

MATERIAL SAFETY DATA SEET – NO. A-30

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LABEL IDENTITY: Beryllium Alloy

COMMON NAME AND SYNONYMS: Beryllium Copper

CAS NO.: Mixture

TRADE NAME: Alloy 165, UNS NO. C17000

FORMULA: See Chemical Composition

SECTION I – STANDARDS AND REGUALTIONS

OCCUPATIONAL – STANDARDS

<u>SUBSTANCE</u>	<u>OSHA</u>			<u>ACGIH</u>	
	<u>PEL</u>	<u>CEILING</u>	<u>PEAK</u>	<u>TLV</u>	<u>TLV-STEL</u>
BERYLLIM	0.002	0.005	0.025	0.002	NA
COPPER FUME	0.1	NA	NA	0.2	NA
(DUST & MIST)	1.0	NA	NA	1.0	2.0
COBALT	0.1	NA	NA	0.1	NA

ALL CONCENTRATIONS ARE AS MILLIGRAMS PER CUBIC METER OF AIR

- ACGIH = American Conference of Governmental Industrial Hygienists
- PEL = Eight hour average permissible exposure limit
- CEILING = Not to be exceeded except for peak limit
- PEAK = 30 minute maximum duration concentration above ceiling limit
- TLV = Eight hour average threshold limit value
- TLV-STEL = 15 minute short term exposure limit
- (C) = ACGIH ceiling limit – NOT TO BE EXCEEDED

NA = NOT APPLICABLE

NE = NOT ESTABLISHED

EPA EMISSION STANDARD (AS BE)

0.01 Micrograms per cubic meter (30 day average) ambient air standard 10 Grams / 24hrs. total site emission limit

EPA WASTEWATER REULATIONS

None, regulations are pending

DOT SHIPPING REGULATIONS

No special requirements

EPA RCRA REGULATION

Not applicable

NOTE

State and local regulations may vary

SECTION VI – SPILL AND DISPOSAL PROCEDURES

Beryllium containing scrap is normally recycled. In cases where this is not justified, solid material may be landfilled.

Because of the potential inhalation hazard inherent in the handling of fine, dust – like material (such as baghouse fines) we recommend it be: 1) Sealed in two plastic bags. 2) Placed in a sound container. 3) Labeled as a “Beryllium Containing Material”, and 4) Shipped to either a recycling facility or an approved hazardous waste disposal site. If greater than one pound of such metal dust or powder is released into the environment, report the spill immediately to the national response center (800) 424-8802

SECTION VII – SPECIAL PROTECTION INFORMATION

No protective equipment or clothing is required when handling solid forms. Approved high efficiency cartridge or supplied air respirator is required if beryllium in air concentrations exceeds OSHA standard.



SECTION VIII – SPECIAL PRECAUTIONS



When welding, melting and casting, dry grinding, dry sanding, polishing, or otherwise abrading the surface of Beryllium alloys in a manner which generates finely divided particles, an exposure to airborne Beryllium in excess of the occupational standard can occur. Under these conditions, local exhaust ventilation at the point of generations is the preferred method of control. The normal machining of Beryllium alloys does not pose a problem of exposure to airborne Beryllium; however, cast Beryllium alloys must have the scale, containing Beryllium Oxide, cleaned from the surface before machining to prevent potential exposure. Grinding or sanding operations under a liquid coolant do not pose an exposure potential; unless by recycling the liquid coolants, the concentration of finely divided Beryllium alloy reaches a point where particulate becomes airborne during its use. This source can be controlled by an in-line coolant centrifuge. Operations generating airborne Beryllium must be air sampled to determine exposure levels. Where exposure data indicates, medical surveillance should be conducted.



SECTION II – PHYSICAL DATA AND CHEMICAL COMPOSTION



MELTING POINT: 1630⁰ F (MINIMUM)
BOILING POING: NA
VAPOR PRESSURE: NA
SOLUBILITY: NA
SOLID, BRASS COLOR

COMPOSITION

BERYLLIUM: CAS NO. 7440-41-7-1.60-1.79%
COBALT: CAS NO. 7440-48-4-0.2-0.35%
COPPER: CAS NO. 7440-50-8-BALANCE



SECTION 111 – FIRE AND EXPLOSION HAZARD DATA



FLASH POINT: NA
UPPER FLAMMABLE LIMIT: NA
LOWER FLAMMABLE LIMIT: NA
AUTO-IGNITION TEMPERATURE: NA



SECTION IV-HEALTH HAZARD DATA



Effects of over exposure: ACUTE – dusts and fumes irritate the eyes, nose, and throat. Symptoms may include cough, metallic taste in the mouth, fever, fatigue, and nausea. Chronic – inhalation may cause berylliosis, a serious chronic lung disease, with cough, chest pain, shortness of breath, weight loss, weakness, and fatigue. First aid: Remove from exposure and consult a physician. Handling of solid shapes presents no dermatitis or skin absorption problem.

Hazard communication regulations of the occupational safety & health administration require that caution labels for materials listed as potential carcinogens in either the international agency for cancer research monograph series or the national toxicology program annual report on carcinogens must contain a cancer warning. Beryllium has been so listed based principally on animal tests and therefore, as shipped by brush, this material bears a label identifying it as a potential cancer hazard.



SECTION V – REACTIVITY DATA



STABLE