Section 1 - Identification of The Material and Supplier

Chem-Trend Australia Pty. Ltd.
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Chemical nature: Alloy of beryllium and copper metals.

Trade Name: **Beryllium Copper Plunger Tips**

Product Use: Tip that fits onto the end of a plunger in die casting various molten metals.

Creation Date: **March, 2014**

This version issued: **September, 2024** and is valid for 5 years from this date.

Poisons Information Centre: Phone 13 1126 from anywhere in Australia

Section 2 - Hazards Identification

Statement of Hazardous Nature

SUSMP Classification: S6

ADG Classification: None allocated. Not a Dangerous Good under the ADG Code.

UN Number: None allocated

GHS Signal word: DANGER

Skin sensitisation – category 1
Acute toxicity (inhalation) – category 4
Carcinogenicity – category 1

HAZARD STATEMENT:

H317: May cause an allergic skin reaction.
H332: Harmful if inhaled.
H350: May cause cancer.

PREVENTION

P102: Keep out of reach of children.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dusts.
P271: Use only outdoors or in a well ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves, protective clothing and eye or face protection.
P281: Use personal protective equipment as required.

RESPONSE

P311: Call a POISON CENTRE or doctor.
P314: Get medical advice or attention if you feel unwell.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+P313: If exposed or concerned: Get medical advice.
P333+P313: If skin irritation or rash occurs: Get medical advice.
P337+P313: If eye irritation persists: Get medical advice.
P370+P378: Not combustible. Use extinguishing media suited to burning materials.

STORAGE

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

DISPOSAL

P501: Dispose of small quantities and empty containers by putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Emergency Overview

Physical Description & Colour: Metal article with a distinct copper/gold colour.

Odour: No odour.
Major Health Hazards: harmful if inhaled, may cause cancer if inhaled, possible skin sensitiser.

Note that the cancerous nature of this product relates to exposure by inhalation. The physical nature of this product (cast metal pieces) makes inhalation of particles most unlikely.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m^3)	STEL (mg/m^3)
Copper	7440-50-8	90-99	1 (fume)	not set
Nickel	7440-02-0	max 2	not set	not set
Cobalt	7440-48-4	max 3	not set	not set
Beryllium	7440-41-7	max 0.8	0.002	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Inhalation: If inhalation occurs, contact a Poisons Information Centre. Urgent hospital treatment is likely to be needed. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.
Skin Contact: Gently brush away excess particles. Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.
Eye Contact: Quickly and gently brush particles from eyes. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. Take special care if exposed person is wearing contact lenses.
Ingestion: If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.
No fire decomposition products are expected from this product at temperatures normally achieved in a fire.
Extinguishing Media: Not combustible. Use extinguishing media suited to burning materials.
Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.
Flammability Class: Does not burn.

Section 6 - Accidental Release Measures

Accidental release: This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. For minor spills, clean up, rinsing to sewer and put empty container in garbage. Although no special protective clothing is normally necessary because of occasional minor contact with this product, it is good practice to wear impermeable gloves when handling chemical products. In the event of a major spill, prevent spillage from entering drains or water courses and call emergency services.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.
Storage: Store packages of this product in a cool place. Make sure that containers of this product are kept tightly closed. Keep containers dry and away from water. Keep containers of this product in a well ventilated area. Make sure

that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Check packaging - there may be further storage instructions on the label.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits	TWA (mg/m^3)	STEL (mg/m^3)
Copper	1 (fume)	not set
Beryllium	0.002	not set

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

Eye Protection: Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

Skin Protection: If you believe you may have a sensitisation to this product or any of its declared ingredients, you should prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: rubber, nitrile.

Respirator: If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable Dust Mask. Otherwise, not normally necessary.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Metal article with a distinct copper/gold colour.
Odour:	No odour.
Boiling Point:	Not available.
Flash point:	Does not burn.
Upper Flammability Limit:	Does not burn.
Lower Flammability Limit:	Does not burn.
Autoignition temperature:	Not applicable - does not burn.
Freezing/Melting Point:	1575-1855°C
Volatiles:	Nil at 100°C.
Vapour Pressure:	Nil at normal ambient temperatures.
Vapour Density:	Not applicable.
Specific Gravity:	8.08-8.61
Water Solubility:	Insoluble.
pH:	No data.
Volatility:	Nil at normal ambient temperatures.
Odour Threshold:	No data.
Evaporation Rate:	Not applicable.
Coeff Oil/water Distribution:	No data
Particle Characteristics:	Metal objects.
Autoignition temp:	Not applicable - does not burn.

