

Seattle Fire Department

Permit Conditions

6201

Site Address: _____

Inspector: _____

Industrial Ovens and Furnaces

NOTICE

This permit shall be kept on the premises designated herein at all times and shall be readily available for inspection by the fire code official. (SFC 105.3.5)

Definitions:

OVEN/FURNACE CLASS A. An oven or furnace that has heat utilization equipment operating at approximately atmospheric pressure wherein there is a potential explosion or fire hazard that could be occasioned by the presence of flammable volatiles or combustible materials processed or heated in the furnace.

Note: Such flammable volatiles or combustible materials can, for instance, originate from the following:

1. Paints, powders, inks, and adhesives from finishing processes, such as dipped, coated, sprayed and impregnated materials.
2. The substrate material.
3. Wood, paper and plastic pallets, spacers or packaging materials.
4. Polymerization or other molecular rearrangements.

Potentially flammable materials, such as quench oil, waterborne finishes, cooling oil or cooking oils, that present a hazard are ventilated according to Class A standards.

OVEN/FURNACE CLASS B. An oven or furnace that has heat utilization equipment operating at approximately atmospheric pressure wherein there are no flammable volatiles or combustible materials being heated.

OVEN/FURNACE CLASS C. An oven or furnace that has a potential hazard due to a flammable or other special atmosphere being used for treatment of material in process. This type of furnace can use any type of heating system and includes a special atmosphere supply system. Also included in the Class C classification are integral quench furnaces and molten salt bath furnaces.

OVEN/FURNACE CLASS D. An oven or furnace that operates at temperatures from above ambient to over 5,000°F (2760°C) and at pressures normally below atmospheric using any type of heating system. These furnaces can include the use of special processing atmospheres. (SFC 202)

General Conditions:

1. Enclosed rooms or basements containing industrial ovens shall be provided with combustion air in accordance with the *Seattle Mechanical Code* and the *Seattle Fuel Gas Code* and with ventilation air in accordance with the *Seattle Mechanical Code*. (SFC 3003.1)
2. Industrial ovens and furnaces shall be located so as not to pose an ignition hazard to flammable vapors or mists or combustible dusts. (SFC 3003.3)
3. Roofs and floors or ovens shall be insulated and ventilated to prevent temperatures at combustible ceilings and floors from exceeding 160° F (71° C). (SFC 3003.4)
4. Fuel-gas piping serving industrial ovens shall comply with the *Seattle Fuel Gas Code*. (SFC 3004.1)
5. Each industrial oven or furnace shall be provided with an approved manual fuel shutoff valve in accordance with the *Seattle Mechanical Code* or the *Seattle Fuel Gas Code*. (SFC 3004.2)
6. Approved manual shutoff valves for fuel supply lines shall be located within 6 feet of the appliance served. (SFC 3004.2.1)

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7. The design of the manual fuel shutoff valve shall incorporate a permanent feature which visually indicated the open or closed position of the valve. (SFC 3004.3)
8. Interlocks shall be provided for Class A ovens so that conveyors or sources of flammable or combustible materials shall shut down if either the exhaust or recirculation air supply fails. (SFC 3005.1)
9. Class A and B ovens which contain, or are utilized for the processing of, combustible materials shall be protected by an approved automatic fire-extinguishing system per Chapter 9 of the SFC.
Exceptions:
 1. Small tabletop ovens used in laboratory facilities.
 2. Nonwalk-in ovens that are less than 4 feet in length and width. (SFC 3006.1)
10. Fixed fire extinguishing systems shall be provided for Class C and D ovens. It is the user's responsibility to consult with the fire code official concerning the necessary requirements for such protection. (SFC 3006.2)
11. Portable fire extinguishers having a minimum rating of 40-BC shall be provided and located not closer than 15 feet or a maximum of 50 feet from the oven and related equipment. (SFC 3006.3)
12. An approved, clearly worded form providing oven or furnace system information shall be prominently displayed or a manufacturer's nameplate shall be provided stating the safe operation condition for which the oven or furnace system was designed, built, altered or extended. (SFC 3007.1)
13. Safety data for Class A solvent atmosphere ovens shall be furnished on the manufacturer's nameplate permanently attached to the furnace. (SFC 3007.2)
14. Operating, maintenance and supervisory personnel shall be thoroughly instructed and trained in the operation of ovens or furnaces. (SFC 3007.3)
15. Equipment shall be maintained in accordance with the manufacturer's instructions. (SFC 3007.4)
16. Industrial ovens and furnaces shall comply with the applicable provisions of NFPA 86, the *Seattle Fuel Gas Code*, and the *Seattle Mechanical Code*. (SFC 3001.1)