Venting Hazardous Material Storage Cabinets, Rooms and Areas

Venting of storage cabinets is not required by Code and has not been demonstrated to be necessary for fire protection purposes. Additionally, if improperly performed, venting of a storage cabinet could compromise the ability of the cabinet to adequately protect its contents from involvement in a fire. However, there may be other health and safety considerations (e.g., odor control, control of potentially hazardous vapors) that dictate that the interior of a cabinet be ventilated. Early in the design phase, the designer shall discuss ventilation of hazardous material storage cabinets with Facilities Management, Environmental Health and Safety, and the Designated Campus Fire Marshal.

If a flammable liquid storage cabinet is ventilated, then it shall be connected through the lower bung opening to an exterior exhaust in such a manner that it will not compromise the specified performance of the cabinet. The other metal bung shall be connected to an air supply located outside of the fire control area.

If the cabinet is not vented, then it shall be sealed with the bungs supplied or specified by the manufacturer.

UC Practice
24 CCR 9 (CFC), Section 7901.11.1.1

Toxic material storage cabinets, when used to store Highly Toxic materials in excess of an exempt amount shall be vented in a manner like flammable liquid storage cabinets.

24 CCR 9 (CFC), Section 8003.3.1.3.3

Exhaust vent materials for hazardous material cabinets shall be compatible with contents of the cabinets. Vent materials for flammable liquid storage cabinets shall be resistant to high temperatures generated in a fire. Stainless steel, hard-soldered copper, and carbon steel are
appropriate vent materials for flammable storage cabinets, provided the material is compatible with the intended service. Nonmetallic duct shall not be used to vent flammable storage cabinets. Compatible nonmetallic duct material, such as PVC, can be used for toxic material storage cabinet service. Polypropylene, which is combustible, is not appropriate vent duct material.

The citation does not specifically authorize or forbid venting flammable storage cabinets. The citation states the following requirement: “Piping, valves, fittings, and related components intended for use with flammable and combustible liquids shall be designed and fabricated from suitable materials having adequate strength and durability to withstand the pressures, structural stresses, and exposures to which they could be subjected. Such equipment shall be in accordance with nationally recognized engineering standards, be listed for the application or be approved.”

24 CCR 9 (CFC), Section 7901.11.1.1