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# LAUNDERING AND DYEING

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(235513) No. 278 Jan. 98

#### Authority

The provisions of this Subchapter A issued under act of June 2, 1913 (P. L. 396, No. 267) (71 P. S. §§ 1441—1451); and section 15 of the act of May 18, 1937 (P. L. 654, No. 174) (43 P. S. § 25-15), unless otherwise noted.

#### Source

The provisions of this Subchapter A adopted January 15, 1927, amended through July 1, 1968; unless otherwise noted.

#### GENERAL PROVISIONS

## § 23.1. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

Dampening machine—A machine used for dampening clothes or other textiles.

*Drying tumbler*—A machine in which clothes or other textiles are dried by air. It usually consists of an enclosure inside of which is a revolving cylinder.

*Extractor*—A power-driven centrifugal machine used for removing surplus moisture from clothes or other textiles.

Guarded, encased or enclosed—Any object, equipment, or its parts which are so covered, shielded, fenced or otherwise protected that accidental contact at the point of danger, resulting in injury, is not possible.

*Hazardous*—An object which is so accessible as to permit contact that may result in injury.

*Ironer*—A hand or power-operated machine with one or more rolls or heated surfaces in contact used for ironing or smoothing clothes or other textiles.

Laundry—An establishment in which garments or other materials are washed in water, dried, starched, ironed or otherwise finished. This term does not include the operations of printing, bleaching, mercerizing, drycleaning, or dyeing of garments or other textile materials.

*Marking machine*—A power-driven machine used for marking clothes or other textiles.

Sewing machine—A machine used for sewing or stitching clothes or other textiles.

Shaker clothes tumbler—A revolving cylinder used for shaking out clothes or other textiles.

Starching machine—A power-driven machine used for the starching of clothes or other textiles.

Washing machine—A power-driven machine used for washing clothes or other textiles. It generally consists of a stationary case or shell inside of which is a revolving perforated cylinder.

Wringer—One or more power-driven rolls used for removing surplus moisture from clothes or other textiles.

## § 23.2. Scope.

- (a) This subchapter pertains to all laundries within this Commonwealth. and sets forth rules to safeguard the lives, limbs and health of workers in laundries.
- (b) Both the employer and employe shall have the responsibility of complying with the provisions of this subchapter.

# § 23.3. Penalty.

Any person who violates any of the provisions of this Subchapter or any regulations of the Department or who interferes with the Department or its duly authorized representative in the enforcement of such provisions or regulations shall be penalized under section 15 of act of May 18, 1937 (P. L. 654, No. 174) (43 P. S. § 25-15).

## SPECIFICATIONS FOR ALL INSTALLATIONS

## § 23.11. Marking machine.

Each power-marking machine shall be equipped with an improved tripping device or barrier guard of approved type to prevent the fingers of the operator from coming in contact with the descending marking plunger.

## § 23.12. Equipment.

- (a) Each washing machine, drying tumbler, drum, shaker or similar equipment of the double cylinder type shall have a device for holding open the doors or covers of the inner and outer cylinders while it is loaded or unloaded.
- (b) Each washing machine, drying tumbler, drum, shaker or similar equipment of the single cylinder type shall have a device to hold open the doors or covers while it is loaded or unloaded unless the doors or covers open downward.

## § 23.13. Centrifugal extractors or whizzers.

- (a) Each motor-driven centrifugal extractor or whizzer shall have a metal cover provided equipped with an interlocking device which shall prevent the cover from opening while the basket is in motion and also prevent the power operation of the basket while the cover is open. The device may not prevent the movement of the basket by hand to insure an even loading.
- (b) Each centrifugal extractor or whizzer shall be securely fastened in position to eliminate unnecessary vibration and shall not be operated at a speed greater than the rating of the manufacturer. Each engine individually driving a centifugal extractor or whizzer shall be provided with an approved engine stop and speed limit governor.

## § 23.14. Power wringers.

Power wringers shall be equipped either with a device which instantaneously relieves roll pressure, or with a bar or other guard extending across the entire front of the feed or first pressure rails. The bar or guard shall be so arranged that when it is struck by the hand of the operator or other person it causes the machine to stop. The requirement of this section may not apply to blanket washers.

## § 23.15. Dampening machines.

Each roll type dampening machine shall have the rolls entirely enclosed and guarded with a slot or hopper device, or a rod located directly in front of the feed and extending the full length of the rolls.

