

March 28, 2008

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RE: Study on Hazardous Substances in Electrical and Electronic Equipment (EEE), not Regulated by the RoHS Directive

Japan Society of Newer Metals (JSNM) is a public-service corporation authorized by the Japanese government. JSNM supports material restriction for the protection of human health and the environment that are based on the scientific evaluation of environmental risks, alternative technology, cost-effectiveness, etc. JSNM would like to take this opportunity to contribute to the above referenced consultation.

JSNM represents approximately forty (40) Japanese special metals manufacturers serving a global client base across a range of industry sectors including the electronic and automotive sectors. JSNMs members report that Copper beryllium (CuBe) alloy is used as conducting spring material in a range of applications including electronic connectors, IC sockets, switches, relays, and micro motors. JSNM recognizes that CuBe alloys have already made a significant contribution to the advancement of electronics by supporting their miniaturization and reliability and that the CuBe alloys will continue to make a significant contribution to the advancement of electronic and electrical equipment.

JSNM considers that there exists amongst industry a high level of awareness of the environmental and health issues associated with CuBe alloys. An example supporting this is the guidance released by C4E (CEFIC-EECA-EICTA-EUROMETAUX). This guidance from 4 leading European industry association clearly states that:

- CuBe alloy is classified as a non-toxic substance
- CuBe alloy can be managed safely using existing control
- CuBe alloys in end-of life electronic devices can be recycled as a part of general copper recycling processes.

JSNM is aware of discussions regarding the recycling of CuBe alloys. JSNMs experience is that CuBe alloys are currently recycled as part of the general copper recycling processes and is not aware of any cases where CuBe alloys have been identified as the source of significant health or environmental risks from recycling operations.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jun Oriyama', is centered on a light gray rectangular background.

**Jun Oriyama**

**Managing Director**

**Japan Society of Newer Metals (JSNM)**

**Guidance Document  
on the Appliance of Substances under Special Attention in  
Electric & Electronic – Products**

**Published in co-operation**

**by**

**European Chemical Industry Council (CEFIC)**

**European Electronic Component Manufacturers Association (EECA)**

**European Information, Communications and Consumer Electronics Industry  
Technology Association (EICTA)**

**European Association of Metals (EUROMETAUX)**

**Version 2.2**

**Release of November 25, 2002**

**Attachment VI: Copper Beryllium Alloys**

(Vsn: May 2002)

- **Chemical compound:** Metallic alloys within the following compositional ranges
 

Beryllium	2% max	CAS-No 7440-41-7
Nickel	2.2% max	CAS-No 7440-02-0
or		
Cobalt	2.7% max	CAS-No 7440-48-4
Lead	0.6% max	CAS-No 7439-92-1 (free machining rod only)
Copper balance CAS-No 7440-50-8		
- **Special applications:** Electrical connector terminations; switch components; relay springs; electromagnetic radiation seals.
- **Benefits:** High strength; high conductivity; stability at elevated temperatures under stress; ease of fabrication into complex shapes; recyclable. High reliability electrical connections; efficient shielding against high frequency electromagnetic radiation; miniaturisation.
- **Reasons for special attention:** Toxic by inhalation (R23). Classified as Category 2 carcinogens by inhalation (R49) – but see “Current Affairs” below. Non-toxic to the environment.
- **Evaluation:** Inhalation risk can only arise in certain component manufacturing operations, e.g. grinding or welding. Local exhaust ventilation and filtration under existing workplace regulations control such risk. General handling, stamping and forming and most machining operations do not cause inhalation risk.
 

No risk arises during the lifetime of the components. Scrap from component manufacturing operations can be returned to the alloy manufacturer for recycling as copper beryllium alloy. Segregated copper beryllium scrap should only be remelted using proper controls.

Components in end-of-life electrical equipment can be recycled as part of the general copper recycle stream. There is generally no need for component extraction prior to equipment recycling.

The alloys are classified as non-hazardous in the OECD, Basel and EU Waste Control Systems and in the International Maritime Organisation Composite List.
- **Recommendations:** The alloys can continue to be used safely by current practices. Component manufacturing operations should be assessed for risk from airborne material and appropriate controls should be used if such risk could exist.
 

Component manufacturing scrap should be returned to the supplier for recycling.

Equipment manuals should identify copper beryllium components to inform subsequent decisions about equipment recycling options. Where economically viable, components should be segregated for recycling as copper beryllium alloy. Where this is not economically viable, the components can be carried with the equipment through normal recycling into the general copper recycle stream.
- **Current affairs:** It has been recognised by the EC and the OECD that alloys in general may be inappropriately hazard – classified under the present system, which uses arbitrary concentration limits, which are more appropriate to simple mixtures. Discussion is underway, between the EC; the OECD and industry, to determine how alloys might be better classified by direct assessment of their own properties. Once this procedure is established, existing data will be presented to argue that copper beryllium alloys are in fact non-carcinogenic.

## CEFIC - EECA - EICTA - EUROMETAUX

The forthcoming EU Directive on Waste from Electrical and Electronic Equipment does not require segregation of copper beryllium components prior to equipment recycling, nor place any restriction on their usage.

- **Further information**

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- **Voluntary ECO labels and ECO declarations**

At present there are no restrictions in voluntary ECO label systems and no obligations to declare in voluntary ECO declaration systems.