

NATIONAL WELDING ALLOYS, INC. -- ALUMINUM & MAGNESIUM BARE WELDING WIRE 5554 --  
3439-00-803-9499

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

Product ID:ALUMINUM & MAGNESIUM BARE WELDING WIRE 5554

MSDS Date:08/01/1990

FSC:3439

NIIN:00-803-9499

MSDS Number: BWDYH

=== Responsible Party ===

Company Name:NATIONAL WELDING ALLOYS, INC.

Address:1600 SOUTH CANAL STREET

City:PITTSBURGH

State:PA

ZIP:15215

Country:US

Info Phone Num:412-781-4255

Emergency Phone Num:412-781-4255, CHEMTREC 800-424-9300

CAGE:0ACE2

=== Contractor Identification ===

Company Name:NATIONAL WELDING ALLOYS INC

Address:1600 SOUTH CANAL STREET

Box:City:PITTSBURGH

State:PA

ZIP:15215-2624

Country:US

Phone:412-781-4255

CAGE:0ACE2

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

Ingred Name:SILICON (SIO2 AMPHOROUS RESPIRABLE)

CAS:60676-86-0

RTECS #:VV7328000

Fraction by Wt: 0.25%

Other REC Limits:NONE RECOMMENDED

OSHA

PEL:10 MG/M3 RDUST; Z-3

ACGIH TLV:0.1 MG/M3 RDUST;9394

Ingred Name:IRON OXIDE

CAS:1309-37-1

RTECS #:NO7400000

Fraction by Wt: 0.40%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:10 MG/M3 (FE)

ACGIH TLV:5MG(FE)/M3FUME,B2;94

Ingred Name:COPPER (SARA III)

CAS:7440-50-8

RTECS #:GL5325000

Fraction by Wt: 0.10%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:0.1MG/M3 FUME/1 DUST

ACGIH TLV:0.2 MG/M3 FUME; 9394

EPA Rpt Qty:5000 LBS

DOT Rpt Qty:5000 LBS

:OO9275000  
Fraction by Wt: .5-1.00%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:C 5 MG/M3  
ACGIH TLV:5 MG/M3, DUST; 9394

Ingred Name:MAGNESIUM  
CAS:7439-95-4  
RTECS #:OM2100000  
Fraction by Wt: 2.4-3.0%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:ZINC (SARA III)  
CAS:7440-66-6  
RTECS #:ZG8600000  
Fraction by Wt: 0.25%  
Other REC Limits:NONE RECOMMENDED  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS

Ingred Name:TITANIUM ALLOY  
Fraction by Wt: .05-.20%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:ALUMINU  
M (SARA III)  
CAS:7429-90-5  
RTECS #:BD0330000  
Fraction by Wt: BALANCE  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:15MG/M3 DUST/5 FUME  
ACGIH TLV:10MG/M3 DUST; 9394

Ingred Name:ZIRCONIUM  
CAS:7440-67-7  
RTECS #:ZH7070000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:5 MG/M3  
ACGIH TLV:5 MG/M3/10 STEL;9394

Ingred Name:NICKEL  
CAS:7440-02-0  
RTECS #:QR5950000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:1 MG/M3  
ACGIH TLV:1 MG/M3

Ingred Name:CHROMIUM (SARA III)  
CAS:7440-47-3  
RTECS #:GB4200000  
Fraction by Wt

: .05-.20%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:1 MG/M3  
ACGIH TLV:0.5 MG/M3; 9394  
EPA Rpt Qty:1 LB  
DOT Rpt Qty:1 LB

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO  
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:YES  
Health Hazards Acute and Chronic:WELDING ELECTRODES NON-HAZ SOLID @AMB  
TEMP.WELDING GENERATES FUME/GAS/ELECTROMAGNETIC RADIATION W/KNONW  
ADVERSE HEALTH EFFECTS.DISCOMFORT,DIZZ,NAU,THROA  
T  
DRYNESS/IRRIT.PULM IRRIT,PNEUMOCONIOSIS.SIDERO SIS.BURNS FROM  
ELECTROMAGNETIC RADIATION.  
Explanation of Carcinogenicity:PER MSDS:NICKEL & CHROMIUM SHOULD BE  
CONSIDERED A POSSIBLE CARCINOGEN PER OSHA 29CFR1910.1200.HEXAVALENT  
CR REPORTED CAR  
Effects of Overexposure:DISCOMFORT, DIZZINESS, NAUSAU, THROAT DYRNESS &  
IRRITATION, PULMONAYR IRRITATION, PNEUMOCONIOSIS, SIDEROSIS.  
Medical Cond Aggravated by Exposure:INDIVIDUALS W/IMPAIRED PULMONARY  
FUNCTION OR ILLNESS MAY HAVE SY  
MPTOMS EXACERBATED BY IRRITANTS  
CONTAINED IN WELDING FUMES.

