

MATERIAL SAFETY DATA SHEET

ALLOYS 2605, 210, 220, 226, 230, 240, 260, 268, 272, 274, 280	MSDS No. 007	Revision Date Jan 17, 2012
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AURUBIS BUFFALO, Inc.
70 SAYRE STREET
P.O. BOX 981
BUFFALO, NEW YORK 14240

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SECTION 1. GENERAL

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Trade Name	2605 (CARTRIDGE BRASS)	260 (CARTRIDGE BRASS)
	210 (GILDING METAL 210)	220 (COMMERCIAL BRONZE 220)
	226 (COMMERCIAL BRONZE 226)	230 (RED BRASS 230)
	240 (LOW BRASS 240)	268 (YELLOW BRASS 268)
	272 (YELLOW BRASS 272)	280 (YELLOW BRASS 272)

Other Names	2605 (CARTRIDGE BRASS 70-30)	260 (CARTRIDGE BRASS 70-30)
	210 (GILDING METAL 95-5)	220 (COMMERCIAL BRONZE 90-10)
	226 (COMMERCIAL BRONZE 90-10)	230 (RED BRASS 85-15)
	240 (LOW BRASS 80-20)	268 (YELLOW BRASS 66-34)
	272 (YELLOW BRASS 63 1/2)	280 (YELLOW BRASS 63 1/2)

Chemical Family	COPPER-ZINC ALLOY	Telephone Numbers
		Emergency 716/879-6700 Company

Generic Name	BINARY BRASS	DOT Hazardous Materials Proper Shipping Name
CAS No.	NONE	NONE

UN/NA ID No.	N/A	DOT Hazard Class N/AP
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SECTION 2. SUMMARY OF HAZARDS

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METAL MACHINING OR GRINDING OPERATIONS MAY PRODUCE FINE PARTICULATE OR DUST; HEATING, MELTING, WELDING, OR BRAZING MAY PRODUCE METAL FUMES AND PARTICULATES. INHALATION OF EXCESSIVE FUME OR DUST CONCENTRATIONS MAY RESULT IN RESPIRATORY TRACT IRRITATION AND/OR METAL FUME FEVER.

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SECTION 3. FIRE AND EXPLOSION
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Flash Point (method) N/AP Autoignition Temperature (method) N/AP

Flammable limits (% volume in air)
Upper N/AP Lower N/AP

Fire and Explosion Hazards DUST HAZARD EXISTS UNDER FAVORING CONDITIONS OF SMALL PARTICLE SIZE. DISPERSION IN AIR AND STRONG IGNITION SOURCE MAY RESULT IN AN EXPLOSION.

Extinguishing Media DRY CHEMICAL; USE DRY POWDER FOR METAL FIRES. GENTLY SPOON MEDIA ONTO FIRE. DO NOT DISTURB PARTICLES.

Special Firefighting Procedures DO NOT ENTER FIRE AREA WITHOUT PROPER PROTECTION INCLUDING PRESSURE-DEMAND, SELF-CONTAINED BREATHING APPARATUS.

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SECTION 4. HEALTH HAZARDS
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Summary of Acute Hazards RESPIRATORY TRACT IRRITATION, METAL FUME FEVER, EYE IRRITATION

ROUTE OF EXPOSURE SIGNS AND SYMPTOMS PRIMARY ROUTE

Inhalation INHALATION OF EXCESSIVE FUME OR DUST CONCENTRATIONS [X]
MAY RESULT IN RESPIRATORY TRACT IRRITATION AND METAL FUME FEVER.
SYMPTOMS OF METAL FUME FEVER MAY LAST 24 TO 48 HOURS AND MAY INCLUDE A SWEET OR METALLIC TASTE IN THE MOUTH, DRYNESS AND IRRITATION OF THE THROAT, COUGH, SHORTNESS OF BREATH, CHEST PAIN, NAUSEA, VOMITING, WEAKNESS FATIGUE, MUSCLE AND JOINT PAIN, CHILLS, SWEATING AND FEVER.

Eye Contact MECHANICAL IRRITATION MAY RESULT FROM AN ACCUMULATION OF DUST PARTICLES IN THE EYE. [X]

Skin Absorption NO SIGNIFICANT SIGNS OR SYMPTOMS INDICATIVE OF AN ADVERSE EFFECT ARE EXPECTED TO OCCUR. []

Skin Irritation NO SIGNIFICANT SIGNS OR SYMPTOMS INDICATIVE OF AN ADVERSE EFFECT ARE EXPECTED TO OCCUR. []

Ingestion IF SWALLOWED IN LARGE QUANTITIES, THIS MATERIAL COULD HAVE A TOXIC EFFECT. []

Symptoms of Chronic Hazards and Special Health Effects SEE SUPPLEMENTAL INFORMATION SECTION

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SECTION 5. PROTECTIVE EQUIPMENT AND OTHER CONTROL MEASURES

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Respiratory IF EXPOSURE EXCEEDS THE PEL/TLV, USE NIOSH APPROVED RESPIRATORY PROTECTION EQUIPMENT AS SPECIFIED IN THE NIOSH/OSHA OCCUPATIONAL HEALTH GUIDELINES FOR CHEMICAL HAZARDS.

Eye USE SAFETY GLASSES WITH SIDE SHIELDS OR GOGGLES TO PREVENT INJURY FROM FLYING PARTICLES OR HIGH DUST CONCENTRATIONS. USE GOGGLES OR SHIELD WITH APPROPRIATE LIGHT FILTRATION DURING WELDING OR CUTTING OPERATIONS.

Skin WHERE USE CAN RESULT IN SKIN CONTACT WITH PARTICULATE, PRACTICE GOOD PERSONAL HYGIENE. WASH HANDS AND OTHER EXPOSED AREAS WITH A MILD SOAP AND WATER BEFORE EATING, DRINKING OR SMOKING.

