UNC CHARLOTTE
Department of Engineering Technology

LABORATORY SAFETY ANALYSIS

OPERATING THE SST 1200es 3D PRINTER

Location: Smith 125A

Required Training: The SST 1200es 3D Printer is designed and intended for use by properly trained and experienced operators. If you are not familiar with the proper and safe operation of this printer, do not use until proper training and knowledge have been obtained.

Required Personal Protective Equipment (PPE): Safety glasses, leather gloves.

Reference Materials: Manufacturer's safety rules and operating instructions

PHOTOS	TASK	HAZARDS	CONTROLS
	Wear clear safety glasses with side shields.	Flying debris	• Students are required to provide their own safety glasses. • See laboratory instructor or laboratory manager if you do not have safety glasses before proceeding to use equipment.
	Inspect safety glasses for cracks, scratches or other damage. Ensure the ANSI standard Z87.1 is stamped into the side of glasses. If necessary inspect dust mask or face mask.	Flying debris	• If defects are found report this to your lab instructor before using.
	Put on all necessary PPE	Flying debris and sharp materials, burns	• Always wear safety glasses. • Always wear leather gloves when working inside of the printer. Interior surfaces are **HOT!**
	Empty purged material hopper	Burns	• Always wear leather gloves when working inside of the printer. Interior surfaces are **HOT!**
	Insert or remove blank build base.	Burns	• Wear gloves when inserting or removing build base due to hot interior surfaces. • Insure that base locking clamps are engaged.
	Removing completed build base	Burns	• Disengage base locking clamps. • Wear gloves when inserting or removing build base due to hot interior surfaces. • Handle base by molded in handle as printed models may also be **hot**.

	Removing models from build base.	Cuts, flying debris, burns	• Allow models to cool before removing from base. • Always wear approved safety glasses when removing models from base, as support material can shatter and fly outward.
	Maintenance	Injury, burns, electrical hazards.	• In all cases, maintenance (including material cartridge changes) must be referred to the Laboratory Manager, or qualified laboratory instructor.
	Clean work area and return all PPE to a clean storage area.	Injury	• Ensure adequate housekeeping measures to prevent accidents. • Clean any residual shards of support material from the table and floor.

For more information about this LSA, contact the *Department of Engineering Technology* at UNC Charlotte (704) 687-2305

Please visit our website at: http://www.et.uncc.edu\

The development of Laboratory Safety Analyses is a very effective means of helping reduce incidents, accidents, and injuries in the workplace. It is an excellent tool to use for training purposes and can also be used to investigate "near misses" and accidents.