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CARPENTER TECHNOLOGY CORP -- PYROMET 680 HI TEMP ALLOY, 5510941 -- 3439-00-882-7351
===== Product Identification =====

Product ID:PYROMET 680 HI TEMP ALLOY, 5510941

MSDS Date:10/01/2000

FSC:3439

NIIN:00-882-7351

Status Code:A

MSDS Number: CLBRN

=== Responsible Party ===

Company Name:CARPENTER TECHNOLOGY CORP

Address:101 W BERN ST

Box:14662

City:READING

State:PA

ZIP:19612-4662

Country:US

Info Phone

Num:610-208-2134 / 610-208-2457/2463

Emergency Phone Num:610-208-2134; 208-2457

Resp. Party Other MSDS Num.:REV NO 5

CAGE:71321

=== Contractor Identification ===

Company Name:AERO MIST INC

Address:990 INDUSTRIAL PARK DR

Box:City:MARIETTA

State:GA

ZIP:30062-2433

Country:US

Phone:404-422-2071

Contract Num:SP0490-96-MBS86

CAGE:52435

Company Name:CARPENTER TECHNOLOGY CORP

Address:101 W BERN ST

Box:14662

City:READING

State:PA

ZIP:19612-4662

Country:US

Phone:610-208-2134 / 610-208-2457/2457

CAGE:7132

1
Company Name:JO-JON INC
Address:360 FREEPORT BLVD SUITE 1 & 2
Box:UNKNOW
City:SPARKS
State:NV
ZIP:89431
Country:US
Phone:702-356-6988
Contract Num:SP0490-99-M-W524
CAGE:009J0

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

Ingred Name:NICKEL
CAS:7440-02-0
RTECS #:QR5950000
= Wt:47.7
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3

Ingred Name:CHROMIUM
CAS:7440-47-3
RTECS #:GB4200000
= Wt:21.5
OSHA PEL:0.5 MG/M3
ACGIH TLV:0.5 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:IRON
(REGULATED IN OXIDE FORM)
CAS:1309-37-1
RTECS #:NO7400000
= Wt:18.
OSHA PEL:10 MG/M3
ACGIH TLV:5 MG/M3;2 PPM

Ingred Name:MOLYBDENUM
CAS:7439-98-7
RTECS #:QA4680000
= Wt:8.8
OSHA PEL:5 MG/M3 (SOL)
ACGIH TLV:10 MG/M3 (INSOL)

Ingred Name:MANGANESE
CAS:7439-96-5
RTECS #:OO9275000
= Wt:.6
OSHA PEL:5 MG/M3 C
ACGIH TLV:0.2 MG/M3 C

Ingred Name:TUNGSTEN
CAS:7440-33-7
RTECS #:YO7175000
= Wt:.6
OSHA PEL:NONE
ACGIH TLV:5 MG/M3, 10 MG/M3 C

OSHA PEL:15 MG/M3
ACGIH TLV:10 MG/M3

Ingred Name:COPPER
CAS:7440-50-8
RTECS #:GL5325000
= Wt:.1
Other REC Limits:0.1 MG/M3 (FUME)
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:YES IARC:YES
Health Hazards Acute and Chronic:AS SHIPPED, THE METAL PRODUCT IS AN
ARTICLE. THE LIKELIHOOD FOR HAZARDOUS CONSEQ
UENCES THROUGH EYE,
SKIN CONTACT, INHALATION, OR INGESTION WOULD BE CONSIDERED MINIMAL.
HOWEVER, IF YOUR PROCESS INVOLVE S GRINDING, MELTING, WELDING,
CUTTING, OR OTHER PROCESS THAT CAUSES RELEASE OF DUST OR FUME,
HAZARDOUS LEVELS OF THESE ALLOYS COULD BE GENERATED. INHALATION:
PRIMARY ROUTE OF EXPOSURE, STEEL DUSTS AND FUMES MAY CAUSE
IRRITATION TO THE RESPIRATORY TRACT. CHRONIC EXPOSURE MAY AGGRAVATE
PRE-EXISTING CONDITIONS. SKIN AND EYE CONTACT: MAY CAUSE IRRITATIO

N

OR SKIN SENSITIVITY. INGESTION: CERTAIN CONSTIT UENTS MAY BE
HARMFUL IF SWALLOWED.

Explanation of Carcinogenicity:LIST OF CHEMICALS KNOWN TO CAUSE CANCER
AND REPRODUCTIVE TOXICITY INCLUDES HEXAVALENT COMPOUNDS OF CHROMIUM
AND NICKEL DUST FROM PYROMETALLURGICAL PROCESSING.

