

**14ct YELLOW GOLD
HARD SOLDER (14YHS)**

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	14ct Yellow Gold Hard Solder (Product Code: 14YHS)
Other Names	Proper Shipping Name - None allocated
Recommended Use	Solder for jewellery alloys
Supplier Address	Becks Group Australia – A Division of Peter W Beck Pty Ltd 14 Duncan Court Ottoway Park SOUTH AUSTRALIA 5013
Telephone	08 8440 3399 or 1800 888 590 Toll Free
Fax	08 8447 1144
Email	preciousmetals@becksgroup.au
Web Address	www.becksgroup.au
Emergency Telephone	13 11 26 Poisons Information Centre - Australia
Emergency Services	000 - Australia

SECTION 2 - HAZARDS IDENTIFICATION

Hazard Statement	Classified as NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. according to criteria of NOHSC.
Hazchem Code	None allocated
Dangerous Goods Class	None allocated
Sub Risk	None allocated
Risk Phrases	R26/27/28 - Very Toxic by inhalation and in contact with skin and if swallowed. R36/37/38 - Irritating to eyes, respiratory system and skin.
Safety Phrases	S20/21 - When using, do not eat, drink or smoke. S23 - Do not breathe fumes / vapour. S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S51 - Use only in well ventilated areas.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Synonym(s)	CAS No	Proportion %
Gold	-	7440-57-5	55% - 60%
Silver	-	7440-22-4	15% - 25%
Copper	-	7440-50-8	15% - 20%
Zinc	-	7440-66-6	1% - 5%

SECTION 4 - FIRST AID MEASURES

Description of necessary measures according to routes of exposure	
Swallowed	DO NOT induce vomiting. Wash out mouth with water and then give plenty of water to drink in small amounts. Never give anything to an unconscious person. Loosen tight clothing. Seek medical attention immediately.
Eyes	Hold eyes open and wash continuously for 15 minutes with running water. Ensure irrigation under eyelids by occasionally lifting eyelids. Do not attempt to remove contact lenses unless trained. Seek medical attention immediately.
Skin	Wash skin well with soap and water for at least 15 minutes. Remove contaminated clothing and footwear. Ensure contaminated clothing is thoroughly washed before using again. Seek medical attention immediately.

Inhaled Remove victim to fresh air.
Keep patient warm and rested.
If breathing is shallow, or has stopped, ensure clear airway and apply resuscitation and oxygen if available.
Seek medical attention immediately.

Symptoms of Exposure

Acute

Swallowed Will cause severe irritation to the mouth, mucous membranes, throat, oesophagus and stomach. May result in difficult breathing, stomach pain, circulatory shock, nausea, cramps, vomiting and diarrhoea.

Eyes Will cause severe irritation to the eyes, with effects including tearing, pain and stinging.

Skin Will cause irritation to the skin, with effects including redness and itchiness.

Inhaled Very Toxic Fumes. Will cause dryness and irritation to the nose, throat and respiratory system, with effects including coughing and choking. In severe cases, inhalation may result in spasm, inflammation and oedema of the larynx and bronchi, chemical pneumonitis and pulmonary oedema.

Delayed

Swallowed Ingestion may cause nausea, cramps, vomiting and diarrhoea. May result in difficult breathing, stomach pain and circulatory shock.

Eyes Depending upon duration of exposure, conjunctivitis and some form of permanent eye damage may occur.

Skin Repeated skin contact may lead to dermatitis.

Inhaled Very Toxic Fumes. Inhalation of freshly formed fume may cause Metal Fume Fever. Four to twelve hours after exposure, signs may include a metallic taste in the mouth, dryness and irritation of the throat, coughing, headache, fever, chills, excessive sweating, muscle pain, chest pain, nausea, vomiting and weakness. Recovery from symptoms occurs within 48 hours. Metal Fume Fever is not usually fatal and there are no known delayed effects relating to repeated incidences of Metal Fume Fever.

First Aid Facilities

It is advisable to ensure that an eye-wash station and drench shower is kept close to the area where the product is used. Give a copy of this MSDS to medical personnel if signs or symptoms of overexposure occur and medical attention is needed.

