







Metal Finisher



CHECKLIST



№	 ENERGY	
1	Use energy efficient lighting. Replace all halogen, incandescent, T-12, high-pressure sodium, and metal halide lighting with LEDs. T-8s should be replaced with T-8 LEDs/integrated LEDs as they burn out.	
2	Complete regularly scheduled maintenance on your HVAC at least twice a year. This includes: cleaning and replacing filters, inspecting damaged suction lines, addressing leaks, checking condenser and evaporator coils for proper airflow, and maintaining the proper function of economizers.	



№	 TOXICS	
1	Reduce drag out losses.	
2	Extend the drip process for the chemical plating solution from parts to minimize dragout.	
3	Control the dragout of contaminants into the process plating solutions.	
4	Ensure the rack of work-pieces are lated with downward open cavities open, to promote draining of the plating solution.	
5	Install drainboards and drip bars.	
6	Install an automatic process line system for more precise monitoring and transfer operations.	
7	Adjust process schedules or dedicate process equipment when processing parts.	
8	Filter plating solutions to help minimize contamination.	
9	Sand blast or mechanically pre-clean parts as much as possible to help reduce the use of toxic acids.	
10	Use non-chlorophenolic biocides and non-hex chrome for the maintenance of cooling towers.	
11	Establish regular testing to maintain plating tanks for operational parameters	



12	Remove dropped parts into process tanks on a daily basis.	
13	Lower the concentration of the plating bath constituents and increase the temperature of the plating solution.	
14	Use water-based cleaners and non-halogenated solvents to clean parts.	
15	Replace cyanide with non-cyanide plating solution.	
16	Use purified/distilled/deionized water.	
17	Use trivalent chromium instead of hexavalent chromium in the plating process.	
18	Use greener chemistries in conversion coating.	
19	Replace solvent degreasing with alkaline degreasing.	
20	Use aqueous carbonate-based chemical developers in printed circuits manufacturing.	
21	Switch to terpene in place of Trichloroethylene (TCE) or Dichloromethane (DCM).	
22	Substitute acetone cleaners with ethyl acetate.	
23	Substitute chelating agents with non-chelated process chemicals.	
24	Reduce the use of heavy metals by substitution with less toxic and more sustainable materials for the manufacturing of printed circuit boards.	
25	Use alternative treatment technologies to reduce sludge.	
26	Replace lead-lined tanks or lead anodes.	
27	Replace any hazardous metal piping.	
28	Use refrigerated freeboard chillers on vapor degreasing units.	
29	Use processing chemicals that do not increase the volume of metal sludge.	
30	Install closed-loop plating systems.	
31	Reduce the generation of unnecessary metal sludge.	
32	Clean, repair, and maintain racks to prevent bath contamination.	
33	Repair leaking tanks, pumps, and valves.	
34	Check daily for leaking tanks and pipes.	
35	Keep plating areas clean and prevent foreign materials from entering or remaining inside process tanks to prolong the life of the bath.	

№	 SOLID WASTE	
1	Work with your coordinator, waste hauler, or building manager to perform a waste audit to maximize recycling and composting (if applicable).	
2	Set up easily accessible waste stations with landfill, compost, and recycle bins co-located. Add clearly marked educational signage. Check with your coordinator or waste hauler for free signage and/or stickers.	
3	In your electrowinning system, filter the cake recycling unit, tramp oils separator, and generally recycle metals.	

№	 WASTEWATER	
1	Only allow rain down the storm drain. Ensure that no wastewater, debris, or litter enters the storm drains near your business. Never hose down floor mats, equipment, or vehicles in an area where wastewater may flow into a storm drain. If you have debris catch basins, clean them annually and as needed after rain storms.	
2	Keep dumpsters and any other potential pollutants, such as paint cans, other chemical drums, scrap metal, etc., covered and impermeable to rainwater. Keep outdoor areas clean and report leaking dumpsters to your waste hauler.	
3	Reuse rinse water to reduce water usage and recover precious metals from process tanks.	
4	Use reverse osmosis for heavy metals recovery.	
5	Reuse of treated wastewater discharge or effluent.	
6	Recycle solvents for subsequent reuse.	
7	Remove metals from spent plating solution.	
8	Recirculate cooling waters through a cooling tower and other in process recycling.	
9	Use waste acids and bases for pH adjustment in wastewater treatment systems.	
10	Segregate the waste stream to eliminate pollutants.	
11	Have an approved Toxics Organics Management Plan	
12	Install an efficient rectifier.	

No	 TRANSPORTATION	
1	Offer employee commuting options like a Commuter Benefits Program and telecommuting.	
2	If your business uses a fleet of vehicles, purchase electric vehicles or commit to purchasing EVs in the future.	
3	Install EV charging station for staff and fleet.	

No	 WATER	
1	Replace all existing faucet aerators and showerheads with low flow fixtures. Bathroom aerators should not exceed 0.5gpm; kitchen sinks should not exceed 1.5GPM; showerheads should not exceed 1.5GPM.	
2	Contact your water utility company for a free water audit and water efficiency program. Check for potential leaks frequently and repair them.	
3	Retrofit toilets flushing at higher than 1.6 gallons with high efficiency toilets (1.28 gallons or less).	
4	Replace all urinals flushing at greater than 1.0 gallons with a high-efficiency urinal, flushing at less than or equal to .125 gallons, or waterless urinals.	
5	Improve water conservation through either concurrent rinsing, over-tank rinsing, use of static (still) rinsing, use of spray or mist rinsing, or adding agitation in rinse tanks.	
6	Install automatic flow controls on rinse tanks, employ timed or automatic shut-off valves, water meters for each production line, and educators.	

No	 COMMUNITY	
1	Post signage encouraging resource conservation.	
2	Have an environmental policy statement that outlines the organization's commitment to sustainability and distributed to all employees. The policy must address waste reduction, water/energy conservation, and education.	
3	Research upgrading the 100% renewable energy option from your community choice aggregation (CCA) provider or utility.	
4	Encourage employee participation in sustainability efforts by adopting programs like sustainability best practices in employee on-boarding, establishing a "Green Team", measuring and communicating the progress on sustainability initiatives, and having internal goals for sustainability.	
5	Register your business with the IL Green Business Tracker to calculate your carbon footprint and other energy metrics.	