## § 23.16. Ironers.

- (a) Reclothing rolls. During the operation of reclothing the rolls of all ironers, the power shall be shut off and the machine turned by hand or foot, except in the case of power-driven speed controlled ironers using low speed, or machines which normally run only at low speed. In such cases an operator shall be stationed at the power control.
- (b) Foot treadle pressure. The maximum amount of foot treadle pressure for foot treadle-operated ironers and presses shall be not greater than 75 pounds.
- (c) *Platform.* All foot treadle-operated roll type ironers or presses shall be equipped with a stationary working platform equal in height to the distance between the foot treadle at its lowest point and the floor.
- (d) *Hand ironing*. The ironing board for hand ironing shall be adjustable for height or the height of ironing boards shall be adjusted to the height of the operator by means of working platforms.
- (e) Flat-work type. Each flat-work ironer shall be equipped either with a bar or other approved guard across the entire front of the feed or first pressure rolls so arranged that the striking of the bar or guard by the hand of the operator or other person causes the machine to stop, or with a fixed rod to prevent the hands from entering the rolls. All pressure rolls on flat-work ironers shall be guarded over the top and sides so that a person 6 feet tall may not reach into the rolls without removing the guard. When the doffer roll is used and is operated by power other than the ribbon or apron feed, a guard shall also be placed in front of the roll.
- (f) Rotary, roll and shoe type. Each body ironer of the rotary, roll and shoe type, sleeve, bosom, coat, band, combination collar and cuff ironer, and other similar equipment, except machines operated by foot treadle pressure, shall be equipped either with a bar or other approved guard across the entire length of the feed roll or shoe, so arranged that the striking of the bar or guard by the hand of the operator or other person causes the machine to stop, or with a fixed rod to prevent the hands from coming in contact with the rolls or shoe. The hot roll or

shoe shall be covered so as to prevent the operator or other person from coming in contact with the heated surfaces.

(g) *Press type*. Each power-driven body ironer of the press type shall be equipped with a device to prevent the fingers of the operator from getting caught between the ironing surfaces when under pressure.

## § 23.17. Sewing machines.

Each sewing machine shall be equipped with a guard permanently attached to the machine so that the fingers of the operator do not pass under the needle. It shall be of such type that the needle may be conveniently threaded without removing the guard.

# § 23.18. Steam pipes.

Steam pipes, except those pertaining to a building heating system, within 7 feet of the floor or a working platform and exposed to contact shall be covered with a heat resistive material or otherwise properly guarded. This requirement does not apply to valves and fittings.

## § 23.19. Exhaust or ventilating fans.

Any part of each exhaust or ventilating fan which is within seven feet of the floor or a working platform shall be completely covered with wire mesh of not less than No. 16 gauge with openings not larger than 1/2 inch at their greatest dimension. This requirement does not apply to fans in drying rooms.

## § 23.20. Starting and stopping device.

Each power-driven machine shall have an approved starting and stopping device so located that it may be operated from the normal point of operation.

## § 23.21. Drainage and flooring.

- (a) Workroom floors. The floors of workrooms in which washing or extracting operations are performed shall be constructed of a material impervious to water and so leveled as to readily drain off all accumulations of water in sufficient time to prevent the formation of pools.
- (b) Cement or concrete floors. In front of each machine, except for extractors or washers, situated on a cement or concrete floor, there shall be placed a standing rack of wood or equivalent material. This rack shall be of such dimensions as to accommodate the operator at all points of his normal operating positions, and shall be so beveled as not to create a tripping hazard. Duckboard type of construction shall be accepted. Mats of rubber, cork, linoleum, or similar material shall be accepted in lieu of racks where such floors are maintained in a dry condition.
- (c) Wet floors. On any type of floor where wet floor conditions prevail, a wooden rack of duckboard construction or with the top surface cleated to prevent

slipping shall be required in front of each machine except for extractors or washers. This rack shall accomodate the operator at all points of his normal operating positions, and shall not create a tripping hazard. Wire mats or raised metal racks shall be accepted in lieu of the wooden rack. For the operators of extractors or washers located where wet floor conditions prevail, the employer shall provide water-resistive boots or shoes to insure that their feet are dry and free from dampness at all times, and such boots or shoes shall be accepted in lieu of the racks.