Advice To Doctor

Treat symptomatically. Note the nature of this product. Consult the Poisons Information Centre.

Aggravated medical conditions caused by exposure

Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Use sand, graphite powder, dry chemical, water spray or water fog. DO NOT USE water jet.

Hazards from combustion products

Non-combustible, non-flammable in solid form. Fine powder or filings may burn with intense heat. Dousing fine dust and burning molten metal with water may present an explosion hazard generating hydrogen gas / toxic fumes. Avoid contact with incompatible materials such as strong acids, halogens and acetylene. Hazardous polymerisation will not occur.

Special protective precautions and equipment for fire fighters

Fire fighters should wear full emergency protective equipment including self-contained breathing apparatus.

Hazchem Code

None allocated

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Evacuate all unnecessary personnel. Increase ventilation. Wear respirator and protective clothing. Follow Fire Fighting procedures.

Methods & materials for containment and clean up

Dampen spilled material with water fog to avoid airborne dust. Sweep up solid material for recycling or disposal. Molten metal should be allowed to cool before clean up. Wear sufficient respiratory protection and full protective clothing to minimize exposure. Transfer material to a suitably labeled container.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling

Maintain adequate ventilation at all times. A supplied air respirator or a self contained breathing apparatus (SCBA) for emergencies should be available and checked regularly. Wash hands thoroughly after use with soap and water. Do not eat, drink or smoke during use. Do not breathe dust or fumes. Avoid all contact with eyes, skin and clothing and wear protective clothing and equipment. Do not re-use gloves or finger cots.

Conditions for safe storage and incompatibilities

Store in tightly closed containers in an adequately ventilated, cool area, located away from sunlight, strong acids, halogens, acetylene, food or beverages.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

National exposure standards (TWA) Safework Australia

Zinc 5mg/ m³

Copper 1mg/ m³

Silver 0.1mg/ m³

Gold not established

Biological limit values

Not available.

Engineering controls

Maintain adequate local ventilation at all times to maintain exposure to below the occupational exposure limits. Temperatures should be kept as low as practicable to minimise the generation of fume. Avoid close proximity to strong acids, halogens, acetylene and water.

Personal Protective Equipment

Respirator Vapour / Fume respirator. (SCBA).

Eye Protection Chemical goggles or face shield.

Glove Type Chemical resistant gloves.(Nitrile or Neoprene).

Clothing Chemical resistant clothing and shoes.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colour - Yellow	:	Physical Form - Solid	:	Shape - Metal Tab
Odour	Odourless				
pH	Not applicable				
Vapour Pressure	Not available				
Vapour Density	Not available				
Boiling Point	Not available				
Freezing/Melting Point	Not available				
Solubility in Water	Insoluble				
Specific Gravity	Not available				
Flash point	Not applicable				
Flammability Limits	Non flammable				
Ignition Temperature	Non flammable / Non combustible				
Reactions that release flammable gases or vapours	Decomposes to fumes containing oxides. Dousing with water jet produces explosive hydrogen gas.				

SECTION 10 - STABILITY AND REACTIVITY

Chemical stability	Product is stable in solid form under normal conditions.
Conditions to avoid	Decomposes to toxic metal fumes upon heating and in contact with moisture, strong acids, halogens or acetylene. It is recommended that the solder join is solid before water quenching a joined assembly.
Incompatible materials	Strong acids, halogens and acetylene. Small additions of water to molten metal can cause an explosion of hydrogen gas.
Hazardous decomposition products	Toxic metal fumes, hydrogen gas.

SECTION 11 - TOXICOLOGICAL INFORMATION

Health effects from the likely route of exposure

Acute

Swallowed	Will cause severe irritation to the mouth, mucous membranes, throat, oesophagus and stomach. May result in difficult breathing, stomach pain, circulatory shock, nausea, cramps, vomiting and diarrhoea.
Eyes	Will cause severe irritation to the eyes, with effects including tearing, pain and stinging.
Skin	Will cause irritation to the skin, with effects including redness, itchiness and possible dermatitis.
Inhaled	Very Toxic Fumes. Will cause dryness and irritation to the nose, throat and respiratory system, with effects including coughing and choking. In severe cases, inhalation may result in spasm, inflammation and oedema of the larynx and bronchi, chemical pneumonitis and pulmonary oedema.