Effects of Overexposure:SYMPTOMS ARE FLU-LIKE INCLUDING: SHORTNESS OF
BREATH, COUGHING, MUSCLE PAIN, FEVER AND CHILLS. GENERALLY,
SYMPTOMS RESOLVE WITH REST IN A FEW DAYS. ALSO SYMPTOMS BASED ON
IN

DIVIDUAL INGREDIENTS: EYES: IRRITATION. SKIN: IRRITATION,
CONTACT DERMATITIS, ULCERATION, ALLERGIC REACTIONS. INHALATION:
IRRITATION OF MUCOUS MEMBRANES, FIBROSIS, NASAL IRRITATION, CANCER,
KIDNEY AND LIVER DAMAGE, FUME FEVER, SIDEROSIS, CNS SYMPTOMS,
HEADACHE, CHANGES IN MOTOR ACTIVITY AND PSYCHOLOGICAL DISTURBANCES.

Medical Cond Aggravated by Exposure:CHRONIC EXPOSURE TO ALLOY DUSTS AND
FUMES MAY AGGRAVATE PRE-EXISTING CONDITIONS.

===== First Aid Meas

ures =====

First Aid:AS SHIPPED, THE METAL PRODUCT IS AN ARTICLE. THE LIKELIHOOD FOR HAZARDOUS CONSEQUENCES THROUGH EYE OR SKIN CONTACT, INHALATION ,OR INGESTION WOULD BE CONSIDERED MINIMAL. INHALTION: REMOVE PERSON FROM EXPOSURE TO FRESH AIR. IF BREATHING DIFFICULTY OCCURS, GET PROMPT MEDICAL ATTENTION. SKIN/EYE CONTACT: FLUSH EYES WITH PLENTY OF WATER FOR 15 MINUTES, SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. WA SH SKIN WITH SOAP AND WATER, IF R ASH DEVELOPS, SEEK MEDICAL ATTENTION. INGESTION: SEEK MEDICAL ATTENTION.

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

Flash Point:NOT COMBUSTIBLE
Extinguishing Media:IN THE FORM SHIPPED, THESE SPECIALTY METALS ARE NOT COMBUSTIBLE.
Fire Fighting Procedures:NO SPECIAL INSTRUCTIONS OR EQUIPMENT FOR PRODUCT AS SHIPPED.
Unusual Fire/Explosion Hazard:IN THE FORM SHIPPED, HAZARDOUS DECOMPOSITION PRODUCTS ARE NOT EXPECTED.

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

Spill Release Procedures:LAND / WATER SPILL: AS SHIPPED, THIS PRODUCT DOES NOT POSE A HAZARD TO THE ENVIRONMENT.

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

Handling and Storage Precautions:STORE AWAY FROM ACIDS AND OXIDIZERS.

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

Respiratory Protection:IF INDUSTRIAL HYGENE MONITORING REVEALS AN OVEREXPOSURE DURING THE PROCESSING OF THE PRODUCT, ENGINEERING CONTROLS ARE REQUIRED TO BE INSTALLED TO REDUCE EXPOSURES BELOW OSHA PERMISSIBLE EXPOSURE LIMITS. IN THE ABSENCE OF FEASIBLE ENGINEERING CONTROLS, WEAR A NIOSH APPROVED RESPIRATOR FOR PROTECTION FOR THE TYPE OF PARTICULATE GENERATED.
Ventilation:LOCAL EXHAUST VENTILATION RECOMMENDED TO CONTRROL EMISSIONS NEAR THE SOURCE OF METAL BEING CUT, GROUND, WELDED, OR MELTED.
Protective Gloves:LEATHER GLOVES WHEN HEATING STEEL PRODUCT.
Eye Protection:SAFETY GLASSES AND FACE SHIELD WHEN GRINDI

NG

Other Protective Equipment:ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT IS
DEPENDENT ON THE OPERATION PERFORMED.

Supplemental Safety and Health

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

HCC:N1

Melt/Freeze Pt:=1315.6C, #####F

M.P/F.P Text:2400F TO 2800F

Spec Gravity:7.5-8.5

Solubility in Water:INSOLUBLE

Appearance and Odor:GRAY SOLID; ODORLESS.

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

Stability Indicator/Materials to Avoid:YES

ACIDS, B

ASES, AND OXIDIZERS

Hazardous Decomposition Products:NONE FOR PRODUCT AS SHIPPED.

Conditions to Avoid Polymerization:WILL NOT OCCUR.

