

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 Phon

e 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

Fraction by Wt: 0.008%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:10 M

G 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 Limits: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 Mixture: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 MS
DS: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,CNS DEPRESS,GI DISORDER,LUNG CHANGES.
Medical Cond Aggravated by E
xposure: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 T

REAT
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 SURROUND
ING 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, AVOI D 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 S
TORE 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 RES

P 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 HDN LG OPERATIONS AS APPROP
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/CLOTH CONTAM W/PARTIC

===== Physical/Chemical Prope
rties =====

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 COTNACT W/MINE

RAL 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/GRINK/MELT/DROSS HNDLG OPERATIONS.

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

Waste Disposal Methods:WASTE MATL DISPO IAW STATE/FED REGS.SPEC
LABEL/PKG/STORAGE/TRANSPD/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
EMISS/SPILL/RELEASE.

=====

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.