Delayed

Swallowed	Ingestion may cause nausea, cramps, vomiting and diarrhoea. May result in difficult breathing, stomach pain and circulatory shock.
Eyes	Depending upon duration of exposure, conjunctivitis and some form of permanent eye damage may occur.
Skin	Repeated skin contact may lead to dermatitis.
Inhaled	Very Toxic Fumes. Inhalation of freshly formed fume may cause Metal Fume Fever. Four to twelve hours after exposure, signs may include a metallic taste in the mouth, dryness and irritation of the throat, coughing, headache, fever, chills, excessive sweating, muscle pain, chest pain, nausea, vomiting and weakness. Recovery from symptoms occurs within 48 hours. Metal Fume Fever is not usually fatal and there are no known delayed effects relating to repeated incidences of Metal Fume Fever.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Toxic to aquatic organisms, soils and plant life.
Persistence and degradability	May cause long term adverse effects in aquatic, soil and plant environments.
Mobility	Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal methods and containers	Dispose of in a manner conforming to regulations set out by the Environmental Protection Authority, Federal, State and Local Government Regulations. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste by an approved waste agency. Processing, use or contamination of this product may change the waste management options. Advise toxic, irritant nature.
Special Precautions for landfill or incineration	Must not be allowed to enter the ground, sewers or waterways. Dispose of in a manner conforming to regulations set out by the Environmental Protection Authority, Federal, State and Local Government Regulations.

SECTION 14 - TRANSPORT INFORMATION

UN Number	None allocated
UN Proper Shipping Name	None allocated
Dangerous Goods Class	None allocated
Sub Risk	None allocated
Packing Group	None allocated
Special precautions for user	Maintain adequate ventilation at all times. A supplied air respirator or a self contained breathing apparatus (SCBA) for emergencies should be available and checked regularly. Avoid contact with moist air or water. Store in a cool place and out of direct sunlight. Store away from sources of heat, strong alkalis, acids, combustibles and oxidising agents. Store in original packages.
Hazchem Code	None allocated

SECTION 15 - REGULATORY INFORMATION

Additional national and/or international regulatory information

SUSDP Not Scheduled

SECTION 16 - OTHER INFORMATION

Date of Preparation or last revision

First Issued: February 2010

Key/Legend to abbreviations and acronyms used

NIOSH	National Institute for Occupational Safety and Health (USA)
NOHSC	National Occupational Health and Safety Commission of Australia
N.O.S.	Not otherwise specified
pH	Measure of how acidic or alkaline a material is using a 1 - 14 scale. pH 1 is strongly acidic and pH 14 is strongly alkaline.
PVC	Polyvinyl Chloride
SCBA	Self contained breathing apparatus.
SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons
TWA	Time Weighted Average (Value of exposure over an 8 hour shift)

Literature references

NOHSC - National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011 (2003)] (Australia)

NOHSC - Guidance Note on the interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment 3rd Edition [NOHSC:3008 (1995)] (Australia)

NOHSC - Guidelines for Health Surveillance [NOHSC:7039 (1995)] (Australia)

NOHSC - Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)] (Australia)

NOHSC - List of Designated Hazardous Substances [NOHSC:10005 (1999)] (Australia)

NEW JERSEY RIGHT TO KNOW HAZARDOUS SUBSTANCE FACT SHEET - Dept of Health and Senior Services (USA) May 2001 (NOHSC approved material)

NIOSH - Pocket Guide to Chemical Hazards (USA)

SAFework (SA) - Information Sheet - Welding / Metal Fumes August 2000 (Australia)

This information is given in good faith, being compiled from sources considered to be dependable. It is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Since P W Beck Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

- END OF MSDS -