

NATIONAL WELDING ALLOYS, INC. -- BARE WIRE 4043, ALUMINUM BARE WELDING WIRE --
3439-00-268-9654

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

Product ID: BARE WIRE 4043, ALUMINUM BARE WELDING WIRE

MSDS Date: 09/01/1995

FSC: 3439

NIIN: 00-268-9654

MSDS Number: CFYDD

=== Responsible Party ===

Company Name: NATIONAL WELDING ALLOYS, INC.

Address: 1600 SOUTH CANAL STREET

City: PITTSBURGH

State: PA

ZIP: 15215

Country: US

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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 =====

Ingredient Name: COPPER (SARA 313) (CERCLA)

CAS: 7440-50-8

RTECS #: GL5325000

Fraction by Wt: 0.30%

Other REC Limits: NONE RECOMMENDED

OSHA PEL: 0.1MG/M

3 FUME/1 DUST
ACGIH TLV:0.2 MG/M3 FUME; 9596
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:SILICA, CRYSTALLINE - FUSED
CAS:60676-86-0
RTECS #:VV7328000
Fraction by Wt: 4.5-6.0%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:SEE TABLE Z-3
ACGIH TLV:0.1 MG/M3 RDUST;9596

Ingred Name:ZINC OXIDE (SARA 313) (CERCLA)
CAS:1314-13-2
RTECS #:ZH4810000
Fraction by Wt: 0.10%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9596

Ingred Name:IRON OXIDE
CAS:1309-37-1
R
TECS #:NO7400000
Fraction by Wt: 0.80%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:10 MG/M3 (FE)
ACGIH TLV:5MG(FE)/M3FUME,B2;96

Ingred Name:MAGNESIUM OXIDE
CAS:1309-48-4
RTECS #:OM3850000
Fraction by Wt: 0.05%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:15 MG/M3 PARTICULATE
ACGIH TLV:10 MG/M3; FUME; 9596

Ingred Name:MANGANESE (SARA 313)
CAS:7439-96-5
RTECS #:OO9275000
Fraction by Wt: 0.05%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:C, 5 MG/M3 (FUME)
ACGIH TLV:0.2 MG/M3; 9596

Ingred Name:TITANIUM

M DIOXIDE
CAS:13463-67-7
RTECS #:XR2275000
Fraction by Wt: 0.20%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9596

Ingred Name:ALUMINUM (SARA 313)
CAS:7429-90-5
RTECS #:BD0330000
Fraction by Wt: BALANCE
Other REC Limits:NONE RECOMMENDED
OSHA PEL:15 MG/M3 DUST
ACGIH TLV:10 MG/M3 DUST; 9596

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

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingest
ion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:WELD ELECTRODES ARE NONHAZ SOLID @AMBT
TEMPS.WELD GENERATES FUMES/GASES/ELECTROMAGNETIC RADIATION W/KNOWN
ADVERSE HEALTH EFFECTS.SHORT TERM EXPO TO WELD
FUME:DISCOMFT,DIZZ,NAU,DRYNESS/IRRIT THROAT.LON G TERM EXPO MAY
CONTRIBUTE TO PULM IRRIT,PNEUMOCONIOSIS.FE FUME MAY PRODUCE
SIDEROSIS(BENIGN).
Explanation of Carcinogenicity:PER MSDS:TITANIUM DIOXIDE,MANGANES
FUME,ZINC FUME,WELDIN
G FUME:ID AS SUSP/CONF HUMAN CARCINOGEN BY
OTHER SOURCES.
Effects of Overexposure:KNOWN ADVERSE HEALTH EFFECTS.
DISCOMFORT,DIZZ,NAU,DRYNESS/IRRIT THROAT. PULM
IRRIT,PNEUMOCONIOSIS, SIDEROSIS, CANCER.
Medical Cond Aggravated by Exposure:INDIVIDUALS W/IMPAIRED PULMONARY
FUNCTION OR ILLNESS MAY HAVE SYMPTOMS EXACERBATED BY IRRITANTS
CONTAINED IN WELDING FUMES.

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

First Aid:REMOVE FRM DUST/FUME EXPO.STOP BREATH P

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

Flash Point:NONE

Autoignition Temp:Autoignition Temp Text:NP

Lower Limits:NONE

Upper Limits:NONE

Extinguishing Media:THIS ALLOY IS ONCOMBUSTIBLE.USE EXTINGUISHING MEDIA APPROPRAITE TO SURROUNDING FIRE.