Engineering Controls USE ADEQUATE VENTILATION TO KEEP FUME OR DUST CONCENTRATION BELOW THE OCCUPATIONAL EXPOSURE LIMITS SHOWN IN SECTION VI. (REFER TO ANSI Z49.1, "SAFETY IN WELDING AND CUTTING" AND "OSHA REGULATION" CFR 1910.252.)

Other Hygienic and Work Practices WHERE APPLICABLE, USE PROTECTIVE GLOVES TO PROTECT AGAINST HEAT OR SHARP METAL EDGES.

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SECTION 6. OCCUPATIONAL EXPOSURE LIMITS

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SUBSTANCE	SOURCE	DATE	TYPE	VALUE/UNITS	TIME
COPPER FUME	OSHA	1988	TWA	0.1 MG/M3	8 HRS
COPPER DUSTS AND MISTS	OSHA	1988	TWA	1 MG/M3	8 HRS
ZINC OXIDE FUME	OSHA	1988	TWA	5 MG/M3	8 HRS
ZINC OXIDE FUME	OSHA	1989	STEL	10 MG/M3	15 MIN
COPPER FUME	ACGIH	1988	TWA	0.2 MG/M3	8 HRS
COPPER DUSTS & MISTS, AS CU	ACGIH	1988	TWA	1 MG/M3	8 HRS
ZINC OXIDE FUME	ACGIH	1988	TWA	5 MG/M3	8 HRS
ZINC OXIDE FUME	ACGIH	1988	STEL	10 MG/M3	15 MIN
ZINC OXIDE DUST	ACGIH	1988	TWA	10 MG/M3	8 HRS

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SECTION 7. EMERGENCY AND FIRST AID

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Inhalation IMMEDIATELY REMOVE FROM CONTAMINATED AREA TO FRESH AIR. IF IRRITATION PERSISTS, OR IF OTHER SIGNS OR SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION.

Eye Contact MECHANICAL INJURY ONLY. TREAT AS MECHANICAL INJURY ONLY. TREAT AS INERT FOREIGN BODY.

Skin Contact NOT EXPECTED TO PRESENT A SIGNIFICANT SKIN CONTACT HAZARD UNDER ANTICIPATED CONDITIONS OF NORMAL USE.

Ingestion NOT EXPECTED TO PRESENT A SIGNIFICANT INGESTION HAZARD UNDER ANTICIPATED CONDITIONS OF NORMAL USE.

Emergency Medical Treatment Procedures METAL FUME FEVER MAY BE TREATED SYMPTOMATICALLY.

SECTION 10.

PHYSICAL AND CHEMICAL DATA

Boiling points N/AP	Viscosity Units, N/AP	Temp. Method	Dry Point N/AP
Freezing Point N/AP	Vapor Pressure N/AP	Sol. in Water N/AP	Volatile Char. SOLIDS NOT VOLATILE
Specific Gravity Water at 39F = 1 8.45 TO 8.86	Vapor Sp. Gr. (Air=1 at STP) N/AP		pH N/AP
Hazardous Polymerization NO			Stability STABLE
Other Chemical Reactivity N/AP			
Other Physical and Chemical Properties	MELTING/FREEZING RANGE 1650 F - 1950 F DEGREES ODORLESS METALLIC MATERIAL		
Conditions to Avoid	EXPOSURE DURING STORAGE TO STRONG ACIDS, BASES OR OXIDIZING AGENTS.		
Materials to Avoid	MERCURY, AMMONIA AND ACETYLENE		
Hazardous Decomposition Products	METAL FUMES MAY BE GENERATED UNDER EXTREME HEAT		

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SECTION 11. ADDITIONAL PRECAUTIONS

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Handling, GOOD HOUSEKEEPING MUST BE PRACTICED DURING STORAGE, TRANSFER,
Storage HANDLING AND USE TO AVOID EXCESSIVE DUST ACCUMULATION. APPLY
and RECOMMENDATIONS OF NFPA 491 FOR COPPER ALLOYS.

Decontamination
Procedures

USE GOOD PERSONAL HYGIENE. WASH HANDS WITH MILD SOAP AND WATER
General BEFORE EATING, DRINKING, SMOKING, OR BEFORE LEAVING WORK. SALTS
Comments OF METAL COMPONENTS HAVE DEMONSTRATED MUTAGENIC POTENTIAL IN
SEVERAL BIOASSAYS, BUT THE HEALTH SIGNIFICANCE OF THESE RESULTS IS UNKNOWN.

NOTE EQ = Equal AP = Approximately N/P = No Applicable
LT = Less Than UK = Unknown Information Found
GT = Greater Than TR = Trace N/AP = Not Applicable
N/DA = No Data Available

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LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY
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SECTION 12. SUPPLEMENTAL INFORMATION

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THE COPPER AND THE ZINC IN THIS MATERIAL MAKES IT SUBJECT TO THE REPORTING
REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND
REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372. THIS NOTICE MUST NOT BE
DETACHED FROM THIS MATERIAL SAFETY DATA SHEET AND ANY COPYING OR
REDISTRIBUTION OF THIS DATA SHEET MUST INCLUDE THIS NOTICE.

THOSE RARE INDIVIDUALS (ONE PERSON IN 200,000 POPULATION) SUFFERING FROM
THE GENETIC DISORDER KNOWN AS WILSON'S DISEASE DO NOT ELIMINATE COPPER
FROM THE SYSTEM IN A NORMAL FASHION AND SHOULD MINIMIZE INGESTION AND
INHALATION OF COPPER CONTAINING MATERIALS.

Supplement Date 11/25/88