

INCO ALLOYS INTERNATIONAL INC -- MONEL\*WELDING ELECTRODE\*\*190 & 190N --  
3439-00-559-3261

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

Product ID:MONEL\*WELDING ELECTRODE\*\*190 & 190N

MSDS Date:11/01/1989

FSC:3439

NIIN:00-559-3261

MSDS Number: BJYZF

=== Responsible Party ===

Company Name:INCO ALLOYS INTERNATIONAL INC

Address:1401 BURRIS RD

City:NEWTON

State:NC

ZIP:28658-1754

Country:US

Info Phone Num:704-465-

0352

Emergency Phone Num:304-526-5780

CAGE:9Z762

=== Contractor Identification ===

Company Name:INCO ALLOYS INTERNATIONAL INC

Address:1401 BURRIS RD

Box:City:NEWTON

State:NC

ZIP:28658-1754

Country:US

Phone:800-624-3411

CAGE:9Z762

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

Ingred Name:BARIUM CARBONATE

CAS:513-77-9

RTECS #:CQ8600000

Fraction by Wt: 1-5%

Other REC Limits:NONE SPECIFIED

Ingred Name:CALCIUM CARBONATE (MARBLE) (LIMESTONE)

CAS:1317-65-3

RTECS #:EV9580000

Fr

action by Wt: 1-5%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:10 MG/M3 TDUST; 9192

Ingred Name:CALCIUM FLUORIDE  
CAS:7789-75-5  
RTECS #:EW1760000  
Fraction by Wt: 1-5%  
Other REC Limits:NONE SPECIFIED

Ingred Name:COPPER (SARA III)  
CAS:7440-50-8  
RTECS #:GL5325000  
Fraction by Wt: 15-40%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:0.1MG/M3 FUME/1 DUST  
ACGIH TLV:0.2MG/M3 FUME; 9192  
EPA Rpt Qty:5000 LBS  
DOT Rpt Qty:5000 LBS

Ingred Name:MANGANESE (SARA III)  
CAS:7439-96-5  
RTECS #:O  
O9275000  
Fraction by Wt: 1-5%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:(C) 5 MG/M3 DUST  
ACGIH TLV:5 MG/M3 DUST 9293

Ingred Name:SODIUM FLUOALUMINATE  
CAS:15096-52-3  
RTECS #:WA9625000  
Fraction by Wt: 5-10%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:2.5 MG/M3

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

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

MG/M3; 9192

Ingred Name:SILICA, CRYSTALLINE - FUSED  
CAS:60676-86-0  
RTECS #:VV7328000  
Fraction by Wt: 1-5%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:SEE TABLE Z3  
ACGIH TLV:0.1 MG/M3 RDUST;9293

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

Ingred Name:TITANIUM DIOXIDE  
CAS:13463-67-7  
RTECS #:XR2275000  
Fraction by Wt: 1-5%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:10 MG/M3 TDUST; 9293

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Hazards Identification =====

LD50 LC50 Mixture:UNCLASSIFIED WELDING FUMES=5MG/M3 PEL  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO  
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO  
Health Hazards Acute and Chronic:BRONCHIAL IRRITATION, BARITOSIS,  
RESPIRATORY TRACT IRRITATION, METAL FUME FEVER, GASTROINTESTINAL  
UPSET, PUS FORMATION IN THE CONJUCTIVA, CORNEA OR SCLERA;  
NEUROLOGICAL PROBLEMS; ABNORMAL KIDNEY FUNCT ION; LUNG FIBROSIS AND  
CHRONIC BR  
ONCHITIS.  
Explanation of Carcinogenicity:NICKEL & CRYSTALLINE SILICA HAVE BEEN  
IDENTIFIED BY IARC AND/OR NTP AS POTENTIAL CANCER CAUSING AGENTS.  
Effects of Overexposure:EYE IRRITATION, REDNESS, PAIN & CONJUNCTIVITIS;  
NAUSEA, VOMITING & WEAKNESS; EXCESSIVE SALIVATION, COLIC, VIOLENT  
DIARRHEA, CONVULSIVE TREMORS; INTESTINAL BLOCKAGE; CHILLS, FEVER &  
SWEATING; APATHY, D ROWSINESS, SPASTIC GAIT & PARALYSIS; LOSS OF  
CONSCIOUSNESS & DEATH.  
Medical Cond Aggravated by Exposure:PRE-EX

ISTING CHRONIC SKIN, EYE OR  
RESPIRATORY DISORDERS MAY BE AGGRAVATED IF INDIVIDUALS ARE  
REPEATEDLY OVEREXPOSED TO FUMES AND DUST.