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

First Aid:REMOVE FROM DUST OR FUME EXPOSURE. IF BREATHING HAS STOPPED  
PERFORM ARTIFICIAL RESPIRATION. SUMMON MEDICAL AID IMMEDIATELY.

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

Flash Point:NONE  
Lower Limits:NONE  
Upper Limits:NONE  
Extinguishing Media:THIS ALLOY IS NON-COMBUSTIBLE. USE EXTINGUISHING  
MEDIA APPROPRIATE TO SURROUNDI  
NG FIRE.  
Fire Fighting Procedures:IF MATL REDUCED TO POWDER FORM CAUTION MUST BE  
USED TO PREVENT FIRE/EXPLO.TO EXT METAL POWDER FIRE USE DRY  
SAND,DRY GRAPHITE OR OTHER CLASS D FIRE EXT POWDER.  
Unusual Fire/Explosion Hazard:NO UNUSUAL FIRE/EXPLO HAZ ARE ASSOCIATED  
W/MATL.

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

Handling and Storage Precautions:READ/UNDERSTAND MFG'S  
INSTRUCTIONS/PRECAUT LABEL ON PROD.SEE AMER NAT STD Z49.1"SAFETY IN  
WELDING/CUTTING

" FROM AMER WELD SOC,POB351040,MIA,FL351040.

Other Precautions:SE ALSO OSHA PUBLICATION 2205(29CFR1910) FROM US GOVT  
PRINT OFC,WASHINGTON,DC20402.COMPOSITION OF WELDING EMISSIONS VAR  
SUBSTANTIALLY W/WELDING PROCESS.ACTUAL EXPO SHOULD BE DETERMINED BY  
MONITORING F UME IN OPERATOR'S BREAHTING ZONE.

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

Respiratory Protection:USE RESPIRABLE FUME RESP OR AIR SUPPLIED RESP  
WHEN WELDING,BRAZING,SOLDERING IN CONFINED SPAC  
E OR SHWERE LOCAL  
EXHAUST OR VENTILATION DOES NOT KEEP EXPOSURE BELOW PEL, TLV OR  
STEL.

Ventilation:USE ENOUGH VENTI,LOC EXHA @ARC(FLAME)/BOTH TO KEEP FUME/GAS  
BELOW PEL/TLV/STEL IN WORKER BREATHZONE & GEN AREA.

Protective Gloves:WELDER'S GLOVE

Eye Protection:HELMET,FACESHIELD W/FIL LENS W/APPROP #.

Other Protective Equipment:PROT SCREENS,FLASH GOGGLES TO SHIELD  
OTHERS.SEE ANSI/ASC Z49.1SEC4.2.HEAD/BODY FROM  
RADIAT/SPARKS/FLAM/ELECT SHOCK

Work Hygienic Practices:TRAIN EMPLOYE

E TO KEEP HIS HEAD OUT OF FUMES &

NOT TO TOUCH LIVE ELECTRICAL PARTS/INSULATE.SEE ANSI/ASC Z49.1SEC5.

Supplemental Safety and Health

WELDERS SHOULD NOT WEAR SHORT SLEEVE SHIRTS, SHORT PANTS OR CUTOFFS.USE  
EXHAUST SYSTEM TO CLEAR WELDING FUMES. MAKE SURE THAT INHALED AIR  
DOES NOT CONTAIN FUME CONSTITUENTS ABOVE PERMISSABLE LEVELS.

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

HCC:N1

Appearance and Odor:SOLID WIRE OR ROD, GREY TO SILVER IN COLOR.

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

Stability Indicator/Materials to Avoid:YES

AVOID CONTACT W/MINERAL ACIDS & OXIDIZING AGENTS WHICH MAY GENERATE  
HYDROGEN GAS;EVOLUTION OF HYDROGEN MAY BE EXPLO HAZ.

Stability Condition to Avoid:NONE SPECIFIED BY MFG.

Hazardous Decomposition Products:VAR ELEMENTAL METALS & METAL OXIDES  
MAY BE GENERATED FROM MELTING/GROSS HANDLING OPERATIONS.

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

Waste Disposal Methods:P

REVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSABLE CONTAINER OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

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