

NATIONAL WELDING ALLOYS, INC. -- BARE WIRE # 5356 -- 3439-00-873-2320

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

Product ID: BARE WIRE # 5356

MSDS Date: 09/01/1995

FSC: 3439

NIIN: 00-873-2320

MSDS Number: BWDYX

=== 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: 412-7

81-4255

CAGE: 0ACE2

=== Contractor Identification ===

Company Name: NATIONAL TORCH TIP CO INC.

Address: 50 FREEPORT RD

City: PITTSBURGH

State: PA

ZIP: 15215-2906

Country: US

Phone: 412-781-4200

CAGE: 93009

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

CAS: 7440-21-3

RTECS #: VW0400000

Fraction by Wt: 0.25%

Other REC Limits:NONE RECOMMENDED  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:10 MG/M3 TDUST; 9394

Ingred Name:IRON  
CAS:7439-86-6  
RTECS #:NO6925000  
Fraction by Wt: 0.4%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:COPPER (SARA III)  
CAS:7440-50-8  
RTECS #:GL5325000  
Fraction by Wt: 0.1%  
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

Ingred Name:MANGANESE (SARA III)  
CAS:7439-96-5  
RTECS #:OO9275000  
Fraction by Wt: 0  
.05-.2%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:C 5 MG/M3 DUST  
ACGIH TLV:5 MG/M3 DUST 9394

Ingred Name:MAGNESIUM  
CAS:7439-95-4  
RTECS #:OM2100000  
Fraction by Wt: 4.5-5.5%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:CHROMIUM (SARA III)  
CAS:7440-47-3  
RTECS #:GB4200000  
Fraction by Wt: .05-.2%  
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

Ingred Name:ZINC (SARA III)  
CAS:7440-66-6  
RTECS #:ZG8600000  
Fraction by Wt: 0.1%  
Other RE

C Limits:NONE RECOMMENDED

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ingred Name:TITANIUM

CAS:7440-32-6

RTECS #:XR1700000

Fraction by Wt: .06-.2%

Other REC Limits:NONE RECOMMENDED

Ingred Name:ALUMINUM (SARA III)

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; 9394

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

LD50 LC50 Mixture:UNCLASSIFIED WELDING FUMES=5MG/M3 PEL

Routes of Entry:

Inhalation:YES Skin:YES Ingestion:NO

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:HAZARD RESULTS FROM WELDING PROCESS.

NO HAZARD EXPECTED FROM SHIPPING/STORAGE. SHORT TERM EXPOSURE TO WELDING FUMES, GASES OR DUST MAY RESULT IN DISCOMFORT, DIZZINESS, NAUSEA AND DRYNESS OR IRRITATION OF THE THROAT. LONG TERM EXPOSURE TO WELDING FUMES MAY CONTRIBUTE TO PULMONARY IRRITATION OR PNEUMOCONIOSIS.

Explanation of Carcinogenicity:NICKEL AND C

HRONIUM ARE CONSIDERED

POSSIBLE CARCINOGENS UNDER OSHA. RESPIRATORY CANCER FROM WELDING IS UNCONFIRMED.

Effects of Overexposure:EXPOSURE TO WELDING FUMES MAY RESULT IN

DISCOMFORT SUCH AS DIZZINESS, NAUSEA, FEVER, DRYNESS AND/OR IRRITATION OF NOSE, THROAT AND EYES. SKIN SENSITIVITY MAY ALSO BE NOTED. WATERY EYES, HEADACHE, BREATHING DIFFICULTY, FREQUENT COUGHING AND/OR CHEST PAINS MAY OCCURE FROM ACUTE EXPOSURE. TOXIC GASES CAN BE FATAL.

Medical Cond Aggravated by Exp

osure:INDIVIDUALS WITH IMPAIRED PULMONARY  
FUNCTION OR ILLNESS MAY HAVE SYMPTOMS EXACERBATED BY IRRITANTS  
CONTAINED IN WELDING FUMES.

