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**SSERC Risk Assessment** (revised version March 2018)

(based on HSE’s INDG 163 ‘Risk assessment - A brief guide to controlling risks in the workplace’)

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| Activity assessed | Anodizing aluminium |
| *Date of assessment* | 16th July 2014 |
| *Date of review (****Step 5****)* |  |
| *School* |  |
| *Department* |  |

| Step 1 | Step 2 | Step 3 | Step 4 |
| --- | --- | --- | --- |
| *List Significant hazards here:* | *Who might be harmed and how?* | *What are you already doing?**What further action is needed?* | *Actions* |
| *by whom?* | *Due date* | *Done* |
| Ethanol (IMS) is highly flammable and forms explosive mixtures in air. | Pupils or teacher by ignition of vapours. | Keep ethanol well away from sources of ignition. Use a hotplate or water bath to heat dye solutions. Ensure the ethanol is returned to the bottle before using a Bunsen burner. |  |  |  |
| Sulphuric acid is corrosive | Technician through splashes while preparing 1M solution, pupils/teacher while using dilute acid. | For preparing dilute acid wear face shield, nitrile gloves and pvc apron.Using 1M solution, wear goggles (BS EN166 3) |  |  |  |
| Dyes – of varying hazards. Avoid dyes that are suspect carcinogens.Avoid inhaling dust.Solutions are generally low hazard. | Technician (or others) inhaling dust making up solutions. | Work with care and avoid raising dust. |  |  |  |
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| **Description of activity:**Aluminium is cleaned in IMS then electrolysed in 1M sulphuric acid for 30 minutes at 15V DCThe anodized aluminium is rinsed in distilled water and then place in a dye bath at 70°C for 10 minutes with frequent agitation.Excess dye is rinsed off under running water and the metal is ‘fixed’ in boiling water for 10 minutes. |

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| **Additional comments:** |