EXPLO HAZ.  
Stability Condition to Avoid: NONE SPECIFIED BY MANUFACTURER.  
Hazardous Decomposition Products: VAR ELEMENTAL METALS/METAL OXIDES MAY  
BE GENERATED FRM WELD/CUT/GRIND/MELT/DROSS HANDLG OPERATIONS.

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

Waste Disposal Methods: WASTE MATL DISPO IAW STATE/FED REGS. SPEC  
LABEL/PKG/STORAGE/TRANSPOR/DISPO PROCEDURES CALL ENVIRO  
ENGINEER/CONSULTANT FAMILIAR W/WASTE DISPO REGS. SOLID NO SPEC  
ENVIRO PROBLEMS; POWDER/DUST SIGN IMPACT ON AIR/H2O QUAL. CONTROL  
EMISSIONS/SPILL/RELEASE.

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