Fire Fighting Procedures:IF MATL REDUCED TO POWDER FORM CAUTION MUST BE USED TO PREVENT FIRE/EXPLO.TO EXTINGUISH METAL POWDER FIRE USE DRY SAND,DRY GRAPHITE,OTHER CLASS D FI

RE EXTINGUIS

Unusual Fire/Explosion Hazard:NO UNUSUAL FIRE/EXPLO HAZ ASSOC W/MATL.

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

Spill Release Procedures:NONE SPECIFIED BY MANUFACTURER.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:READ/UNDERSTAND MFG INSTRUCT/PRECAUT LABEL ON PROD.SEE ANS Z49.1/OSHA 29CFR1910.CLEAR WLED FUME W/EXHAU SYS.INHAL AIR DOESNT CON

TAIN FUME >PERM LEVELS

Other Precautions:ACTUAL EXPO SHOULD BE DETERMINED BY MONITORING FUME IN OPERATORS BREATH ZONE.FUME/GAS DECOMPO PRODUCTS NOT INGREGS IN ELECTROD IMPORTANT.CONCEN MAY DECR/INCR BY MANY TIMES ORIGINAL CONC IN ELECTRODE.M EW CMPDS NOT IN ELECTRODES MAY FORM.

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

Respiratory Protection:USE RESPIRABLE FUME RESP OR AIR-SUPPL RESP WHEN WELD/BRAZE/SOLDER IN CONFINE SPACE OR WHERE LOC EXHAU/VENTI DOES NT

KEEP EXP BEL PEL/TLV/STEL.MOST WELD EVEN W/PRIMITIVE VENTI DOESNT PRODUCE EXPO INSIDE WELD HELMET >5MG/M3;IF SO CONTROLL IT.

Ventilation:USE ENOUGH VENTI/LOC EXHAU @ARC/FLAME TO KEEP FUME/GAS BEL PEL/TLV/STEL IN WORKER BREATHZONE/GEN AREA.

Protective Gloves:INSULATED CLOTHING

Eye Protection:HELMET,FCSHEILD W/FILT LENS

Other Protective Equipment:SEE ANSI/ASC Z49.1 SEC 5,SEC 4.2.PROTECTIVE SCREENS/FLASH GOGG TO OTHERS.HEAD/BODY PROT FRM RADIATION/SPARK/ELECT SHOCK.

Work Hyg

ienic Practices: TRAIN WORKERS KEEP HEAD OUT OF FUMES & NOT TOUCH LIVE ELECT PART/INSULATE FRM WORK/GROUND.WEAR GLOVES/APRON/HATS/ETC.

Supplemental Safety and Health

DECOMP PROD: VARIES SUBSTANTIALLY W/WELD PROCESS.COMPO/QUANT DEPEND UPON METAL&ELECTRODE USED/PROCESS/PROCEDURE.ALSO COATINGS ON METAL WELDED,#OF WELDERS/VOL OF WORK AREA,QUAL/AMT OF VENTI,WELDER HEAD POSITION TO FUME PLUME,CONTAM IN ATM.DECOMPO PROD OF NORMAL OPERATION INCLUDE THOSE FRM VOLAT/RX/OXI/BASE META L/COAT,ETC

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

HCC:N1

Boiling Pt:B.P. Text:NP

Melt/Freeze Pt:M.P/F.P Text:NP

Decomp Temp:Decomp Text:NP

Vapor Pres:NP

Vapor Density:NP

Spec Gravity:NP

pH:NP

Viscosity:NP

Evaporation Rate & Reference:NP

Solubility in Water:NP

Appearance and Odor:NP

Percent Volatiles by Volume:NP

Corrosion Rate:NP

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

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 MANUFACTURER.

Hazardous Decomposition Products:VARIOUS ELEMENTAL METALS/METAL OXIDES MAY BE GENERATED FRM MELT/DROSS HNDLG OPERATIONS.WELD EMISSIONS COMPOSITION (SUPP)

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

Waste Disposal Methods:PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRO.DISCARD PRODUCT/RESIDUE/DISPO CNTNR/LINER IN ENVIRONMENTALLY

ACCEPTABLE MANNER IN FULL COMPLIANCE W/LOCAL, STATE AND FEDERAL REGULATIONS.

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