



Open Flame Operations Registration Fact Sheet

BACKGROUND

The National Fire Protection Association (NFPA) fire code that applies to laboratory operations, NFPA-45 *Standard on Fire Protections for Laboratories Using Chemicals*, defines fire protection requirements for open flame operations. This code has been fully adopted by the state of Maryland into law.

The [Open Flame Operations Registration](#) was developed for laboratories that use open flame operations on a regular basis to easily comply with the code requirements. Each laboratory that uses open flames is required to complete the registration. The registration is a one-time event and does not need to be adjusted unless a lab permanently stops use of open flame operations. If a laboratory will permanently cease use of open flame operations, please contact labsafety@umd.edu to be removed from the registration list.

Open flame operation registration is not required for high temperature producing devices that do not produce a flame. This includes hot plates, soldering stations, microincinerators, and/or furnaces.

Some specific operations using flames may have additional restrictions and requirements. Hot works involving brazing, welding, or a similar spark-generating operation that is capable of initiating fires or explosions or open flame operations conducted outside of a lab environment requires a separate per-event permit issued by the Fire Marshal's Office. Please contact the Fire Marshal's Office on firemarshal@umd.edu for further information.

REGISTRATION ELEMENTS

The registration identifies the location of all laboratory open flame operations and emergency response equipment, as well as what type of operations are being conducted.

In addition to identifying the locations where open flame operations, the registration requires labs to agree to the following requirements. Additional controls may be required by a principal investigator and can be identified at the end of the registration.

- All equipment to be used will be inspected and in good repair.
- All open flame operations must have written procedures defining appropriate use, maintenance, and emergency response.
- A responsible person is assigned to ensure all open flames are extinguished and no potential for fire exists at the end of the operations.
- Bunsen burners and/or biological operations using open flames shall be at least 2 feet from flammable and combustible materials. All other open flame operations, including use of torches, shall be at least 3 feet from flammable and combustible materials.
- Materials that cannot be moved are protected with noncombustible material or cover.
- Operations using open flames outside of a fume hood will not be conducted under shelves, cabinets, or other overhanging equipment.
- Operations using open flames that require tubes/hoses: tube/hose must be compatible with gas, in good condition, rated to at least 150% of working pressure and secured to the gas outlet. Clamps must be applied to both the gas supply and the burner/torch connections. Reusable clamps can be purchased commercially (e.g., [Fisherbrand™ Tight-Seal™ Clamps](#), [Thomas® Hose/Tubing Clamps](#)).
- Open flame operations that use equipment with a small gas cylinder attached is either handheld, clamped, or weighted to prevent equipment from falling over.