DANGEROUS GOODS (DG) and HAZARDOUS SUBSTANCES (HS) RISK ASSESSMENT

Administration	Date Completed: 16/05/2024
Department/Work Area Location: MATH: [151] Monadelphous EECE Lab	Responsible Work Area Manager/ Supervisor Stuart Mather / Jega Gurusamy
People involved in completion of this Risk Assessment:	
Name of Dangerous Goods or Hazardous Substance:	**Chip Quik Leaded Solder Wire: SMD2SW.020** **HMP 362 5C SOLDER WIRE #556-503** **Indium Corp. Indalloy® 10 Pb-In Solder Alloy**
Equipment being use	**soldering station**

Determine Dangerous Goods (DG) and Hazardous Substances (HS) Hazard and Risk Factors

Review SDS of DG / HS and answer the following questions:

Question	Yes/No	Class:	Packaging Group:	Quantity:	Unit of Measure:
Is the substance classified as being Hazardous?	Yes	N/A	N/A	SMD2SW.020: 1 HMP 362 5C: 500 Indalloy® 10: ~20	Lb g g
Is the substance a Dangerous Good?	No	N/A	N/A	N/A	N/A

Review SDS of DG / HS and document Risk and Safety Phrase:

Risk Phrases Eg. Heating may cause explosion	H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H350 May cause cancer. H351 Suspected of causing cancer. H360 May damage fertility. May damage the unborn child. H373 May cause damage to the reproductive system, the blood, the brain and the endocrine organs through prolonged or repeated exposure. Route of exposure: oral, inhalative. H410 Very toxic to aquatic life with long lasting effects. R33 Danger of cumulative effects.
Safety Phrases Eg. Keep in cool place	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. P233 Keep container tightly closed. P260 Do not breathe dust/fume/gas/mist/vapor/spray. P261 Avoid breathing dust/fumes. P262 Do not get in eyes, on skin, or on clothing. P264 Wash hands thoroughly after handling. P270 Do not eat, drink, or smoke when using this product. P271 Use in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P281 Use personal protective equipment as required. P284 In case of inadequate ventilation wear respiratory protection. P301/P330/P331/P310 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER/Doctor. P303/P361/P352/P333/P313 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with soap & water. Get medical advice/attention if skin irritation or rash occurs or if you feel unwell. P304/P340/312 IF INHALED: Remove victim to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. P305/P351/338/ P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call POISON CENTER/Doctor. P308/P313 IF EXPOSED OR CONCERNED: Get medical advice/attention. P342/P311 IF EXPERIENCING RESPIRATORY SYMPTOMS: Call POISON CENTER/Doctor. P362 Take off contaminated clothing and wash it before reuse. P391 Collect spillage. P402/P404 Store in a dry place. Store in a closed container. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Determine DG/HS Risk Factors: *Tick ☑ the below boxes to for all identified risks*

What form is the HS/DG in?

- ☐ Liquid
- ☒ Solid
- ☐ Gas/Odour
- ☐ Powder
- ☐ Other (Describe):

HS Hazards

Does the SDS make reference to any of the following HS hazards?

- ☒ Toxic
- ☒ Harmful
- ☐ Corrosive
- ☒ Irritant
- ☐ Poisonous
- ☒ Sensitiser (allergic reaction to skin)
- ☒ Carcinogenic
- ☒ Mutagenic
- ☐ Teratogenic (may cause birth defects)
- ☐ Other (Describe):

DG Hazards

Does the SDS make reference to any of the following DG hazards?

- ☐ Acid ☐ Strong ☐ Weak
- ☐ Base ☐ Strong ☐ Weak
- ☐ Acid oxidiser
- ☐ Corrosive
- ☐ Dangerous when wet
- ☐ Explosive
- ☐ Highly flammable
- ☐ Organic peroxide
- ☐ Oxidising agent
- ☐ Spontaneously combustible
- ☐ Unstable
- ☐ Other (Describe):

Exposure Routes

Does the SDS make reference to any specific requirements managing possible exposure routes?

- ☒ Inhalation
- ☒ Ingestion
- ☐ Injection
- ☒ Skin
- ☒ Eye
- ☐ Other (Describe):

First Aid and Emergency

Does the SDS outline any specific first aid?

