

NATIONAL WELDING ALLOYS, INC. -- BARE WIRE # 4043 -- 3439-01-012-6661

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

Product ID:BARE WIRE # 4043

MSDS Date:09/01/1995

FSC:3439

NIIN:01-012-6661

MSDS Number: BYSDB

=== 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

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 (SIO2 AMPHOROUS RESPIRABLE)

CAS:60676-86-0

RTECS #:VV7328000

Fraction by Wt: 4.5-6%

Other REC Limits:NONE RECOMMENDED

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SHA 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: 0.8%  
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: 0.30%  
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%  
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: 0.05%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:ZINC (SARA III)  
CAS:7440-66-6  
RTECS #:ZG8600000  
Fraction by Wt: 0.10%  
Other REC Limits:NONE RECOMMENDED  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS

Ingred Name:TITANIUM ALLOY  
Fraction by Wt: 0.20%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:ALUMINUM (SARA I

II)  
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

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

LD50 LC50 Mixture:U  
NCLASSIFIED 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  
PNEUMO  
CONIOSIS.  
Explanation of Carcinogenicity:NICKEL AND CHROMIUM 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 Exposure: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 Controls/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. LAUNDRER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

WELDING AND HOT CUTTING FUMES & GASES CANNOT BE CLASSIFIED SIMPLY. THEIR COMPOSITION AND QUANT

ITY 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

Solubili

ty in Water:NIL

Appearance and Odor:SOLID WIRE OR ROD,GREY TO SILVER IN COLOR, 0.030" 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.

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