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

First Aid:INHALATION: REMOVE FROM EXPOSURE. IF SEVERE RESPIRATORY  
IRRITATION PERSISTS, SEE DOCTOR. VICTIM MAY EXHIBIT " METAL FUME  
FEVER". EYE: FLUSH PARTICLES FROM EYE WITH CLEAN WATER FOR 15  
MINUTES. IF IRRITATION PERSISTS SEE DOCTOR. SKIN: WAS WITH SOAP  
AND WATER. IF RASH  
DEVELOPS, SEE DOCTOR. INGESTION: IF SYMPTOMS OF  
INGESTION ARISE, SEE MEDICAL HELP.

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

Flash Point:NONFLAMMABLE  
Unusual Fire/Explosion Hazard:NONFLAMMABLE; HOWEVER SPARKS FROM WELDING  
IN USER OPERATIONS COULD IGNITE FLAMMABLE OR COMBUSTIBLE LIQUIDS,  
VAPORS AND SOLID.

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

Spill Release Procedures:VACUUM OR SHOVEL ANY SPILLED MATERIAL INTO A  
SUITABLE  
CONTAINER. ALLOY WASTES ARE NORMALLY COLLECTED TO RECOVER  
METAL VALUES.

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

Handling and Storage Precautions:WEAR GLOVES AND FLAME RETARDANT  
CLOTHING WHEN CUTTING, GRINDING OR WELDING. DO NOT EXPOSE SKIN TO  
RADIATION WHEN HOT CUTTING OR WELDING.

Other Precautions:MAINTAIN EXPOSURES BELOW THE ACCEPTABLE EXPOSURE  
LIMITS. USE INDUSTRIAL HYGIENE AIR MONITORING TO ENSURE THAT YOUR  
USE OF THIS MATERIAL DOES NOT CREA  
TE EXPOSURES WHICH EXCEED  
RECOMMENDED EXPOSURE LIMITS.

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

Respiratory Protection:USE AIR-SUPPLIED RESPIRATOR IN CONFINED SPACES.  
RESPIRATORS SHOULD BE USED IN ACCORDANCE WITH 29CFR 1910.134.

Ventilation:USE LOCAL AND GENERAL VENTILATION TO KEEP AIRBORNE  
CONCENTRATIONS OF DUST OR FUMES BELOW THE TLV DURING USE.

Protective Gloves:WELDERS LEATHER GLOVES

Eye Protection:OSHA APPROVED GOGGLES/FACE SHIELD W/LENS

Other Prote

Protective Equipment:WEAR FLAME RETARDANT CLOTHING. DO NOT EXPOSE SKIN OR EYES TO HEAT & RADIATION.

Work Hygienic Practices:WASH THOROUGHLY BEFORE EATING OR SMOKING. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

WELDING AND HOT CUTTING FUMES & GASES CANNOT BE CLASSIFIED SIMPLY. THEIR COMPOSITION AND QUANTITY ARE DEPENDENT ON THE METAL BEING WELDED, THE PROCEDURES, PROCESSES AND THE TYPE OF WIRE OR ELECTRODES USED.

===== Physical/Chemical

Properties =====

HCC:N1

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

Spec Gravity:4-6

Appearance and Odor:WELDING ELECTRODE IS METALLIC SILVER COLORED WIRE WITH A FLUX COATING/FLUX CORE

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

Stability Indicator/Materials to Avoid:YES

Hazardous Decomposition Products:WELDING AND CUTTING OPERATION MAY INCLUDE OXIDES OF THE METALS, CHROMATES, FLUORIDES, CARBON MONOXIDE, OZONE, TOXIC GAS.

===== Disposal

Considerations =====

Waste Disposal Methods:IF DISPOSAL IS NECESSARY, DISPOSE IN ACCORDANCE WITH FEDERAL, STATE & LOCAL REGULATIONS.

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