- ☒ Transfer immediately to doctor/hospital
- ☐ First aid supplies (eye wash, first aid kit etc.)
- ☐ First aid equipment required
- ☐ First aid training
- ☒ Call Poison Information Centre
- ☒ Do NOT induce vomiting
- ☐ Give water
- ☐ Medical emergency plan
- ☐ Evacuation plan
- ☐ Emergency Equipment
- ☒ Other (Describe):
  IF INHALED: Remove person to fresh air. If not breathing, seek immediate medical attention.

Health Monitoring

Does the SDS refer to any specific health monitoring requirements in being exposed to the HS/DG?

- ☐ Health Surveillance
- ☐ Air Monitoring
- ☐ Other (Describe)

Handling and Usage

Does the SDS outline any specific requirements in handling/using the DG / HS

- ☒ Wear PPE
- ☐ Follow label instructions
- ☒ Avoid inhalation
- ☒ Avoid skin or eye contact
- ☒ Only use in well-ventilated areas
- ☒ Keep container sealed when not in use
- ☒ Maintain personal hygiene standards before and after use
- ☐ Keep away from ignition sources
- ☐ Training required before use
- ☐ Other (Describe):

Storage

Does the SDS refer to any specific safe storage requirements?

- ☐ Ensure Correct labelling
- ☒ Store in cool and dry area
- ☐ Store in ventilated area
- ☐ Protect from heat
- ☐ Protect from ignition sources or open flames
- ☐ Protect from sunlight
- ☐ Refrigerate or freeze at specified temperature
- ☒ Isolate/ Lock / Restrict Access
- ☐ Separation and Segregation
  **See Compatibility Chart **
- ☐ Other (Describe):

Transport (DG Items Only)

Which Australian Dangerous Goods Code (ADG Code) requirements apply to this DG?

- ☐ Packaging requirements
- ☐ Use of bulk containers, IBCs, freight containers and unit loads
- ☐ Marking and placarding
- ☐ Vehicle requirements
- ☐ Segregation and stowage
- ☐ Transfer of bulk dangerous goods
- ☐ Safety equipment
- ☐ Procedures during transport emergencies
- ☐ Other (Describe):

Spill Management

Does the SDS make reference to any specific actions in managing HS/DG spills?

- ☐ Spills management kit and PPE items
- ☐ Isolate spill from water drainage systems
- ☐ Apply absorbent material
- ☐ Apply neutralising agent
- ☐ Dilute spill with water
- ☐ Report to environmental authority
- ☐ If safe to do so, stop gas flow to avoid explosion and fire.
- ☐ Spills management kit and PPE items
- ☐ Other (Describe):

Disposal

Does the SDS make reference to any specific actions in disposing of the HS/DG item?

- ☐ Dilute with Water:
- ☐ Dispose by domestic waste water system:
- ☐ Separate from waste
- ☒ Check local environmental laws
- ☐ Store for next chemical waste disposal collection
- ☐ Other (Describe):
- ☐ Empty cylinders to be returned to manufacturer/supplier
- ☐ Disposal by licensed disposal company
- ☐ Empty containers to be disposed of as per product

Other Risks

Can anyone be injured or suffer ill health from exposure to other hazards while using the HS/DG

- ☐ Manual handling
- ☐ Plant
- ☐ High Risk Work (HRW)
- ☐ Permit to Work
- ☐ Other (Describe):

**Note if risks related to manual handling, plant or HRW have been identified, please also consider completing a Risk Assessment, Permit to Work, Safe Work Method Statement (SWMS) templates etc

Comments – *Provide further comment on the risk factors identified:*

Risk Measures and Actions

Where risks or hazards have been identified above complete the following listing all controls that will be undertaken to reduce the risk rating:

Refer to Assessment Matrix and Hierarchy of Controls document to determine risk ratings and the most appropriate controls
Add additional pages if required.

