

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

Product ID:NICKEL WELD ELECTRODE 141 & 141N

MSDS Date:09/18/1996

FSC:3439

NIIN:00-901-7637

MSDS Number: CDQMB

=== Responsible Party ===

Company Name:INCO ALLOYS INTERNATIONAL INC

Address:1401 BURRIS RD

City:NEWTON

State:NC

ZIP:28658-1754

Country:US

Info Phone Num:800-624-3411/704-465-0352

Emergency Phone Num:304-526-5780

CAGE:9Z762

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

Ingred Name:CALCIUM CARBONATE (MARBLE) (LIMESTONE)

CAS:1317-65-3

RTECS #:EV9580000

Fraction by Wt: 5-10%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:15 MG/M3 TDUST

ACGIH TLV:10 MG/M3 TDUST; 9596

Ingred Name:ALUMINUM OXIDE

Fraction by Wt: 1-5%

Other REC Limi

ts:NONE RECOMMENDED

Ingred Name:NICKEL (SARA 313) (CERCLA)  
CAS:7440-02-0  
RTECS #:QR5950000  
Fraction by Wt: 40-70%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:1 MG/M3  
ACGIH TLV:1 MG/M3; 9596

Ingred Name:SILICA  
Fraction by Wt: 0.5-2%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:10 MG/M3  
ACGIH TLV:10 MG/M3

Ingred Name:SODIUM FLUOALUMINATE  
CAS:15096-52-3  
RTECS #:WA9625000  
Fraction by Wt: 5-10%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:SODIUM SILICATE  
CAS:1344-09-8  
Fraction by Wt: 1-5%  
Other REC  
Limits:NONE RECOMMENDED

Ingred Name:TITANIUM  
CAS:7440-32-6  
RTECS #:XR1700000  
Fraction by Wt: 1-5%  
Other REC Limits:NONE RECOMMENDED

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

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:AS SHIPPED HAVE NO KNOWN(UNLESS  
INGEST)TOXICOLOGICAL PROPERTIES OTHER THAN CAUSING ALLERGIC RXS

IN  
INDIVIDUALS SENS TO METAL(S)CONTAINED IN PROD.USER GENERATED  
DUST/FUMES MAY ON CONTACT W/SKIN/EYES PR ODUCE MECHANICAL  
IRRIT.CHRONIC EXPO COULD CAUSE DERM,CONJUNCTIVITIS.EXCESSIVE WELD  
FUMES INHALMAY POSE LONG TERM (SUPPL)  
Explanation of Carcinogenicity:PER MSDS:IARC CONCLUDES WELDING FUMES  
POSSIBLY CARCI TO HUMANS.NTP/IARC-NI/NI CMPDS.IARC-CRYSTALLINE  
SILICA.  
Effects of Overexposure:BRONCHIAL INFLAMM.MILD RESP IRRIT,INTESTINAL  
BLOCKAGE.SENS,ALLERGIC RX.SILIOSIS,D  
YSPNEA,COUGH,WHEEZ,REP NON-SPEC  
CHEST ILLNESSES,PULM FUNCTION IMPAIR.IRRIT NOSE/THROAT/RESP  
TRACT,SEVERE GI DISTRESS,SA  
LIV,NAU,VOMIT,DIARR,PAIN,UNCONSC,DEATH,SKELETAL ABNORM,DERM.CORRO  
ON MUC MEMB,EYE/SKIN/RESP/GI IRRIT,ABNORM KID.(SUPPLE)  
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:EYE:FLUSH PARTICLES FROM EYEBALLS W/CLEAN WATER FOR @LEAST  
15MINS.IRRIT PERSISTS GET MED H  
ELP.SKIN:WASH W/SOAP/WATER TO REMOVE  
ANY METALLIC PARTICLES.RASH DEVELOPS GET MED ATTN.INHAL:REMOVE FROM  
EXPO. SEVERE RESP IRRIT PERSISTS GET MED HELP.EXCESSIVE INHAL OF  
SOME METAL FUMES CAN PRODUCE ACUTE RX KNOWN AS METAL FUME FEVER  
W/SYMPPT OF CHILLS/FEVER SIMILAR TO FLU SYMPT.INGEST:SYMPT ARISE GET  
MED HELP.