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Containers should be kept dry. Keep containers and surrounding areas well ventilated.

Incompatibilities: strong acids, strong oxidising agents.

Fire Decomposition: No significant quantities of decomposition products are expected at temperatures normally achieved in a fire.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Local Effects:
Target Organs: There is no data to hand indicating any particular target organs.

Nickel is Classed by SWA as a potential sensitiser by skin contact.
Cobalt is Classed by SWA as a potential sensitiser by skin contact.
Beryllium is Classed by SWA as a potential sensitiser by skin contact.

Classification of Hazardous Ingredients

Ingredient	Health Hazard Statement Codes
Beryllium	H330, H350i, H335, H372, H334, H317

- Acute toxicity – category 1
- Carcinogenicity – category 1B
- Specific target organ toxicity (single exposure) – category 3
- Specific target organ toxicity (repeated exposure) – category 1
- Respiratory sensitisation – category 1
- Skin sensitisation – category 1

Nickel — H351, H372, H317

- Carcinogenicity – category 2
- Specific target organ toxicity (repeated exposure) – category 1
- Skin sensitisation – category 1

Cobalt — H350i, H335, H373, H360F, H334, H317, H413, H302, H330

- Carcinogenicity – category 1B
- Specific target organ toxicity (single exposure) – category 3
- Specific target organ toxicity (repeated exposure) – category 2
- Reproductive toxicity – category 1B
- Respiratory sensitisation – category 1
- Skin sensitisation – category 1
- Hazardous to the aquatic environment (chronic) – category 4
- Acute toxicity (ingestion) - category 4
- Acute toxicity (inhalation) - category 1

Nickel compounds are known to be human carcinogens based on sufficient evidence of carcinogenicity from studies in humans, including epidemiological and mechanistic information, which indicates a causal relationship between exposure to nickel compounds and human cancer. The findings of increased risk of cancer in exposed workers are supported by evidence from experimental animals that shows that exposure to an assortment of nickel compounds by multiple routes causes malignant tumours to form at various sites in multiple species of experimental animals. A report may be found at http://ntp.niehs.nih.gov/ntp/roc/eleventh/profiles/s118nick.pdf
Beryllium and beryllium compounds are known to be human carcinogens based on sufficient evidence of carcinogenicity in humans. Epidemiological studies indicate an increased risk of lung cancer in occupational groups exposed to beryllium or beryllium compounds. Groups with greater exposure or longer time since first exposure show higher risks, which supports a cause-and-effect relationship. A report may be found at http://ntp.niehs.nih.gov/ntp/roc/eleventh/profiles/s022bery.pdf

Potential Health Effects

Persons sensitised to Nickel, Cobalt or Beryllium should avoid contact with this product.

Inhalation:
Short Term Exposure: Available data shows that this product is toxic, but symptoms are not available. In addition product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.
Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:
Short Term Exposure: Classified as a potential sensitiser by skin contact. Exposure to a skin sensitiser, once sensitisation has occurred, may manifest itself as skin rash or inflammation, and in some individuals this reaction can be severe. However product is unlikely to cause any discomfort in normal use.
Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure: This product is believed to be not irritating to eyes.
Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. This product is unlikely to cause any irritation problems in the short or long term.
Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: Nickel is classified by SWA as a Class 3 Carcinogen, possibly carcinogenic to humans.
Beryllium is classified by SWA as a Class 2 Carcinogen, likely to be carcinogenic to humans.
See the SWA website for further details. A web address has not been provided as addresses frequently change.
NTP: Nickel is classified by NTP as reasonably anticipated to be carcinogenic to humans.
Beryllium is classified by NTP as reasonably anticipated to be carcinogenic to humans.
See the NTP website for further details. A web address has not been provided as addresses frequently change.
IARC: Nickel is classed 2b IARC - possibly carcinogenic to humans.
Cobalt is classed 2b IARC - possibly carcinogenic to humans.
Beryllium is classed 1 by IARC - carcinogenic to humans. Beryllium compounds, evaluated as a group.
See the IARC website for further details. A web address has not been provided as addresses frequently change.

Section 12 - Ecological Information

This product is unlikely to adversely effect the environment.

Section 13 - Disposal Considerations

Disposal: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Section 14 - Transport Information

UN Number: This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

Section 15 - Regulatory Information

AIIC: All of the significant ingredients in this formulation are compliant with AICIS regulations.
The following ingredient: Beryllium, is mentioned in the SUSMP.

Section 16 - Other Information

This SDS contains only safety-related information. For other data see product literature.

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS

OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document “Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice” (July 2020) and GHS Revision 7

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