Hazard/Risk Identified in Section B	General Description of Hazard/Risk	Risk Rating Before Controls			Controls Implemented	Risk Rating After Controls		
		Likelihood	*Consequence*	*Risk Rating*	**More than one control may be required to effectively mitigate an identified hazard**	*Likelihood*	*Consequence*	*Risk Rating*
Mutagenic	May cause infertility. May damage the unborn child.	Possible	Major	Major (Ma2)	**Engineering Controls** - Use the portable fume extraction system - Ensure adequate room ventilation (air-conditioning) is available **Administrative Controls** - Training required before use (Class/training from Makers Lab). **PPE:** - gloves, lab coat, safety glasses	Unlikely	Major	Moderate (Mo5)
Carcinogenic	Suspected of causing cancer.	Possible	Major	Major (Ma2)	**Substitution** - If possible, use Lead-free solder **Engineering Controls** - Use the portable fume extraction system - Ensure adequate room ventilation (air-conditioning) is available **Administrative Controls** - Training required before use (Class/training from Makers Lab). **PPE:** - gloves, lab coat, safety glasses	Unlikely	Major	Moderate (Mo5)
Toxic	Very toxic to aquatic life with long lasting effects.	Unlikely	Major	Moderate (Mo5)	**Engineering Controls** - Fume extraction system **Administrative Controls** - Training required before use - Contact the UWA safety team to arrange disposal of any waste	Unlikely	Major	Moderate (Mo5)
Irritant	Causes serious eye irritation	Possible	Moderate	Moderate (Mo2)	**Engineering Controls** - Use the portable fume extraction system - Ensure adequate room ventilation (air-conditioning) is available	Unlikely	Moderate	Minor (Mi6)

					Administrative Controls - Training required before use (Class/training from Makers Lab). **PPE:** - gloves, lab coat, safety glasses			
Harmful	Harmful if inhaled	Possible	Moderate	Moderate (Mo2)	**Engineering Controls** - Usage of portable fume extraction system - Ensure adequate room ventilation (air-conditioning) is available **Administrative Controls** - Training required before use (Class/training from Makers Lab).	Unlikely	Moderate	Minor (Mi6)
Harmful	Harmful if swallowed	Possible	Moderate	Moderate (Mo2)	**Administrative Controls** - Training required before use (Class/training from Makers Lab). - Never handle the leaded solder wire without gloves **PPE:** - gloves, lab coat	Unlikely	Moderate	Minor (Mi6)
Irritant	May cause allergy or asthma symptoms or breathing difficulties if inhaled	Possible	Moderate	Moderate (Mo2)	**Engineering Controls** - Usage of portable fume extraction system - Ensure adequate room ventilation (air-conditioning) is available **Administrative Controls** - Training required before use (Class/training from Makers Lab).	Unlikely	Moderate	Minor (Mi6)
Irritant	May cause respiratory irritation	Possible	Moderate	Moderate (Mo2)	**Engineering Controls** - Usage of portable fume extraction system - Ensure adequate room ventilation (air-conditioning) is available **Administrative Controls** - Training required before use (Class/training from Makers Lab).	Unlikely	Moderate	Minor (Mi6)
Irritant / Sensitiser	Causes skin irritation May cause allergic skin reaction	Possible	Minor	Minor (Mi3)	**Engineering Controls** - Usage of portable fume extraction system - Ensure adequate room ventilation (air-conditioning) is available **Administrative Controls** - Training required before use (Class/training from Makers Lab).	Unlikely	Minor	Low (L5)

					PPE: - gloves, lab coat			

INDUCTEES DECLARATION		
I will comply with UWA's Safety and Health Policy and associated procedures and guidelines. I acknowledge receipt of this induction and have received the necessary information, instruction and training required to enable me to work safely.		
Name(s):	Signature(s):	Date:

PROJECT SUPERVISOR DECLARATION (if applicable)		
Name: Jega Gurusamy	Signature: JG	Date: Click or tap to enter a date. 29/08/24
LAB SUPERVISOR DECLARATION		
Name: Stuart Mather	Signature:	Date: Click or tap to enter a date. 29/08/24
HEAD OF SCHOOL AUTHORISATION		
Name: Tim Sercombe	Signature:	Date: Click or tap to enter a date. 05/09/2024

Email completed and signed form to School Operations Engineering schoolops-eng@uwa.edu.au