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

First Aid:IN CASE OF ELECTRICAL SHOCK, TURN OFF POWER PRIOR TO REMOVAL  
FROM EXPOSURE AREA AND ADMINISTRATION OF FIRST AID. REMOVE FROM  
EXPOSURE AREA AND CALL FOR MEDICAL AID. ADMINISTER OXYGEN IF  
BREATHING IS DIFFICULT. IF NOT BREATHING, BEGIN ARTIFICIAL  
RESPIRATION. IF

NO DETECTABLE PULSE, BEGIN EXTERNAL HEART MASSAGE.

EMPLOY FIRST AID TECHNIQUES RECOMMENDED BY THE AMERICAN RED CROSS.

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

Flash Point:NONE

Lower Limits:NOT GIVEN

Upper Limits:NOT GIVEN

Extinguishing Media:USE SUITABLE MEDIA FOR SURROUNDING FIRES.

Fire Fighting Procedures:FIRE FIGHTERS SHOULD USE NIOSH APPROVED SCBA &  
FULL PROTECTIVE EQUIPMENT WHEN FIGHTING CHEMICAL FIRE.

Unusual Fire/Explosion Hazard:IF THIS MATERIAL IS REDUCED TO POWDER

FORM, CAUTION MUST BE USED TO PREVENT FIRE OR EXPLOSION. TO  
EXTINGUISH A METAL POWDER FIRE, USE CLASS "D" EXTINGUISHER.

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

Spill Release Procedures:CLEAN UP ANY GRINDING DUST OR WASTE RESIDUES  
AND PLACE IN SUITABLE DOT APPROVED CONTAINERS AND DISPOSE OF IN  
FULL COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. AVOID  
INHALATION AND SKIN EXPOSURE.

=====  
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:PROVIDE PROTECTIVE SCREENS TO SHIELD OTHERS. WHEN  
ELECTRODES AND FLUXES ARE CONSUMED, THE FUME AND GAS DECOMPOSITION  
PRODUCTS GENERATED ARE DIFFERENT IN FORM FROM THE INGREDIENTS  
LISTED. NEW COMPOUNDS NOT IN THE ELECTRODES MAY FORM.

=====  
Exposure Control  
=====

Is/Personal Protection =====

Respiratory Protection:USE WELD FUME RESPIRATOR OR AIR SUPPLIED RESPIRATOR WHEN CUTTING, GRINDING OR WELDING IN A CONFINED SPACE OR WHERE LOCAL EXHAUST OR GENERAL VENTILATION DOES NOT KEEP EXPOSURE BELOW RECOMMENDED LIMITS. USE ONLY NIOSH APPROVED RESPIRATORS.

Ventilation:USE ENOUGH VENTILATION WHEN CUTTING, GRINDING OR WELDING TO KEEP THE DUST, FUMES & GASES FROM THE WORKERS BREATHING ZONE

Protective Gloves:WELDERS LEATHER GLOVES

Eye Protection:

OSHA APPROVED GOGGLES/FACE SHIELD W/LENS

Other Protective Equipment:FLAME RETARDANT CLOTHING WHEN CUTTING, GRINDING OR WELDING. DO NOT EXPOSE SKIN TO RADIATION WHEN HOT CUTTING OR WELDING.

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. OTHER INFLUENCING FACTORS ARE THE PRESENCE OF CONTAMINANTS. CHLORINATED SOLVENTS MAY DECOMPOSE TO TOXIC GASES.

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

HCC:N1

Boiling Pt:B.P. Text:NOT GIVEN

Melt/Freeze Pt:M.P/F.P Text:NOT GIVEN

Vapor Pres:NOT GIVEN

Vapor Density:NOT GIVEN

Spec Gravity:NOT GIVEN

Evaporation Rate & Reference:NOT GIVEN

Solubility in Water:NIL

Appearance and Odor:SOLID WIRE OR ROD

,GREY TO SILVER IN COLOR, 0.062"

O.D.

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

Stability Indicator/Materials to Avoid:YES

STRONG OXIDIZING AGENTS AND MINERAL ACIDS.

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:WELDING AND CUTTING OPERATION MAY INCLUDE OXIDES OF THE METALS, CHROMATES, FLUORIDES, COMPLEX METALLICS, AND OZONE.

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

Waste Disposal

Methods:PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSAL CONTAINER OR LINER IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

Disclaimer (provided with this information by the compiling agencies):

This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability fo

r its use. Any person utilizing this

document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.