Product ID:BARE-WIRE FILLER METALS, 308 MSDS Date:05/01/1994 FSC:3439 NIIN:01-301-8975 MSDS Number: BZSYD === Responsible Party === Company Name: ARCOS ALLOYS DIV HOSKINS MFG CO Address:1 ARCOS DR **City:MT CARMEL** State:PA ZIP:17851 Country:US Info Phone Num:717-339-5200 **Emergency Ph** one Num:800-424-9300 (CHEMTREC) CAGE:03805 === Contractor Identification === Company Name: ARCOS ALLOYS DIV OF HOSKINS MFG CO Address:#1 ARCOS DRIVE Box:308 City:MTCARMEL State:PA ZIP:17851 Country:US Phone:717-339-5200, CHEMTREC 800-424-9300 CAGE:03805 Company Name: ARCOS ALLOYS DIVISION OF HOSKINS MFG. CO. Address:#1 ARCOS DRIVE Box:City:MT CARMEL State:PA ZIP:17851 Country:US Phone:570-339-5200; 717-339-5200 CAGE:19270

Ingre

d Name:IRON CAS:7439-89-6 RTECS #:NO4565500 Fraction by Wt: BALANCE OSHA PEL:N/K ACGIH TLV:N/K

Ingred Name:CHROMIUM (SARA 313) (CERCLA) CAS:7440-47-3 RTECS #:GB4200000 Fraction by Wt: 22% OSHA PEL:1 MG/M3 ACGIH TLV:0.5 MG/M3 EPA Rpt Qty:1 LB DOT Rpt Qty:1 LB

Ingred Name:MANGANESE (SARA 313) CAS:7439-96-5 RTECS #:OO9275000 Fraction by Wt: 2.5% OSHA PEL:5 MG/M3 DUST, C ACGIH TLV:5 MG/M3 DUST

Ingred Name:NICKEL (SARA 313) (CERCLA) CAS:7440-02-0 RTECS #:QR5950000 Fraction by Wt: 11% OSHA PEL:1 MG/M3 ACGIH TLV:1 MG/M3

Ingred Name:SUPDAT: METALLICS. GASEOUS RXN PRODS MAY INCL CARBON MONOXIDE, OZONE & NITROGEN OXIDES. CHLORINATED SOLVS MAY BE (ING 6) RTECS #:9999999ZZ

Ingred Name:ING 5:DECOMPOSED INTO TOX GASES SUCH AS PHOSGENE. WHEN ELECTRODES ARE CONSUMED, FUME & GAS DECOMP PRODS GENERATED(ING 7) RTECS #:9999999ZZ

Ingred Name:ING 6:ARE DIFFERENT IN FORM FROM LISTED INGREDS. NEW CMPDS NOT IN ELECTRODES MAY FORM. KNOWN GASES & FUMES THAT (ING 8) RTECS #:9999999ZZ

Ingred N

ame:ING 7:MAY FORM DURING WELDING/HOT CUTTING ARE: ALUMINUM FUMES, CARBON MONOXIDE, CHROMIUM, CHROMIUM (CHROMATES), (ING 9) RTECS #:9999999ZZ

Ingred Name:ING 8: COBALT FUME, COPPER FUME, IRON OXIDE FUME, MANGANESE FUME, MOLYBDENUM (SOLUBLE), NICKEL (SOLUBLE), (ING 10) RTECS #:9999999ZZ

Ingred Name:ING 9: TUNGSTEN (SOLUBLE), NITROGEN DIOXIDE, OZONE, PHOSGENE. RTECS #:99999992Z

Ingred Name:EXPLAN OF CARCIN: ANNUAL REPORT ON CARCINS, 1994:ANTIC TO BE CARCIN. HUMAN:LUNGS, NASAL CA VITIES. RTECS #:9999999ZZ

Ingred Name:EFTS OF OVEREXP: RSLT IN NEUROLOGICAL DMG, LUNG FIBROSIS, PNEUMOCONIOSIS & OTHER LUNG DISEASES. CHROMIUM IS (ING 13) RTECS #:9999999ZZ

Ingred Name:ING 12: CONSIDERED POSS CARCIN UNDER OSHA (29CFR 1910.1200). STUDIES FORMING BASIS FOR THIS CLASSIFICATION WERE (ING 14)

RTECS #:9999999ZZ

Ingred Name:ING 13: FROM OPERATIONS OTHER THAN WELDING. THERE IS CONSIDERABLE CONTROVERSY ON EXTENT OF RESP CANCER PROBS. (ING 15) RTECS #:99999992Z

Ingred

Name:ING 14: NEVERTHELESS, EXPOSURE MUST BE MAINTAINED BELOW THE SPECIFIED LEVELS. RTECS #:9999999ZZ

Ingred Name:RESP PROT: &/OR WORKER'S BREATHING ZONE TO DETERMINE IF RESP IS REQD & TYPE NEEDED. USE ONLY NIOSH/MSHA APPRVD RESPS. RTECS #:9999999ZZ

Ingred Name:VENT: AREA. KEEP EXPOSURE BELOW LIMITS SPECIFIED. RTECS #:99999992Z

Ingred Name:EYE PROT: & FULL LENGTH FACESHIELD WITH FILTER LENS. SELECT WELDING LENS SHADE FROM AWS PUBLICATION F2.2. RTECS #:9999999ZZ

Ingred Name:OTHER P

ROT EQUIP: WELDING. DO NOT EXPOSE SKIN TO RADIA WHEN HOT CUTTING/WELDING. PROVIDE PROT SCREENS TO SHIELD OTHERS. RTECS #:9999999ZZ

