

ARCOS ALLOYS -- STAINLESS STEEL ALLOY, 309 -- 3439-01-190-0661

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

Product ID:STAINLESS STEEL ALLOY, 309  
MSDS Date:06/08/1990  
FSC:3439  
NIIN:01-190-0661  
MSDS Number: BVNGV  
=== Responsible Party ===  
Company Name:ARCOS ALLOYS  
Address:#1 ARCOS DRIVE  
City:MT CARMEL  
State:PA  
ZIP:17851  
Country:US  
Info Phone Num:717-339-5200  
Emergency Phone Num:800-424-9300(CHEMTREC)  
CAGE:GO  
252

=== Contractor Identification ===

Company Name:ARCOS ALLOYS  
Address:1 ARCOS DR  
Box:308  
City:MT CARMEL  
State:PA  
ZIP:17851-0308  
Country:US  
Phone:717-339-5200  
CAGE:GO252  
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

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

Ingred Name:CHROMIUM; (CR)  
CAS:7440-47-3  
RTECS #:GB4200000  
Fraction by Wt: 25%  
OSH

A PEL:1 MG/M3  
ACGIH TLV:0.5 MG/M3  
EPA Rpt Qty:1 LB  
DOT Rpt Qty:1 LB

Ingred Name:MANGANESE; (MN) (SARA III)  
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; (NI) (SARA III)  
CAS:7440-02-0  
RTECS #:QR5950000  
Fraction by Wt: 14%  
OSHA PEL:1 MG/M3  
ACGIH TLV:1 MG/M3

Ingred Name:IRON; (FE)  
CAS:7439-89-6  
RTECS #:NO4565500  
Fraction by Wt: BALANCE  
OSHA PEL:N/K  
ACGIH TLV:N/K

Ingred Name:SUPDAT:WELDING/HOT CUTTING ARE: ALUMINUM FUMES, CARBON MONOXIDE, CHROMIUM, CHROMIUM (CHROMATES), COBALT FUME, (ING 6)  
RTECS #:9999999ZZ

Ingred Name:NG 5:COPPER FUME, IRON OXIDE FUME, MANGANESE FUME, MOLYBDENUM, NICKEL, TUNGSTEN, NITROGEN DIOXIDE, OZONE, PHOSGENE.  
RTECS #:9999999ZZ

Ingred Name:EXPLAN OF CARCIN:HUMAN/ANIMAL:LUNG CANCER, SKIN ULCERS. NICKEL:IARC MONOGRAPHS ON EVAL OF CARCIN RISK OF CHEMS TO(ING 8)  
RTECS #:9999999ZZ

Ingred Name:ING 7:MAN, VOL 49, PG 257, 1990:GRP 2B. NTP 6TH ANNUAL REPORT ON CARCINOGENS, 1

991:ANTICIPATED TO BE CARCINOGEN. (ING 9)  
RTECS #:9999999ZZ

Inged Name:ING 8:HUMAN:LUNG, NASAL CAVITIES.  
RTECS #:9999999ZZ

Inged Name:EFTS OF OVEREXP:CHRONIC:EXPOS MAY RSLT IN NEUROLOGICAL DMG,  
LUNG FIBROSIS, PNEUMOCONIOSIS & OTHER LUNG DISEASES.  
RTECS #:9999999ZZ

Inged Name:RESP PROT:WORN, &/OR WORKER'S BRTHG ZONE TO DETERMINE IF  
RESP IS REQUIRED & TYPE NEEDED.  
RTECS #:9999999ZZ

Inged Name:VENT:KEEP EXPOSURE BELOW LIMITS SPECIFIED.  
RTECS #:9999999ZZ

Inged Name:EYE PROT:WHEN CU  
TTING, GRINDING/WELDING. IN ADDN, WHEN HOT  
CUTTING/WELDING, WEAR WELDING HELMET & FACE SHIELD W/(ING 14)  
RTECS #:9999999ZZ

Inged Name:ING 13:FILTER LENS. SELECT WELDING LENS SHADE FROM AWS  
PUBLICATION F2.2.  
RTECS #:9999999ZZ

Inged Name:OTHER PROT EQUIP:SCREENS TO SHIELD OTHERS.  
RTECS #:9999999ZZ

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

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO

Reports of Carc

inogenicity: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 YOUR HLTH. LUNG DMG MAY RSLT FROM O VEREXP. ACUTE:SHORT TERM  
EXPOS TO WELDING FUMES, GASES/DUST MAY RSLT IN DISCOMFORT SUCH AS  
DIZZ, NAUS, (EFTS OF OVEREXP)

Explanation of Carcinogenicity:CHROMIUM:IARC MONOGRAPHS, VOL 49, PG 49,  
1990:GR

P 1. NTP 6TH ANNUAL RPT ON CARCINS, 1991:KNOWN TO BE CARCIN.

