

ENGLEHARD CORP. ENGINEERED MATERIALS DIV. -- SILVER-COPPER-ZINC-CADMIUM-NICKEL
BRAZING A -- 3439-00-262-4192

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

Product ID:SILVER-COPPER-ZINC-CADMIUM-NICKEL BRAZING A

MSDS Date:11/16/1990

FSC:3439

NIIN:00-262-4192

MSDS Number: BJXXF

=== Responsible Party ===

Company Name:ENGLEHARD CORP. ENGINEERED MATERIALS DIV.

Address:ROUTE 152

City:PLAINVILLE

State:MA

ZIP:02762

Country:US

Info Phone Num:508-695-7811

Emergency Phone Num:508-695-7811

CAGE:86337

=== Contractor Identification ===

Company Name:ENGELHARD CORP

Address:235 KILVERT ST

Box:City:WARWICK

State:RI

ZIP:02886

Country:US

Phone:401-739-9550

CAGE:86337

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

Ingred Name:CADMIUM (SARA III)

CAS:7440-43-9

RTECS #:EU9800000

Fraction by Wt: 16.0%

Other REC Limits:NONE SPECIFIED

OSHA PEL:SEE 1910.1027

ACGIH TLV:0.01 MG/M3 DUST;9394

EPA Rpt Qty:

10 LBS
DOT Rpt Qty:10 LBS

Ingred Name:COPPER (SARA III)
CAS:7440-50-8
RTECS #:GL5325000
Fraction by Wt: 15.5%
Other REC Limits:NONE SPECIFIED
OSHA PEL:0.1MG/M3 FUME/1 DUST
ACGIH TLV:0.2MG/M3 FUME; 9192
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:SILVER (SARA III)
CAS:7440-22-4
RTECS #:VW3500000
Fraction by Wt: 50.0%
Other REC Limits:NONE SPECIFIED
OSHA PEL:0.01 MG/M3
ACGIH TLV:0.1 MG/M3; 9192
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:NICKEL (SARA III)
CAS:7440-02-0
RTECS #:QR
5950000
Fraction by Wt: 3.0%
Other REC Limits:NONE SPECIFIED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3; 9192

Ingred Name:ZINC (SARA III)
CAS:7440-66-6
RTECS #:ZG8600000
Fraction by Wt: 15.5%
Other REC Limits:NONE SPECIFIED
OSHA PEL:10 MG ZNO/M3
ACGIH TLV:10 MG ZNO/M3; 9192
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO
Heal

th Hazards Acute and Chronic: EYE CONTACT CAUSES MILD IRRITATION. METAL PARTICLES CAN INJURE EYE TISSUE. MOLTEN METAL CAN BURN THE SKIN. INHALATION OF CADMIUM FUMES MAY CAUSE MODERATE TO SEVERE RESPIRATORY IRRITATION. SEVERE EXPOSURE MAY CAUSE HEADACHE, NAUSEA, PNEUMONITIS AND PULMONARY EDEMA, ETC. INGESTION SYMPTOMS SIMILAR TO INHALATION. (SEE MSDS

Explanation of Carcinogenicity: CADMIUM GP 2 CARCINOGEN-IARC, GP 2 NTP. NICKEL GP1 CARCINOGEN-IARC, GP 2 NTP.

Effects of Overexposure:

EMPHYSEMA, LIVER AND KIDNEY DAMAGE, WEIGHT LOSS, IRRITABILITY, ULCERATION OF THE NASAL SEPTUM AND DISCOLORATION OF THE TEETH. DISCOLORATION OF THE SKIN AND EYES CALLED ARGYRIA.

Medical Condition Aggravated by Exposure: PERSONS WITH IMPAIRED RESPIRATORY FUNCTION OR PRE-EXISTING RESPIRATORY, BLOOD AND/OR SKIN DISEASES AND PERSONS WITH A HISTORY OF ASTHMA OR ALLERGIES MAY BE AT INCREASED RISK FROM EXPOSURE.

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===== First Aid Measures =====
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First Aid: INHALATION: REMOVE SUBJECT TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION PREFERABLE MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL PHYSICIAN. EYE: FLUSH WITH PLENTY OF WATER FOR 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION. SKIN: WASH WITH SOAP AND WATER. INGESTION: DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.