#### SPECIFICATIONS FOR NEW INSTALLATIONS

# § 23.31. Equipment.

- (a) Each washing machine, drying tumbler, drum, shaker or similar equipment of the double cylinder type shall be provided with an interlocking device to prevent the inside cylinder from moving when the outer door on the case or shell is open. The device shall prevent the outer door from opening while the inside cylinder is in motion. This device may not prevent the movement of the inner cylinder under the action of a hand-operated mechanism or an inching device.
- (b) Each washing machine, drying tumbler, drum, shaker or similar equipment of the single cylinder type shall be equipped with an approved device which shall automatically prevent the cylinder from moving while the door is open. The outside of the cylinder shall be smooth-surfaced or so guarded as to prevent contact with employes or other persons while the machine is in operation.

#### § 23.32. Centrifugal extractors or whizzers.

- (a) Each belt-driven centrifugal extractor or whizzer shall be equipped with a metal cover with an interlocking device which shall prevent both the cover from opening while the basket is in motion and the power operation of the basket while the cover is open. The device may not prevent the movement of the basket by hand to insure an even loading.
- (b) The rating of the manufacturer shall be stamped in letters not less than 1/4 inch high on the inside of the basket in a place that is easily visible. The maximum permissible speed shall be given in revolutions per minute.

## § 23.33. Ventilation.

Effective means of ventilation against steam, gases, excessive heat or similar conditions shall be installed and maintained.

## SPECIFICATIONS FOR EXISTING INSTALLATIONS

## § 23.41. Centrifugal extractors or whizzers.

(a) Each belt-driven centrifugal extractor or whizzer shall be equipped with a metal cover with an interlocking device which shall prevent both the cover from

opening while the basket is connected to power and the power operation of the basket while cover is open. The device may not prevent the movement of the basket by hand to insure an even loading. A hand-operated brake shall be installed on each belt-driven extractor wherever possible.

- (b) The rating of the manufacturer shall be stamped in letters not less than 1/4 inch high on the outside of the machine in a place that is easily visible. The maximum permissible speed shall be given in revolutions per minute.
- (c) When rated speeds cannot be obtained from the manufacturer, the following speeds shall not be exceeded:

Diameter extractors	Revolutions per
(in inches)	minute
30	1200
48	750
60	500

## **PROHIBITION**

## § 23.51. Minors.

All owners and operators of laundries shall comply with section 5 of act of May 13, 1915 (P. L. 286, No. 177) (43 P. S. § 44) which prohibits the employment of any minor under 16 years of age in, about, or in connection with, any manufacturing or mechanical occupation or process.

## Subchapter B. DRYCLEANING AND DYEING

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## Authority

The provisions of this Subchapter B issued under the Dry Cleaning and Dyeing Law (35 P. S. \$\$ 1269.1—1269.19) (Repealed), unless otherwise noted.

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(235520) No. 278 Jan. 98

#### Source

The provisions of this Subchapter B adopted June 28, 1950, amended through July 1, 1968.

#### **GENERAL PROVISIONS**

#### § 23.71. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

Drycleaning and dyeing—The business or process of cleaning or dyeing wearing apparel, cloth, fabrics, textiles, leather goods, feathers, furs and hats of any type or kind, by immersion and agitation or immersion only, in a commercially nonaqueous volatile or volatile and flammable liquid solvent, applied either manually or by means of a mechanical appliance, including sponging or brushing of such articles by the use of such solvents.

Fire-resistive construction—All buildings or parts of buildings which are constructed of such nonflammable material as stone, steel, concrete, brick, tile or expanded metal lath with plaster, when specifically permitted by a provision of this subchapter and other materials as may be approved from time to time.

*Flash point*—The temperature at which the solvent gives off vapor sufficient to form an ignitable mixture with the air.

*Grade*—The main elevation of the ground adjoining the building on all sides not exceeding one step of 8 inches.

Multiple story—More than one story or occupancy.

Story—That part comprised between the upper surface of any floor and the upper surface of the floor or roof next above in that portion of the building above grade, ground or curb level. If any mezzanine, balcony or gallery shall extend over 33% or more of the horizontal area within the outer walls of the building, it shall be considered as a story. A garret or pipe loft shall be considered as a story if the average ceiling height exceeds 8 feet and it is so constructed as to make occupancy of it possible. If any portion of a building is located above grade, ground or curb level, that portion shall be determined a story if the height of each of the two corners farthest above grade, ground or curb level shall average 5 feet or more above the grade, ground or curb level. These measurements shall be at grade, ground or curb levels to the upper side of the next floor above. Where a portion of the building is located below grade, ground or curb level and the average height from the first floor to the grade, ground or curb levels, measured at each of the two corners, farthest above grade, ground or curb level is greater than 5 feet, that portion below the first shall be determined as constituting a story.

