

INWELD MFG CORP -- ER 70S-3, INWELD MILD AND LOW ALLOY STEEL WELDING WIRES --
3439-00-593-2241

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

Product ID:ER 70S-3, INWELD MILD AND LOW ALLOY STEEL WELDING WIRES

MSDS Date:07/01/1998

FSC:3439

NIIN:00-593-2241

Status Code:A

MSDS Number: CLNZL

=== Responsible Party ===

Company Name:INWELD MFG CORP

Address:3962 PROTLAND ST

Box:40

City:COPLAY

State:PA

ZIP:18037-0040

Country:US

Info Phone Num:610-261-1900

Emergency Phone Num:800-346-5368

CAGE:66376

=== Contractor Identification ===

Company Name:BLACK AND CO

Address:5351 W MINNESOTA ST

Box:UNKNOW

City:INDIANAPOLIS

State:IN

ZIP:46241

Country:US

Phone:317-243-8676

Contract Num:SP0490-00-D-4063

CAGE:00WU8

Company Name:INWELD MFG CORP

Address:3962 PORTLAND ST

Box:40

City:COPLAY

State:PA

ZIP:18037-0040

Country:US

Phone:610-261-1900

CAGE:66376

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

Ingred Name:IRON OXIDE
CAS:1309-38-2
RTECS #:OM4800000
= Wt:5.
ACGIH TLV:5 MG/M3

Ingred Name:MANGANESE
CAS:7439-96-5
RTECS #:OO9275000
= Wt:5.
OSHA PEL:C5 MG/M3
ACGIH TLV:1MG/M3

Ingred Name:SILICON DIOXIDE
CAS:7631-86-9
Fraction by Wt: 5(AS SIO2%)
ACGIH TLV:3 MG/M3 (SIO2)

Ingred Name:ALUMINIUM
CAS:7429-90-5
RTECS #:BD0330000
Fraction by Wt: 5(AS AL2O3%)
OSHA PEL:15 MG/M3
ACGIH TLV:10 MG/M3

Ingred Name:COPPER FUMES
CAS:7440-50-8
RTECS #:GL5325000
Fraction by Wt: 0.1% (DUST)
OSHA PEL:1 MG/M3
AC
GIH TLV:0.2 MG/M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:MOLYBDENUM
CAS:7439-98-7
RTECS #:QA4680000
= Wt:15.
ACGIH TLV:10 MG/M3
ACGIH STEL:20 MG/M3

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

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:SHORT TERM (ACUTE) OVEREXPOSURE TO
WELDING FUMES MAY RESULT IN DISCOMFORT SUCH AS: DIZZINESS, NAUSEA,
AND DRYNESS OR IRRITATION OF THE NOSE, THROAT, OR EYES. LONG TERM

(CHRONIC) OVEREXPOSURE TO WELDING FUMES MAY LEAD TO SIDEROSIS (IRON DEPOSITS IN THE LUNG) AND IS BELIEVED BY SOME INVESTIGATORS TO AFFECT PULMONARY FUNCTION. ARC RAYS CAN INJURE EYES AND BURN SKIN. ELECTRIC SHOCK CAN KILL.

Explanation of Carcinogenicity:NONE.

Effects of Overexposure:DIZZINESS, NAUSEA, AND DRYNESS OR IRRITATION OF THE NOSE, THROAT, OR EYES.

Medical Cond Aggravated by Exposure:AGGRAVATION OF PREEXISTING RESPIRATORY OR ALLERGIC CONDITIONS MAY OCCUR IN SOME WORKERS.

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

First Aid:CALL FOR MEDICAL AID. EMPLOY FIRST AID TECHNIQUES RECOMMENDED BY THE AMERICAN RED CROSS.

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

Unusual Fire/Explosion Hazard:NONFLAMMABLE: WELDING ARC AND SPRAKS CAN IGNITE COMBUSTIBLES. REFER TO AMERICAN NATIONAL STANDARD -49.1 REFERENCED IN SECTION VII FOR FIRE PREVENTION DURING THE USE OF WELDING AND ALLIED PROCEDURES.

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

Handling and Storage Precautions:READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTIONS AND THE PRECAUTIONARY LABEL ON THIS PRODUCT. SEE AMERICAN NATIONAL STANDARD Z-49.1, SAFETY IN WELDING AND CUTTING, PUBLISHED BY THE AMERICAN WELDING SOCIETY, P.O. BOX 354140, MIAMI, FL 33135 AND OSHA PUBLICATION 2206 (29 C.R.F. 1910). U.S.

