

COMBUSTION ENGINEERING, INC -- SHIELDED METAL ARC WELDING ELECTRODES --
3439-00-018-1970

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

Product ID:SHIELDED METAL ARC WELDING ELECTRODES

MSDS Date:02/22/1989

FSC:3439

NIIN:00-018-1970

Status Code:A

MSDS Number: CKMQC

=== Responsible Party ===

Company Name:COMBUSTION ENGINEERING, INC

Address:911 WEST MAIN STREET

City:CHATTANOOGA

State:TN

ZIP:37402

Country:US

Info Phone Num:423-752-2543

Emergency Phone Num:423-752-2543

CAGE:TO

682

=== Contractor Identification ===

Company Name:COMBUSTION ENGINEERING INC

Address:1201 RIVERFRONT PKWY BLD 3

Box:City:CHATTANOOGA

State:TN

ZIP:37402-2108

Country:US

Phone:615-752-2869

CAGE:90454

Company Name:COMBUSTION ENGINEERING, INC

Address:911 WEST MAIN STREET

Box:City:CHATTANOOGA

State:TN

ZIP:37402

Country:US

Phone:423-752-2543

CAGE:TO682

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

Ingred Name:IRON

CAS:7439-89-6

RTECS #:NO4565500

Ingred Name:MANGANESE

CAS:74

39-96-5
RTECS #:OO9275000
OSHA PEL:C5 MG/M3
ACGIH TLV:5 MG/M3

Ingred Name:TANTALUM
CAS:7440-25-7
RTECS #:WW5505000
OSHA PEL:5 MG/M3
ACGIH TLV:5 MG/M3

Ingred Name:SILICON
CAS:7440-21-3
RTECS #:VW0400000
OSHA PEL:15 MG/M3
ACGIH TLV:10 MG/M3

Ingred Name:MOLYBDENUM
CAS:7439-98-7
RTECS #:QA4680000
ACGIH TLV:10 MG/M3

Ingred Name:CHROMIUM
CAS:7440-47-3
RTECS #:GB4200000
OSHA PEL:1 MG/M3
ACGIH TLV:0.5 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:NICKEL
CAS:7440-02-0
RTECS #:QR5950000
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3

Ingred Name:FLUORSPAR
CAS:7789-75-5
RTECS #:EW1760000

Ingred Name:TITANIUM OXIDE
CAS:13463-67-7
RTECS #:XR2275000
OSHA PEL:15 MG/M3
ACGIH TLV:10 MG/M3

Ingred Name:SODIUM SILICATE
CAS:1344-09-8

Ingred Name:POTASSIUM SILICATE
CAS:1312-76-1

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

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:YES
Health Hazards Acute and Chronic:ACUTE-OVEREXP

OSURE TO WELDING FUMES

MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS, NAUSEA, OR DRYNESS OR IRRITATION OF NOSE, THROAT OR EYES. CHROMIUM(CR03)-INHALATION OF FUME WITH CHROMIUM (VI) COMPOUNDS CAN CAUSE IRRITATION OR THE RESPIRATORY SYSTEM, DAMAGE TO THE LUNGS, AND ASTHMA LIKE SYMPTOMS. SWALLOWING CHROMIUM (VI) SALTS CAN CAUSE SEVERE INJURY OR DEATH. DUSTS ON THE SKIN CAN FORM ULCERS. EYE S MAY BE BURNED BY CHROMIUM (VI) COMPOUNDS. ALLERGIC REACTIONS LIKELY IN SOME PEOP

LE FROM

CHROMIUM COMPOUNDS. NICKEL-NICKEL OXIDE (NIO)-METALLIC TASTE, NAUSEA, TIGHTNESS IN CHEST, FEVER,ALLERGIC REAC TIONS' REMOVE FROM OVEREXPOSURE.

Explanation of Carcinogenicity:CONTAINS CHROMIUM AND NICKEL COMPOUNDS.