(ING 7)

Effects of Overexposure:HLTH HAZ:FEVER, 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, F REQUENT COUGH &/OR CHEST PAINS. SOME TOX GASES MAY CAUSE PULM EDEMA, ASPHY & EXCESSIVE EXPOS CAN BE FATAL.

(ING 10)

Medical Cond Aggravated by Exposure:SOME WORKERS MAY EXPERIENCE

DISCOMFORT AT CONCS BELOW TLVS & OTHERS MAY BE AFFECTED BY A PRE-EXISTING CONDITION OR OTHER OCCUP ILLNESS BECAUSE OF THE WIDE VARIATION IN INDIVIDUAL SUSCEPTIBILITIES.

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First Aid Measures  
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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 M

ASSAGE. SKIN:WASH AFFECTED

AREA W/SOAP & WATER. EYES:FLUSH W/LG AMTS OF WATER FOR AT LST 15 MINS. INGEST:SEEK MED ATTN. IN ALL CASES, SEEK MED ATTN FOR FIRST AID.

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Fire Fighting Measures  
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Flash Point:NONFLAMMABLE

Extinguishing Media:MEDIA SUITABLE FOR SURROUNDING FIRE .

Fire Fighting Procedures:USE NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT .

Unusual Fire/Explosion Hazard:ARCS, SPARKS & MOLTEN METAL CAN IGNITE FLAMMABLES

& COMBUSTIBLES OR CAUSE EXPLOSIONS.

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Accidental Release Measures  
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Spill Release Procedures:CLEAN UP ANY GRINDING DUST OR WASTE RESIDUES & PLACE IN SUITABLE DOT APPROVED CONTAINERS. AVOID INHALATION & SKIN EXPOSURE.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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Handling and Storage  
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Handling and Storage Precautions:DO NOT EXPOSE SKIN TO RADIATION WHEN HOT CUTTING OR WELDING. AVOID INHALATION

**& SKIN EXPOSURE.**

Other Precautions:REFER TO FOLLOWING SOURCES FOR ADDNL IMPORTANT INFO:  
ANSI Z49.1, AWS, P.O. BOX 351040, MIAMI, FL 33135 OR OSHA (29 CFR  
1910) U.S. DEPT OF LABOR, WASHINGTON D.C. 20210.

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

Respiratory Protection:USE ONLY NIOSH/MSHA APPRVD RESPS. USE WELD FUME  
RESP/AIR SUPPLIED RESP WHEN CUTTING, GRINDING/WELDING IN CONFINED  
SPACE/WHERE LOC EXHST/GEN VENT DOSE NOT KEEP EXPOS BELOW REC LIMS.  
MON

ITOR AIR QUALITY INSIDE WELDER'S HELMET, IF (ING 11)

Ventilation:USE ENOUGH VENT WHEN CUTTING, GRINDING/WELDING TO KEEP  
DUST, FUMES & GASES FROM WORKERS BRTHG ZONE & GEN AREA. (ING 12)

Protective Gloves:WELDER'S GLOVES.

Eye Protection:USE OSHA APPRVD GOGGS & FCSHLD (ING 13)

Other Protective Equipment:EMER EYE WASH & DELUGE SHOWER . WEAR FLAME  
RETARDANT CLTHG WHEN CUTTING, GRINDING/WELDING. PROVIDE PROT (ING  
15)

Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.

Supplemental Saf  
ety and Health

HAZ DECOMP PROD:CONTAMS IN ATM. DECOMP PRODS MAY INCL OXIDES OF METALS,  
CHROMATES & COMPLEX METALLICS. GASEOUS RXN PRODS MAY INCL CARBON  
MONOXIDE, OZONE & NITROGEN OXIDES. CHLORINATED SOLVS MAY BE DEC  
OMPOSED INTO TOX GASES SUCH AS PHOSGENE. FUMES & GASES MAY VARY IN  
FORM. KNOWN GASES & FUMES THAT MAY FORM DURING(ING 5)

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

Appearance and Odor:BARE FILLER METALS ARE A SOLID WIRE.

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

Stability Indicator/Materials to Avoid:YES  
NONE SPECIFIED BY MANUFACTURER.

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:COMPOSITION & QUALITY OF FUMES & GASES  
ARE DEPENDENT UPON METAL BEING WELDED, PROCS, PROCESSES, ELECTRODES  
USED,(SUPDAT)

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

Waste Disposal Methods:DISPOSE OF IN FULL COMPLIANCE W/FEDERAL, STATE &  
LOCAL

## REGULATIONS.

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