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===== Fire Fighting Measures =====
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Extinguishing Media: THIS MATERIAL IS NOT COMBUSTIBLE IN THE SOLID FORM.

USE ANY MEDIA APPROPRIATE FOR THE SURROUNDING FIRE CONDITIONS.

Fire Fighting Procedures: WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. EVACUATE AREA. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY.

Unusual Fire/Explosion Hazard: NOT A FIRE OR EXPLOSION HAZARD AS SOLID. FINELY DIVIDED DUST MAY IGNITE AND BURN RAPIDLY WHEN MIXED WITH AIR IN THE PROPER SITUATION. FIRE MAY EMIT TOXIC FUMES.

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== Accidental Release Measures ==

Spill Release Procedures:CONTAIN SPILLAGE AND PICK UP OR VACUUM. WASH THOROUGHLY AFTER HANDLING.

Neutralizing Agent:NONE APPLICABLE FOR THIS MATERIAL

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

Handling and Storage Precautions:STORE IN COOL, DRY LOCATION AWAY FROM STRONG ACIDS AND BASES. KEEP CONTAINER CLOSED. WASH THOROUGHLY AFTER HANDLING.

Other Precautions:MAINTAIN ADEQUATE AIRFLOW IF FUMES ARE PRESENT.

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

Respiratory Protection:IF VENTILATION DOES NOT MAINTAIN INHALATION EXPOSURES BELOW PEL (TLV), USE NIOSH/MSHA APPROVED RESPIRATOR AS PER CURRENT 29 CFR 1910.134, INSTRUCTIONS/WARNINGS AND NIOSH-RESPIRATOR SELECTION.

Ventilation:MECHANICAL (GENERAL) VENTILATION IS REQUIRED. LOCAL EXHAUST MAY BE REQUIRED IF WORK AREA IS NOT VENTED.

Protective Gloves:IMPERVIOUS GLOVES

Eye Protection:GLASSES W/ SIDE SHIELDS OR SAFETY GOGGLE

Other Protective Equipment:NON-FLAMMABLE PROTECTIVE CLOTHING.

Work Hygienic Practices:DO NOT BREATHE FUMES FROM BRAZING. DO NOT BREATHE DUST. AVOID CONTACT WITH EYES, SKIN OR CLOTHING.

Supplemental Safety and Health

USE ONLY WITH ADEQUATE VENTILATION. DO NOT EAT, DRINK OR SMOKE IN THE WORK AREA. WASH THOROUGHLY WITH SOAP AND WATER AFTER USE. USE OF BRAZING FLUX MAY POSE ADDITIONAL HAZARDS. REFER TO FLUX MSDS FOR ADDITIONAL PRECAUTIONS.

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

HCC:N1

Melt/Freeze Pt:M.P/F.P Text:1170F,632C

Spec Gravity:9.49

Solubility in Water:INSOLUBLE

Appearance and Odor:METALLIC WIRE, ROD OR STRIP. NO ODOR.

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

Stability Indicator/Materials to Avoid:YES

STRONG OXIDIZERS, STRONG ACIDS AND BASES, ACETYLENE, AMMONIA, HYDROGEN PEROXIDE, MAGNESIUM METAL, HALOGENS, ETC.

Stability Condition to Avoid:OTHER THAN NORMAL TEMPERATURES AND PRESSURES.

Hazardous Decomposition Products:EMITS TOXIC OXIDES OF SILVER, COPPER, ZINC, NICKEL AND CADMIUM WHEN HEATED ABOVE THE MELTING POINT OF 1170 F.

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

Waste Disposal Methods:THE PRODUCT, IF DISPOSED OF BY ITSELF, IS A HAZARDOUS WASTE UNDER THE EPA HAZARDOUS WASTE REGS. BECAUSE OF EXTRACTABLE CADMIUM AND SILVER. WASTE MIXTURES CONTAINING THIS PRODUCT SHOULD BE TESTED BY TC LP METHODOLOGY TO DETERMINE WASTE CLASSIFICATION.

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