Effects of Overexposure:METALLIC TASTE, NAUSEA, TIGHTNESS IN CHEST, FEVER,ALLERGIC REACTIONS.

Medical Cond Aggravated by Exposure:AGGRAVATION OF PRE-EXISTING

RESPIRATORY OR ALLERGY CONDITIONS MAY OCCUR IN SOME WORKERS. SOME STUDIES HAME SHOWN A HIGHER L

EVEL OF LUNG RELATED PROBLEMS AMONG

OLDER WELDERS WHO SMOKED THAN THOSE WHO DI

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

First Aid:REMOVE FROM EXPOSURE AND CALL FOR MEDICAL AID. EMPLOY FIRST AID TECHNIQUES RECOMMENDED BY THE AMERICAN RED CROSS. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN. IN CASE OF ELECTRICAL SHOC K, DISCONNECT AND TURN OFF POWER. IF NOT BREATHING, BEGIN ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF NO

DETECTABLE PULSE, BEGIN EXTERNAL HEART MASSAGE. IMMEDIATELY CALL A PHYSICIAN. IN C ASE OF ARC BURN OR IRRITATION TO EYES OR SKIN, CALL A PHYSICIAN.

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

Extinguishing Media:WELDING ARCS AND SPARKS CAN IGNITE COMPUSTIBLES AND FLAMMABLE PRODUCTS. SEE AMERICAN NATIONAL STANDARD Z49.1

Unusual Fire/Explosion Hazard:WELDING CONSUMABLES APPLICABLE TO THIS SHEET AS SHIPPED ARE NON-REACTIVE, NON-FLAMMABLE, NON-EXPLOSIVE A ND

ESSENTIALLY NON-HAZARDOUS UNTIL WELDED.

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

Other Precautions:READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTIONS AND THE PRECAUTIONARY LABEL ON THE PRODUCT. (SEE AMERICAN NATIONAL STANDARD Z49.I. SAFETY IN WELDING AND CUTTING PUBLISHED BY AMERICAN WELDING SOCIE TY, P.O. BOX 351040, MIAMI, FL 33135 AND OSHA PUBLICATION 2206 (29CFR1910), U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON,

===== Exposu

re Controls/Personal Protection =====

Respiratory Protection:USE NIOSH APPROVED OR EQUIVALENT FUME RESPIRATOR OR AIR SUPPLIED 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 TLV'S IN THE WORKER'S BREATHING ZONE &GENERAL AREA.

Protective Gloves:WEAR HAND PROTECTION TO PREVENT INJURY.WELDER'S GLOVES

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ye Protection:MINIMUM A PROTECTIVE FACE SHIELD WITH FILTER LENS,FLASH GOGGLES

Other Protective Equipment:WEAR HEAD, & BODY PROTECTION WHECH HELP TO PREVENT INJURY FROM RADIATION, SPARKS, & ELECTRICAL SHOCK. SEE ANSI Z49.. ARM PROTECTORS,APRONS,HATS,SHOULDER PROTECTION, AS WELL AS DARK SUBSTANTIAL CLOTHING

Work Hygienic Practices:MAINTAIN EXPOSURE BELOW THE PEL/TLV. USE INDUSTRIAL HYGIENE MONITORING TO ENSURE THAT OUR USE OF THIS MATERIAL DOES NOT CREATE EXPOSURES WHICH EXCEED PEL/TLV. ALWAYS USE EXHAUST VENTILATION.

Supplemental Safety and Health

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

HCC:N1

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

Stability Indicator/Materials to Avoid:YES

Hazardous Decomposition Products:WELDING FUMES AND GASES CANNOT BE CLASSIFIED SIMPLY. THE COMPOSITION AND QUANTITY OF BOTH ARE DEPENDENT UPON THE METAL BEING WELDED, THE PROCESS, PROCEDURES, AND ELECTRODES USED. OT
HER CONDITIONS WHICH

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

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 AN D LOCAL REGULATIONS.

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

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