*Toxic*—A solvent disseminated to areas that may tend to injure the health of employes.

## § 23.72. Scope.

- (a) This subchapter pertains to drycleaning and dyeing establishments, and sets forth rules to safeguard the lives, limbs and health of workers in the establishments.
- (b) Both employer and employe, and manufacturers of drycleaning equipment and systems have the responsibility of complying with this subchapter.

# § 23.73. Application and approval of plans.

- (a) No person, firm or corporation may erect, maintain, construct or operate a drycleaning or dyeing establishment without first obtaining approval from the Department. This approval is in addition to a local or zoning permit which may be necessary.
- (b) Application for this purpose shall be made upon forms prescribed by the Department and shall be accompanied by drawings in triplicate covering floor plan, and exterior elevations of the building, including the position of machinery and equipment, fire extinguishing equipment, when required by the Dry Cleaning and Dyeing Law (35 P. S. §§ 1269.1—1269.19), exhaust fans, motors, type of wiring, storage tanks and other pertinent information relating to the construction, maintenance, equipment and operation of the establishment.
- (c) A plot plan shall also be furnished, showing the location of the dry cleaning building and relative distances to surrounding properties.
  - (d) A fee of \$48 shall be charged for the approval of plans.

#### Source

The provisions of this § 23.73 amended July 26, 1974, 4 Pa.B. 1533. Immediately preceding text appears at serial page (8405).

## § 23.74. Penalty.

A person who violates a provision of this subchapter or the regulations of the Department or who interferes with the Department or its authorized representative in the enforcement of the provisions or regulations shall be penalized under section 17 Dry Cleaning and Dyeing Law (35 P. S. §§ 1269.17).

## GENERAL BUILDING CLASSIFICATIONS

## § 23.81. Classification.

Buildings enumerated in sections 4—8 of the Dry Cleaning and Dyeing Law (35 P. S. §§ 1269.4—1269.8) shall be classified as follows:

(1) *Class I.* The buildings in this class use class I solvent which is a flammable petroleum solvent having the following properties:

Flash point (closed cup tester)

Lower than 100 °F.

(2) Class II. The buildings in this class use class II solvent which is a flammable petroleum solvent having the following properties:

Flash point (closed cup tester) Lower than  $138.2^{\circ}$  F. but

higher than 99° F.

Initial boiling point Lower than 357.8° F. but

higher than  $300^{\circ}$  F.

Ignition temperature Lower than 453.2° F. but

higher than  $400^{\circ}$  F.

Power limit of explosive range Not less than 1.1% by

volume of air.

Spontaneous heating The solvent shall not heat

spontaneously.

(3) Class III. The buildings in this class use class III solvent which is a flammable petroleum solvent having the following properties:

Flash point (closed cup tester)

Initial boiling point

Ignition temperature

Power limit of explosive range

Not lower than 138.2° F.

Not lower than 357.8° F.

Not lower than 453.2° F.

Not less than 0.8% by

volume in air at an initial temperature of 302° F.

Spontaneous heating The solvent shall not heat

spontaneously.

(4) Class IV. The buildings in this class use Class IV solvent which is a commercially nonaqueous liquid solvent that is volatile but does not contain flash point ingredients and which is neither a Class I, Class II nor a Class III solvent.

## CONSTRUCTION—GENERALLY

# § 23.91. Class I buildings.

The erection, adaption or relocation of a Class I drycleaning and dry-dyeing plant as defined in section 4 of the Dry Cleaning and Dyeing Law (35 P. S. § 1269.4) is prohibited. However, changes to machinery and equipment of existing class I plants may be granted upon application and approval of the Department.

## § 23.92. Class II buildings.

(a) Height and location. No drycleaning or dry-dyeing buildings as enumerated in class II may exceed one story in height. Buildings may not have attics,

concealed walls, concealed roof spaces, basements or pits. No building may be located within 10 feet of another building unless they are separated by an unpierced wall.

