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HAYNES INTERNATIONAL INC -- ALLOY 188 -- 3439-01-149-0529

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

Product ID:ALLOY 188 MSDS Date:05/01/1989

FSC:3439

NIIN:01-149-0529

MSDS Number: BGNYG === Responsible Party ===

Company Name: HAYNES INTERNATIONAL INC

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:317-456-6894

CAGE:80357

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Contractor Identification ===

Company Name: ASTROLITE ALLOYS DIV OF ASTRO METALLUGICAL

Address:709 VIA ALONDRA

Box:City:CAMARILLO

State:CA

ZIP:93010-8714

Country:US

Phone:805-484-3621

CAGE:2R602

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: NICKEL (SARA III)

CAS:7440-02-0 RTECS #:QR5 950000

Fraction by Wt: 22%

Other REC Limits: NONE SPECIFIED

OSHA PEL:1 MG/M3

ACGIH TLV:1 MG/M3; 9192

Ingred Name: COBALT (SARA III)

CAS:7440-48-4

RTECS #:GF8750000 Fraction by Wt: 39%

Other REC Limits: NONE SPECIFIED

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: 22%

Other REC Limits: NONE SPECIFIED

OSHA PEL:1 MG/M3

ACGIH TLV:0.5 MG/M3; 9192

EPA Rpt Qty:1 LB DOT Rpt Qty:1 LB

Ingred Name:TUNGSTEN

CAS:7440-33-7

RTECS #:YO7175000

Fraction by Wt: 14%

Other REC Limits: NONE SPECIFIED

OSHA PEL:5 MG/M3/ 10 STEL

ACGIH TLV:5 MG/M3/10 STEL;9192

Ingred Name: IRON OXIDE

CAS:1309-37-1

RTECS #:NO7400000 Fraction by Wt: 3.0%

Other REC Limits: NONE SPECIFIED

OSHA PEL:10 MG/M3 (FE)

ACGIH TLV:5 MG/M3(FE),B2; 9293

Ingred Name: SILICON

CAS:7440-21-3

RTECS #:VW0400000 Fraction by Wt: 0.35%

Other REC Limits: NONE SPECIFIED

OSHA PEL:15 MG/M3 TDUST

ACGIH TLV:10 MG/M3 TDUST; 9293

Ingred Name: MANGANESE (SARA III)

CAS:7439-96-5

RTECS #:OO9275000 Fraction by Wt: 1.25%

Other REC Limits:1 MG/M3 FUMES OSHA PEL:(C) 5 MG/M3 DUST ACGIH TLV:5 MG/M3 DUST 9293

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

LD50 LC50 Mixture:NO INFORMATION GIVEN ON MSDS BY SUPPLIER Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO Health Hazards Acute and Chronic:SHORT TERM EXPOSURE TO WELDING FUMES,MAY RESULT IN DIZZINESS, NAUSEA, FEVER, IRRITATION OF NOS E,

THROAT CALLED METAL FUME FEVER. SKIN SENSITIVITY MAY ALSO BE NOTED. LONG TERM EXPOSURE TO FUMES MAY CAU SE PNEUMOCONIOSIS; & SIDEROSIS. WELDINGHAZARDS ALSO INCLUDE ELECTRIC SHOCK, THERMAL BURNS, AND RADIATION OR UV BURNS.

Explanation of Carcinogenicity:NICKEL AND CHROMIUM ARE LISTED UNDER IARC AND NTP.

Effects of Overexposure:EXPOSURE TO WELDING FUMES MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS, NAUSEA, FEVER, DRYNESS AND/OR IRRITATION OF NOSE, THROAT AND EYES. SKIN

SENSITIVITY MAY ALSO BE

NOTED. WATERY EYES, HEADACHE, BREA THING DIFFICULTY, FREQUENT COUGHING AND/OR CHEST PAINS MAY OCCUR FROM ACUTE EXPOSURE. TOXIC GASES CAN BE FATAL.

Medical Cond Aggravated by Exposure:INDIVIDUALS WITH IMPAIRED PULMONARY FUNCTION OR ILLNESS MAY HAVE SYMPTOMS EXACERBATED BY IRRITANTS CONTAINED IN WELDING FUMES.