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

Flash Point:NON-FLAMMABLE  
Autoignition Temp:Autoignition Temp Text:NP  
Lower Limits:NP  
Upper Limit  
s:NP  
Extinguishing Media:NONE SPECIFIED BY MANUFACTURER. HMIS:USE  
APPROPRIATE FIRE EXTINGUISHING MEDIA FOR SURROUNDING FIRE/MATLS.  
Fire Fighting Procedures:NONE SPECIFIED BY MANUFACTURER. HMIS:USE  
APPROPRIATE PPE AS CONDITIONS WARRANTS.SEE RESPIRATORY SECTION OF  
MSDS.  
Unusual Fire/Explosion Hazard:SPARKS FROM WELDING IN USER OPERATIONS  
COULD IGNITE FLAMM/COMBUST LIQ/VAP/SOLIDS.

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

Spill Release Procedures:VACUUM/S

HOVEL ANY SPILLED MATL INTO SUITABLE  
CONTAINER.ALLOY WASTES ARE NORMALLY COLLECTED TO RECOVER METAL  
VALUES.HOWEVER IF DISPOSAL IS NECESSARY DISPOSE IN ACCORDANCE WITH  
LOCAL, STATE AND FEDERAL REGULATIONS.  
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:MAINTAIN EXPO BEL ACCEPTABLE EXPO  
LIMITS.USE INDUST HYG AIR MONITORING TO ENSURE MATL USE DOESN'T  
CREATE EXPO WHICH EXCEED RECOMMENDED EXPO LIMITS.

Other Precautions:USER'S RESPONSIBILITY TO ASSESS END  
PRODUCTS,INTERMEDIATES,FUGITIVE EMISSIONS ARISING OUT OF ELECTRODE  
USAGE.ALWAYS USE EXHAUST VENT IN USER WELD OPERATIONS.REF:ANSI  
Z49.1;29CFR1910;CAN/CSA-W17.2-M97.

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

Respiratory Protection:RESPIRATORY PROTECTION IS NECESSARY WHEN EXPO  
LIMITS FOR AIRBORNE CONTAMINANTS EXCEEDED DURING WELD W/ELECTRODES.USE  
AIR-SUPPLIED RESP IN CONFINED SPACES.USE ONLY NIOSH APPROVED RESP  
IAW 29CFR1910.134-RESPIRATORY PROTECTION.

Ventilation:USE LOC EXHAUST WHEN WELDING.MAINTAIN EXPO BEL ACCEPTABLE  
EXPO LIMITS.CONFINED SPACES REQUIRE SPEC ATTN TO PROVISION (SUPP)

Protective Gloves:GLOVES.

Eye Protection:FACE PROTECTION.

Other Protective Equipment:PROTECTIVE EQPMT REQUIRED WHEN WELDING.FLAME  
RETARDANT CLOTHING.

Work Hygienic Practices:DON'T EXPO SKIN/EYES TO HEAT/RADIATION FROM  
WELD OPERATIONS.SELECT WELD LENS SHADE FROM AMERICAN WEL  
DING SOCIETY

PUBLICATION F22.

Supplemental Safety and Health

HAZARD DECOMP PROD:METALS,METAL OXIDES,CHROMATES,FLUORIDES,CO,OZONE,OXIDES  
OF NITROGEN.PHOSGENE PRODUCED IF CHLORINATED SOLVENT VAP PRESENT IN  
OPERATION. HEALTH:HEALTH HAZ. SIGN/SYMPT:LUNG FIBROSIS,CHRONIC  
BRONCHITIS. VENTILATION:OF ADEQ VENTILATION &/OR AIR-SUPP RESP.

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

HCC:N1

Boiling Pt:B.P. Text:NP

Melt/Freeze Pt:M.P/F.P Text:>1832F,>100

Decomp Temp:Decomp Text:NP

Vapor Pressure

res:NP  
Vapor Density:NP  
Spec Gravity:4-6GM/CC  
pH:NP  
Viscosity:NP  
Evaporation Rate & Reference:NP  
Solubility in Water:NP  
Appearance and Odor:SOLID,METALLIC SILVER COLORED WIRE W/FLUX COATING  
OR FLUX CORE,ODORLESS.  
Percent Volatiles by Volume:NP  
Corrosion Rate:NP

===== 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:FUMES/GAS INGRED FROM USER WELD  
OPERATIONS DEPEND ON ELECTRODE TYP,FLUX,BASE METAL,SPEC PROCESS  
USED.MAY INCLUDE(SUPPLE)

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

Waste Disposal Methods:ALLOY WASTES NORMALLY COLLECTED TO RECOVER METAL  
VALUES.HOWEVER IF DISPO NECESSARY DISPO IAW LOC/STATE/FED REGS.MAY  
CONTAIN TOXIC CHEM(S) SUBJ TO REPORTING REQMTS OF SEC 313  
EPCRA/40CFR372:ALUMINUM OX IDE,BARIUM CARBONATE,CR,CU,MN,NI.REFER  
TO INGRED.S.

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