

Swansea Hackspace – Hackspace 3D Printer (i3 Mk2/Mk3) Risk Assessment

Version 1.1: 2024-08-12

Without risk reduction measures					With risk reduction measures				
Hazards and Associated Risks	People at Risk	L	C	R	Risk Reduction Measures	L	C	R	
Electric Shock	Operators	2	5	10	Machine to be taken out of use if damaged Machine to be visually inspected before use Machine to be connected to RCD protected power supply	1	2	2	
Fire – due to electrical fault	Operators, other building occupants	2	5	10	Machine must be monitored while in use Machine to be taken out of use if damaged Machine to be visually inspected before use Appropriate fire extinguisher to be available at all times	1	2	2	
Fire – due to thermistor failure	Operators, other building occupants	1	5	5	Temperature must be monitored while in use Software safety features to be used	1	2	2	
Burn risk – hot surfaces	Operators	2	2	4	Prominent warning notice to be installed near to printer Machine to be operated by competent persons Hot elements (bed, extruder) to be turned off when not printing	1	2	2	
Entanglement in mechanism	Operators	2	2	4	Machine to be operated by competent persons	1	2	2	
Fumes	Operators, other room occupants	2	4	8	PLA: Use in well ventilated area ABS: Not for general use. Extraction to be considered for large jobs Other/Unknown: To be assessed before use	1	3	3	

Likelihood / Frequency of Occurrence	L	Consequence / Severity of outcome	C
1 - RARE - Can't believe this will ever happen again		1 - NONE - No injury or adverse outcome	
2 - UNLIKELY - Do not expect it to happen but it is possible		2 - MINOR - Short term harm or damage (Injury that will be resolved in 1 month)	
3 - POSSIBLE - May recur occasionally		3 - MODERATE - Semi Permanent injury (Injury taking up to 1 Yr to resolve)	
4 - LIKELY - Will probably recur but is not a persistent issue		4 - MAJOR - Permanent harm (Loss of body part(s), RIDDOR reportable injury)	
5 - ALMOST CERTAIN - Likely to occur on many occasions		5 - CATASTROPHIC - Death.	