- (b) Walls. No more than two sides of a drycleaning or dyeing room may have blank walls, and interior dividing partitions shall be of at least 4-hours fire-resistive construction. In addition, the walls of drycleaning, dyeing, tumbler or drying rooms shall be of one or more of the following:
  - (1) Brick laid in cement mortar.
  - (2) Reinforced concrete at least 12 inches in thickness.
  - (3) Stone laid in cement mortar at least 16 inches in thickness.
  - (4) Other noncombustible material constructed of a thickness at least 12 inches.
- (c) *Roof.* The roof, ceiling or other construction shall be of fire-resistive construction rated 2-hours fire resistive as classified in accordance with the Standard for Fire Tests of Building Construction and Materials and listed by Underwriters' Laboratories, Inc. Hinged skylights of metal sash and wire glass shall be placed in the roof of each drycleaning or dyeing room. They shall occupy an area equal to at least 1/8 the floor area of the room. The skylights shall be arranged to open under pressure in case of an explosion and close automatically thereafter. The roof covering shall be of incombustible material.
- (d) *Floors*. Floors shall be constructed of concrete not less than 4 inches thick with a troweled, cement top finish and shall be of nonsparking type. Floors may not be lower than the exterior grade surrounding a wall in which there is an opening or vent. There may be no basement, cellar or open space below the floor.
- (e) *Egress*. There shall be provided from a room used for drycleaning or dyeing two means of egress at least 3 feet in width, located as remote from each other as possible, opening directly to the outside of the building. They shall be unobstructed and ready for use at all times.
- (f) *Doors and windows.* Doors shall be at least class A self-closing fire doors as classified by the Underwriters' Laboratories, Inc. Every window opening shall be fitted with solid-steel sash with 1/4 inch wire glass. Doors and windows shall open outward.
- (g) Intercommunicating opening. There may be no intercommunicating opening from a drycleaning, tumbler or drying room to a pressing, sewing or finishing room. There may be an intercommunicating opening between a drycleaning or dyeing room and a drying room, which shall be protected by a standard self-closing fire door rated A label or better as classified by Underwriters' Laboratories, Inc.
- (h) Sewer connection. There may be no direct sewer connection with the drycleaning, tumbler or dyeing room.

# § 23.93. Class III buildings.

- (a) Walls. The walls of drycleaning, dyeing, tumbler or drying rooms shall be of fire-resistive construction, the walls of which may be of brick, concrete block laid in cement mortar or of reinforced concrete at least 8 inches in thickness. Interior dividing partitions shall be of construction equal to at least 2 hours fire resistivity.
- (b) *Multiple story*. When a drycleaning or dyeing room is located in a multiple story building, the remainder of the building may not be used for purposes of public assembly or for living, housing or dwelling purposes. The building shall be of fire-resistive construction, the walls of which may be of brick, concrete block laid in cement mortar or of reinforced concrete at least 8 inches in thickness
- (c) *Roof.* The roof, ceiling or other construction shall be of fire-resistive construction rated one hour fire-resistive as classified in accordance with the Standard for Fire Tests of Building Construction and Materials and listed by Underwriters' Laboratories, Inc. Hinged skylights of metal sash and wire glass shall be placed in the roof of each drycleaning or dry-dyeing room. They shall occupy an area equal to at least 1/8 the floor area of the room. Skylights shall open under pressure in case of an explosion and close automatically thereafter. The roof covering shall be of incombustible material.
- (d) *Floor*. The floor of every drycleaning, dyeing, tumbler or drying room shall be of concrete construction at least four inches in thickness and shall not be lower than the surface of the earth surrounding any wall in which there is an opening or vent. If any such room is located over a basement, the floor of such room shall be liquid and vapor tight.
- (e) *Doors and windows*. All doors shall be at least class B self-closing fire doors as classified by the Underwriters' Laboratories, Inc. All window openings shall be protected with metal sash and wire glass. Doors and windows shall open outward.
- (f) *Intercommunicating openings*. Intercommunicating openings from drycleaning, tumbler and drying rooms shall be provided with fire-resistive, self-closing doors, classified by Underwriters' Laboratories B label or better.
- (g) *Egress*. Any room used for the purpose of drycleaning or dyeing shall have at least one exit which opens to the outside of the building or to an interior fireproof fire structure. No less than two means of egress shall be provided. They shall be unobstructed and ready for use at all times.
- (h) Sewer connection. There shall be no direct sewer connection with the drycleaning, tumbler or dyeing room.
- (i) Basement cellar. Any basement, cellar or open space below the first story of any building in which a drycleaning plant is located shall be used only by the person, partnership or firm operating such plant.

(j) Exhaust fan. There shall be installed in such basement, cellar or open space, an exhaust fan of sufficient capacity, and a flue or flues of noncombustible material adequate to prevent concentration of vapors above the maximum concentrations as specified in this subchapter for drycleaning or dyeing rooms.