===== Toxicological Information =====

Toxicological Information:SPECIALTY STEEL ALLOYS ARE GENERALLY NOT
CONSIDERED HAZARDOUS IN THE FORM SHIPPED (SOLID BAR, WIRE, STRIP OR
BILLETS). HOWEVER, IF YOUR PRICESS INVOLVES GRINDING, MELTING,
WELDING, CUTTING OR ANY OTHE R PROCESS THAT CAUSES RELEASE OF
DUSTOR FUME, HAZAREIUS
LEVELS OF DUST OR FUMES OF THE CONSTITUENTS
OF THESE ALLOYS COULD BE GENERATED. THE FOLLOWING IS A LIST OF
POTENTIAL HEALTH EFFECTS FOR THE HAZA RDOUS ELEMENTS THAT MAY BE
CONTAINED IN ANY OF THE ALLOYS. PLEASE REFER TO THE HAZARDOOUS
INGREDIENTS PRECEDING FOR A LIST OF THOSE SPECIFIC ELEMENTS
CONTAINED IN THE PARTICULAR ALLOY. (CONTD. SEE "E COLOGICAL")

===== Ecological Information =====

Ecological:(CONTD. FROM "TOXICOLOGICAL") IT IS TH

E USERS

RESPONSIBILITY TO ASSESSSS POTENTIAL EXPOSURES BASED ON THEIR
PROCESSING OF THE PRODUCT. ADDITIONALLY, PROTECTIVE COATINGS MAY
HAVE BEEN APPLIED TO THE ST EEL AT THE REQUEST OF THE CUSTOMER. THE
COATING WOULD REPRESENT LESS THAN 0.5% OF THE TOTAL MATERIAL
PRESENT. MATERIAL SAFETY DATA SHEETS ARE AVAILAGLE FOR THESE
COATING PROCUCTS AT YOUR REQUEST. GENE RAL: WELDING FUME, FUMES
FRESHLY GENERATED BY THE WELDING OF ZINC, MAGNESIUM, AND COPPER,
ARE KNOWN TO CA

USE METAL FUME FEVER. INHALATION OF ALUMINUM , IRON,
NICKEL, MANGANESE, SELENIUM AND TIN HAVE A LSO (CONTD. SEE
"TRANSPORT")

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

Waste Disposal Methods:RECYCLE METALLIC BYPRODUCTS AS SCRAP IS
ENCOURAGED. IF BYPRODUCTS NEED TO BE TREATED AND/OR DISPOSED OF AS
WASTES, HAZARDOUS WASTE CHARACTERIZATIONS MUST BE PERFORMED PRIOR
TO TREATING AND/OR DISPOSIN G. CONTACT APPROPRIATE PARTIES TO
ENSURE COMPLIANCE WITH
FEDERAL, STATE, LOCAL RULES AND REGULATION
S RELATED TO WASTE TREATMENT AND DISPOSAL.

===== MSDS Transport Information =====

Transport Information:FOR HAZARDOUS WASTES: DOT (DEPARTMENT OF
TRANSPORTATION): PROPER SHIPPING NAME: HAZARDOUS WASTE SOLID,
N.O.S. (COMPONENT A, COMPONENT B); HAZARD CLASS: 9; NA 3077;
PACKING GROUP: I I I; EMERGENCY RESP ONSE GUIDE NUMBER: 171.
(CONTD. FROM "ECOLOGICAL") BEEN REPORTED TO CAUSE METAL FUME FEVER.
SY
MPTOMS ARE FLU-LIKE INCLUDING: SHORTNESS OF BREATH, COUGHING,
MUSCLE PAIN, FEVER, AND CHILLS. GENERALLY, SYMPTOMS RESOLVE WITH
REST IN A FEW DAYS.

===== Regulatory Information =====

SARA Title III Information:311/312 HAZARDOUS CATEGORIES: NOT APPLICABLE
FOR STORAGE OF ITEMS AS SHIPPED, HOWEVER IF PROCESSED, END PRODUCT
MAY REQUIRE REPORTING. 313: PRODUCT INGREDIENTS SUBJECT TO
REPORTING REQUIREMENTS MAY IN CLUDE: CHROMIUM, NICKEL, MANGANESE

,
COBALT, COPPER, VANADIUM, TITANIUM, OR ALUMINUM.

Federal Regulatory Information:TSCA (TOXIC SUBSTANCES CONTROL ACT): NOT
APPLICABLE. CERCLA (COMPREHENSIBLE RESPONSE COMPENSATION AND
LIABILITY ACT): NOT APPLICABLE. REGULATIONS SUCH AS CLEAN AIR ACT,
CLEAN WATER ACT, RESOURCE CONCE RVATION & RECOVERY ACT MAY APPLY TO
THE HANDLING OF STEEL GRINDINGS AND PARTICULATES FROM PROCESSING.

State Regulatory Information:CALIFORNIA SAFE DRINKING WATER ACT (PROP
65) LISTING: NICKEL,

CAS# 7440-02-0; COBALT, CAS# 7440-48-4.

GOVERNORS LIST OF CHEMICALS KNOWN TO CAUSE CANCER AND REPRODUCTIVE TOXICITY INCLUDES HEXAVALENT CO MPOUNDS OF CHROMIUM AND NICLEL DUST FROM PYROMETALLURGICAL PROCESSING.

===== Other Information =====

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