

PALM BEACH STATE COLLEGE PERSONAL PROTECTIVE EQUIPMENT (PPE) JOB HAZARD ASSESSMENT

Department: Facilities; MTIS	Campus: All
Task: Solder Wire, Electrical Components and Copper Piping	
Job Title(s) Performing Task: A.C. Mechanic, A.C. & Energy Management Systems Specialist, Electrician, Electronic Systems Technician, Maintenance Mechanic, MTIS Technician, Plumber	

Reviewed by Guy Clark, Lead Maintenance Mechanic, and David Olerich, A.C. & Energy Management Systems Specialist, July 23, 2015

Task Step/Sub-Tasks	Hazard(s)	Recommended PPE (Bolded)/Controls
1. For an electric soldering iron, see Steps/Sub-Tasks below.		
a. Check condition of soldering iron and electric cord.	None foreseen	Ensure that the plug has a grounding prong. Remove soldering iron from service if cord is damaged or plug is defective.
b. Turn local ventilation/exhaust system on if present.	Chemical exposure (from fumes created by soldering)	If the area is not equipped with ventilation, avoid breathing fumes.
c. Insert plug into outlet and turn soldering iron on if necessary.	Electric shock	Ensure that the electric cord is not tangled such that it contacts the hot element.
d. Remove oils, paints and coatings from surfaces to be heated during soldering to prevent volatilization.	Cuts (from using wire brush for cleaning)	Hold small objects with tweezers, pliers, a vice or clamps while brushing them.
e. Clean/treat surfaces to be soldered as necessary.	Chemical exposure (from cleaning/treating products)	Wear vinyl/nitrile gloves.
	Cuts (from using wire brush for cleaning)	Hold small objects with tweezers, pliers, a vice or clamps while brushing them.
f. Apply flux if necessary. Remove soldering iron from its rest and apply tip to work. Apply solder to heated area.	Burns	Never touch the tip of the soldering iron.
		Hold wires or other components to be heated with tweezers, pliers, a vice or clamps.
		Keep cleaning sponge wet during use.
		Always return the soldering iron to its rest when not in use.

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f (continued). Apply flux if necessary. Remove soldering iron from its rest and apply tip to work. Apply solder to heated area.	Burns (continued)	Remove combustibles from the immediate work area.
	Impact (from “spitting” solder)	Wear safety glasses .
	Chemical exposure (from solder and flux)	Wear vinyl/nitrile gloves . Use rosin- and lead-free products whenever possible.
g. Return soldering iron to its rest. Allow soldered materials and soldering iron to cool. Use a rag to wipe off flux as necessary.	Burns	Ensure that the soldered materials are sufficiently cool before touching them.
h. Turn off the soldering iron as necessary and unplug from the outlet. Turn off local ventilation/exhaust system if present.	None foreseen.	N/A
i. Wash hands after soldering.	Chemical exposure	Always wash hands with soap and water after soldering and before eating, drinking or smoking.
2. For torch-heated soldering, see Steps/Sub-Tasks below.		
a. Check all connections for tightness before turning the propane gas on.	None foreseen.	Tighten connections as necessary.
b. Remove oils, paints and coatings from surfaces to be heated during soldering to prevent volatilization.	Cuts (from using wire brush for cleaning)	Wear work gloves .
c. Clean pipes and fittings to be soldered and fit them as necessary.	Chemical exposure (from cleaning/treating products)	Wear vinyl/nitrile gloves .
	Cuts (from using wire brush for cleaning or fitting)	Wear work gloves .

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d. Turn on propane gas and use striker to light the torch.	Burns (from striker sparks)	Wear work gloves .
e. Apply flux if necessary. Apply tip of torch to area to be heated. Apply solder to heated area.	Burns	Remove combustibles from the immediate work area.
		Wear work gloves .
	Impact (from “spitting” solder)	Wear safety glasses .
	Chemical exposure (from solder and flux)	Wear vinyl/nitrile gloves . Use rosin- and lead-free products whenever possible.
f. If soldering is complete, turn off the propane gas.	None foreseen	N/A
a. Allow soldered materials to cool. Use a rag to wipe off flux as necessary.	Burns	Ensure that the soldered materials are sufficiently cool before touching them.
b. Wash hands after soldering.	Chemical exposure	Always wash hands with soap and water after soldering and before eating, drinking or smoking.

NOTE: Basic hazard categories include – **impact** (falling/flying objects, struck by), **falls from height**, **penetration** (sharp objects piercing foot/hand, other body parts), **compression** (roll-over or pinching), **cuts, burns, chemical exposure** (inhalation, ingestion, skin contact, eye contact or injection), **heat, extreme cold, harmful dust, noise, light (optical) radiation** (welding, brazing, cutting, furnaces, etc.), **ionizing radiation, non-ionizing (RF energy) radiation, electrical shock, ergonomics** (includes back strain or other strain due to lifting/stretching) and **biologic**.



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CERTIFICATION: I certify that I have personally performed the above Job Hazard Assessment on the date indicated below. *This document is a Certification of the Hazard Assessment required by 29 CFR 1910.132(d)(2).*

Larry L. Leskovjan	<i>Larry L. Leskovjan</i>	July 23, 2015
Printed Name	Signature	Date