First Aid:FIRST AID: INHALED METAL FUME:REMOVE TO FRESH AIR AND AID OR

RESTORE BREATHING OR GIVE OXYGEN AS NEEDED. ULTRAVIOLET EXPOSURE:TREAT SKIN AS SUNBURN, FOR EYES, SEE PHYSICIAN. THERMAL BURNS:USE ORDINAR Y FIRST AID FOR BURN. ELECTRIC SHOCK:SHUT OF POWER FIRST! ADMINISTER CPR AS NEEDED AND GET MEDICAL HELP.

Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. MFR SAID "N/A". Unusual Fire/Explosion Hazard:WEL

DING OR HEAT OF FIRE MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS AND VAPORS. MFR SAIN "N/A".
========= Accidental Release Measures ==========
Spill Release Procedures:SWEEP OR VACUUM DUST, ETC. BEING CAUTIOUS NOT TO RAISE AIRBORN DUST. PLACE IN CONTAINER FOR DISPOSAL.
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Handling and Storage Precautions:NO INFORMATION GIVEN ON MSDS BY SUPPLIER ON MSDS. FOLLOW MANUFACTURER'S INSTRUCTIONS ON STORA GE.
Other Precautions:READ, UNDERSTAND AND FOLLOW MANUFACTURER'S INSTRUCTIONS AND PRECAUTIONARY LABELS. ALSO SEE ANSI STANDARD Z49.1 AND OSHA 2206 (29 CFR 1910).
====== Exposure Controls/Personal Protection ========
Respiratory Protection:RESPIRATOR WILL NOT NORMALLY BE NECESSARY. USE NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR OR RESPIRATOR FOR METAL FUMES IF EXPOSURE IS ABOVE THE TLV/PEL. SEE 29 CFR 1910.134 FOR REGULATIONS PERTAINI NG TO RESPIRATOR USE. Ve
ntilation:USE ENOUGH LOCAL EXHAUST WHEN CUTTING, GRINDING OR WELDING TO KEEP EXPOSURE BELOW TLV/PEL Protective Gloves:FLAMEPROOF GAUNTLET GLOVES Eye Protection:WELDER'S HELMET W/ ANSI Z49.1 LENSES Other Protective Equipment:WEAR HAND HEAD AND BODY PROTECTION WHICH HELP PREVENT INJURY FROM RADIATION, SPARKS, AND ELECTRIC SHOCK. Work Hygienic Practices:USE GOOD INDUSTRIAL HYGIENE PRACTICE. WASH AFTER USING THE PRODUCT AND BEFORE EATING, DRINKING, ETC. Supplemental Safety and Health W
ELDING AND HOT CUTTING FUMES & GASES CANNOT BE CLASSIFIED SIMPLY. THEIR COMPOSITION AND QUANTITY ARE DEPENDENT ON THE METAL BEING WELDED, THE PROCEDURES, PROCESSES AND THE TYPE OF WIRE OR ELECTRODES USED. OTHER INFLUENCING FACTORS ARE THEPRESENCE OF CONTAMINANTS.
======== Physical/Chemical Properties =========
HCC:N1 Spec Gravity:7.9 Solubility in Water:INSOLUBLE Appearance and Odor:METAL ROD O.O46 IN O.D. X 36 INCHES
======== Stability and React

ivity Data ========

Stability Indicator/Materials to Avoid:YES
NO INFORMATION GIVEN ON MSDS BY SUPPLIER
Stability Condition to Avoid:NO INFORMATION GIVEN ON MSDS BY SUPPLIER
Hazardous Decomposition Products:WELDING/CUTTING OPERATIONS PRODUCE A
VARIETY OF FUMES AND GASSES WHICH MAY INCLUDE METALS, METAL OXIDES,
CO, CO*2, O*3.

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

Waste Disposal Methods:DISPOSE I/A/W ALL FEDERAL, STATE AND LOCAL REGULATIONS.

MANUFACTURER MAKES NO SUGGESTIONS AS TO METHOD OF DISPOSAL.

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