Other Precautions:THESE PRODUCTS AS SHIPPED ARE NONHAZARDOUS, NONFLAMMABLE, NONEXPLOSIVE AND NONREACTIVE.

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

Respiratory Protection:USE RESPIRABLE FUME RESPIRATOR OR AIR SUPPLEIS RESPIRATOR WHEN WELDING IN CONFINED SPACE OR WHERE LOCAL EXHAUST OR VENTILATION DOES NOT KEEP EXPOSURE BELOW TLV.

Ventilation:USE ENOUGH VENTILATION, LOCAL EXHAUST AT THE ARC, OR BOTH, TO KEEP THE FUMES AND GASES BELOW THE TLV'S IN THE WORKER'S BREATHING ZONE AND THE GENERAL AREA.

Protective Gloves:WEAR WELDER GLOVES INCLUDING AR

M PROTECTORS FOR ANDS
AND ARM PROTECTION.

Eye Protection:WEAR HELMET OR USE FACE SHIELD WITH FILTER LENS.

Other Protective Equipment:WEAR HEAD, HAND, AND BODY PROTECTION WHICH
HELP TO PREVENT INJURY FROM RADIATION, SPARKS, AND ELECTRICAL
SHOCK, INCLUDING APRONS, HATS, SHOULDER PROTECTION, AS WELL AS DARK
SUBSTANTIAL CLOTHING.

Work Hygienic Practices:TRAIN WELDER TO KEEP HIS HEAD OUT OF THE FUMES
AND NOT TO TOUCH LIVE ELECTRICAL PARTS AND TO INSULATE HIMSELF FROM
WORK AND

GROUND. SEE ANSI Z-49.1

Supplemental Safety and Health

EYE PROTECTION: WEAR HELMET OR USE FACE SHIELD WITH FILTER LENS. AS A
RULE OF THUMB, START WITH A SHADE WHICH IS TOO DARK TO SEE THE WELD
ZONE. THEN GO TO THE NEXT LIGHTER SHADE WHICH GIVES SUFFICIENT
VIEW OF THE WELD ZONE. PROVIDE PROTECTIVE SCREENS AND FLASH
GOGGLES, IF NECESSARY, TO SHIELD OTHERS.

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

HCC:N1

Appearance and Odor:THIS PRODUCT AS SHIPPED ARE
NONHAZARDOUS,
NONFLAMMABLE, NONEXPLOSIVE & NONREACT

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

GASEOUS REACTION PRODUCTS MAY INCLUDE CARBON MONOXIDE & CARBON DIOXIDE.
OZONE & NITROGEN OXIDES MAY BE FORMED BY RADIATION FROM THE ARC.

Stability Condition to Avoid:WELDING FUMES CANNOT BE CLASSIFIED SIMPLY.
THEIR COMPOSITION & QUANTITIES ARE DEPENDENT UPON THE METAL BEING
WELDED, THE PROCESS, THE PROCEDURES, & ELECTRODES USED.

Hazardous Decomposition Product

s:REASONABLY EXPECTED FUME CONSTITUENTS

OF THIS PRODUCT WOULD INCLUDE: COMPLEX OXIDES OF IRON, MANGANESE,
SILICON, COPPER & IN THE CASE OF INWELD 80SD2 (AWS ER 80SD2):
MOLYBDENUM.

===== Toxicological Information =====

Toxicological Information:ONE RECOMMENDED WAY TO DETERMINE COMPOSITION
& QUANTITY OF FUMES AND GASES TO WHICH WORKER`S ARE EXPOSED IS TO
TAKE AN AIR SAMPLE INSIDE THE WELDER`S HELMET, IF WORN, OR IN THE
WORKER`S BREATHING ZONE .

SEE ANSI/AWS F1.1, AVAILABLE FROM THE AMERICAN WELDING SOCIETY, P.O. BOX 351040, MIAMI, FL 33135. THE ACGIH RECOMMENDED GENERAL LIMIT FOR WELDING FUME NOC (NOT OTHERWISE CLASSIFIED) IS 5 MG/M3. THE ACGIH 1984-85 PREFACE STATES: "THE TLV-TWA SHOULD BE USED AS GUIDES IN THE CONTROL OF HEALTH HAZARDS & SHOULD NOT BE USED AS FIRM LINES BETWEEN SAFE & DANGEROUS CONCENTRATIONS". SEE INGREDIENTS FOR SPECIFIC AMOUNTS.

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===== Disposal Considerations =====
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Waste Disposal Methods: PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSABLE CONTAINER, OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

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===== Other Information =====

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