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER. Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO Health Hazards Acute and Chronic:THIS PROD POSES NO HLTH HAZ AS SHIPPED BUT MAY POSE HLTH HAZ DURING USE. ELEC ARC WELDING RAYS CAN INJURE
EYES & BURN SKIN. DUST, FUMES & GASES CAN BE DANGEROUS TO HLTH. LUNG DMG MAY RSLT FROM OVEREXP . SHORT TERM EXPOS TO WELDING FUMES, GASES OR DUST MAY RSLT IN DISCOMFORT SUCH AS DIZZ, NAUS, FEVER, (EFTS OF OVEREXP)
Explanation of Carcinogenicity:NICKEL: IARC MONOGRAPHS ON EVALUATION OF CARCIN RISK OF CHEMS TO MAN, VOL 49, PG 257, 1990:GROUP 2B. NTP 7TH (ING 11)
Effects of Overexposure:HLTH HAZ: DRYNESS &/OR IRRIT OF NOSE, THROAT & EYES. SKIN SENSITIVITY MAY
ALSO BE NOTED. ACUTE EXPOS CAN RSLT IN SAME SYMPS EXCEPT TO GREATER DEGREE AS WELL AS WATERY EYES, HDCH, BRTHG DFCLTY, FREQUEN T COUGH &/OR CHEST PAINS. SOME TOX GASES MAY CAUSE PULM EDEMA, ASPHY & EXCESS EXPOS CAN BE FATAL. CHRONIC: MAY (ING 12)
Medical Cond Aggravated by Exposure:SOME WORKERS MAY EXPERIENCE DISCOMFORT AT CONCS BELOW THE TLV & OTHERS MAY BE AFFECTED BY PRE-EXISTING CNDTN OR OTHER OCCUP ILLNESS BECAUSE OF THE WIDE VARIATION IN INDIVIDUAL SUSCEPTIBILI
TIES.
======================================

First Aid:IN CASE OF ELEC SHOCK, TURN OFF POWER PRIOR TO REMOVAL FROM EXPOS AREA & ADMIN OF FIRST AID. INHAL:REMOVE TO FRESH AIR. IF BRTHG IS DFCLT ADMIN OXYGEN. IF NOT BRTHG BEGIN ARTF RESP. IF NO DETECTABLE P ULSE BEGIN EXTERNAL HEART MASSAGE. SKIN: WASH AFFECTED AREA W/SOAP & WATER. EYES: FLUSH W/LG AMTS OF FRESH WATER FOR AT LEAST 15 MIN. INGEST: SEEK MED ATTN. IN ALL CASES, SEEK MED ATTN FOR FIRST AID.

Flash Point:NONFLAMMABLE Extinguishing Media: MEDIA SUITABLE FOR SURROUNDING FIRE . Fire Fighting Procedures: USE NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT. Unusual Fire/Explosion Hazard:NONFLAMMABLE, HOWEVER, ARCS, SPARKS AND MOLTEN METAL CAN IGNITE FLAMMABLES AND COMBUSTIBLES OR CAUSE EXPLOSIONS. Spill Release Procedure S:CLEAN UP ANY GRINDING DUST OR WASTE RESIDUES AND PLACE IN SUITABLE DOT APPROVED CONTAINERS. Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER. Handling and Storage Precautions: NONE SPECIFIED BY MANUFACTURER. Other Precautions:NONE SPECIFIED BY MANUFACTURER. Respiratory Protection: USE NIOSH/MSHA APPRVD WELD FUME RESP OR AIR SUPPLIED RESP WHEN CUTTIN G. GRINDING OR WELDING IN CONFINED SPACE OR WHERE LOC EXHST OR GEN VENT DOES NOT KEEP EXPOS BELOW RECOM LIMS. MONITOR AIR QUALITY I NSIDE WELDER'S HELMET, IF WORN, (ING 16) Ventilation: USE ENOUGH VENT WHEN CUTTING, GRINDING OR WELDING TO KEEP DUST, FUMES & GASES FROM WORKERS BRTHG ZONE & GEN (ING 17) Protective Gloves: IMPERVIOUS GLOVES. Eye Protection: ANSI APPRVD CHEM WORKERS GOGGS (ING 18) Other Protective Equipment: ANSI APPRVD EYE WASH & DELUGE SHOWER . WEAR **GLOVES & FLAME** RETARDANT CLTHG WHEN CUTTING, GRINDING OR (ING 19) Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER. Supplemental Safety and Health HAZ DECOMP PRODS: BEING WELDED, THE PROCS, PROCESSES & TYPE OF WIRE OR ELECTRODES USED. OTHER INFLUENCING FACTORS ARE PRESENCE OF CONTAMS IN ATM. DECOMP PRODS FORM WELDING OR CUTTING OPERATION INCL TH OSE FROM VOLATILIZATION, RXN &/OR OXIDATION OF LISTED MATLS & MAY INCL OXIDES OF METALS, CHROMATES & COMPLEX (ING 5)

====== Physic

al/Chemical Properties ============

HCC:T6

Appearance and Odor: BARE FILLER METALS ARE SOLID WIRE.

Stability Indicator/Materials to Avoid:YES NONE SPECIFIED BY MANUFACTURER. Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER. Hazardous Decomposition Products:WELDING & HOT CUTTING FUMES & GASES CANNOT BE CLASSIFIED SIMPLY. THEIR COMPOSITION & QTY ARE DEPENDENT ON METAL (SUPDAT)

====== Dis

Waste Disposal Methods:DISPOSE OF IN FULL COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. AVOID INHALATION AND SKIN EXPOSURE.

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. An y person utilizing this

document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.