

CARPENTER TECHNOLOGY CORPORATION -- TYPE 416 HF ANL PKL, ASTM-A-582-80 --  
9510-00-222-4999

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

Product ID:TYPE 416 HF ANL PKL, ASTM-A-582-80  
MSDS Date:01/01/1987  
FSC:9510  
NIIN:00-222-4999  
MSDS Number: BDJZY  
==== Responsible Party ====  
Company Name:CARPENTER TECHNOLOGY CORPORATION  
Emergency Phone Num:(215) 371-2000  
CAGE:71321  
==== Contractor Identification ====  
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:71321

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

Ingred Name:IRON OXIDE  
CAS:1309-37-1  
RTECS #:NO7400000  
Fraction by Wt: 84.0%  
OSHA PEL:10 MG/M3 (FE)  
ACGIH TLV:5 MG/M3(FE),B2; 9293

Ingred Name:NICKEL (SARA III)  
CAS:7440-02-0  
RTECS #:QR5950000  
Fraction by Wt: 0.35%  
OSHA PEL:1 MG/M3  
ACGIH TLV:1 MG/M3; 9192

Ingred Nam

e:MANGANESE (SARA III)  
CAS:7439-96-5  
RTECS #:OO9275000  
Fraction by Wt: 1.25%  
OSHA PEL:(C) 5 MG/M3 DUST  
ACGIH TLV:5 MG/M3 DUST 9293

Ingred Name:CHROMIUM (SARA III)  
CAS:7440-47-3  
RTECS #:GB4200000  
Fraction by Wt: 13.0%  
OSHA PEL:1 MG/M3  
ACGIH TLV:0.5 MG/M3; 9192  
EPA Rpt Qty:1 LB  
DOT Rpt Qty:1 LB

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

Effects of Overexposure:NONE CONSIDERED HAZ IN SOLID  
STATE;HOWEVER,METALLIC FUMES/DUST MAY CAUSE RESP,EYES,LUNG  
PROBLEMS.

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

First Aid:INHAL:MOVE TO FRESH AIR.GET MED ATTN;SKIN:WASH W/WATER & MILD  
DETERGENT.CONSULT A PHYSICIAN;EYES:FLUSH WITH PLENTY OF WATER.GET  
MED HELP;INGESTION:WHILE INGESTION OF LG ENOUGH QTY TO CAUSE HEALTH  
EFFE CTS IS UNLIKELY,CONSULT A DR IF IT OCCURS.

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

Flash Point:NONE  
Extinguishing Media:EXTINGUISH WITH AGENT SUITABLE FOR SURROUNDING FIRE  
Fire  
Fighting Procedures:WEAR SELF-CNTD BRTHG,APP H\*20 SPRAY TO COOL  
CONTR.  
Unusual Fire/Explosion Hazard:NONE NOTED BY MANUFACTURER.

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

Spill Release Procedures:PRODUCT IS SOLID METAL.NO POTENTIAL FOR SPILL  
OR LEAK. HOWEVER IF SMALL METALLIC PIECES ARE SPILLED,COLLECT THOSE  
& REUSE.

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

Handling and Storage Precautions:STORE IN COOL,DRY,WELL VENTILATED

AREA. PROTECT FROM PHYSICAL DAMAGE.AVOID ANY PHYSICAL CONTACT. KEEP CONTAINERS TIGHTLY CLOSED

Other Precautions:FERROCHROME ALLOYS HAVE BEEN ASSOCIATED W/LUNG CHGS.CHROMIUM,COBALT-CHROMIUM ALLOYS,AND NICKEL HAVE BEEN IDENTIFIED AS CARCINOGEN.AVOID BREATHING DUST/FMES DURING GRINDING/WELDING PROCESSES

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

Respiratory Protection:IF FME OR DUST IS RELEASED,USE NIOSH APPRVD RESP

Ventilation:FOR DUST/FUME,USE LOCAL & GE

NERAL VENTILATION TO KEEP 7.5

Solubility in Water:NEGLIGIBLE

Appearance and Odor:SOLID METAL,ODORLESS

Percent Volatiles by Volume:N/

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

Stability Indicator/Materials to Avoid:YES

NONE

Stability Condition to Avoid:NOT KNOWN

Hazardous Decomposition Products:NONE EXPECTED

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

Waste Disposal Methods:IN THE EVENT OF METAL OR METAL PIECES ARE TO BE DISPOSED, CONSULT

LOCAL AUTHORITIES FOR DISPOSAL OR SHIP TO RECYCLING FACILITIES.

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