

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

=====  
===== 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

=====  
===== 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

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

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

=  
=====  
===== 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.

=====  
===== 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.

=====  
===== 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.

=====  
===== 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 & GENERAL 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.

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.