## § 23.94. Class IV buildings.

- (a) *One story*. Any room used for drycleaning or dyeing shall have a ceiling covered with noncombustible material approved by the Department.
- (b) *One story walls*. All walls of drycleaning, dyeing, tumbler or drying rooms shall be of brick laid in cement mortar, or of reinforced concrete, or of stone laid in cement mortar, or covered with other noncombustible material approved by the Department.
- (c) *Multiple story*. If any drycleaning or dyeing room is located in a multiple story building, the remainder of the building may not be used for any purpose of public assembly, or for any living, housing, or dwelling purposes, except that the owner of the drycleaning or dyeing plant may occupy part of the building for his living quarters.
- (d) *Multiple story walls*. When drycleaning or dyeing rooms are located in a multiple story building, the walls of the buildings shall consist of brick or reinforced concrete not less than 8 inches in thickness or any other material equal in fire-resistive rating. The ceiling above the drycleaning or dry-dyeing room shall consist of 1 inch of cement plaster on metal lath or other material which is the equivalent of 1 hour fire resistance as listed by the Underwriters' Laboratories, Inc.
- (e) *Floors*. The floors of every drycleaning, tumbler or dyeing room, shall be of concrete construction not less than 4 inches in thickness or other noncombustible material approved by the Department.
- (f) *Egress*. Any room used for the purpose of drycleaning or dyeing shall have at least one exit which opens to the outside of the building or to an interior fireproof structure. No less than two means of egress shall be provided. They shall be unobstructed and ready for use at all times.
- (g) *Doors and windows*. Door openings shall be protected by at least class C label doors, as classified by the Underwriters' Laboratories, Inc., and shall be of the self-closing type.
- (h) *Basement*. Any basement, cellar or other open space below the first story of any building in which a drycleaning or dyeing plant is located shall be used only by the person, partnership, association or corporation operating the drycleaning or dyeing plant. Any basement, cellar or other open space, shall have installed therein an exhaust fan, or fans of sufficient size and a flue or flues of noncombustible material adequate to prevent concentration of vapors above the maximum concentration as specified in this subchapter for the drycleaning or dyeing rooms in class IV drycleaning and dyeing plants.

## **GENERAL STANDARDS**

## § 23.101. Occupancy.

- (a) The drycleaning room shall not be used for any purpose or occupancy other than spotting, sponging, brushing, reclaiming of solvents and housing of drying cabinets and tumblers.
- (b) Proper aisle space shall be maintained for employes to walk between machines or equipment.

#### § 23.102. Air.

- (a) Venting apertures shall be provided near the floor level in such numbers and positions as to provide free circulation of air and shall be covered by galvanized wire.
- (b) Adequate fresh air entrances shall be provided to avoid a negative gauge pressure in every drycleaning, dyeing, tumbler or drying room.

## § 23.103. Flues.

- (a) All flues and discharge outlets of vent apertures shall be provided with suitable wire screen or equivalent to avoid hazards to surrounding properties.
- (b) Flues and discharge pipes shall extend at least 6 feet above the roof lines or ceiling level of the drycleaning or dyeing room and shall not terminate within 10 feet, measured horizontally, of any door, window or frame wall of any adjoining or adjacent building.

## § 23.104. Equipment.

- (a) Where carbon tetrachloride, perchlorethylene or trichlorethylene is used for spotting, sponging or brushing, these operations shall be performed under an effective type of exhaust hood.
- (b) In cleaning of stills and equipment using synthetic solvents the operator shall be provided with an approved type of respiratory equipment.
- (c) Machinery or equipment may not be placed in any establishment in excess of the sustaining power of the floor or walls.
- (d) The use or reinstallation of used drycleaning equipment, including stills, tanks and tumblers, is not permitted, but upon application to the Department the use of such equipment may be granted after an inspection and approval by the Board.

## § 23.105. Safety and sanitation.

- (a) "No smoking" signs shall be posted in conspicuous places in drycleaning, dyeing, tumbler and drying rooms.
- (b) The floors, walls, ceiling, windows, machinery and all other parts of buildings shall be kept free from the accumulation of lint and dirt.

- (c) Receptacles of fire-resistive material shall be provided for receiving refuse or other material and shall be emptied every day.
- (d) When required by the Department, the employer shall allow determinations to be made of the kind and amount of the atmospheric impurities from a sample taken under conditions and at a point or points prescribed by the Department.
- (e) The Department may from time to time take samples of solvents used in any drycleaning equipment or systems.

# EQUIPMENT AND OPERATING CONDITIONS FOR CLASS II, III AND IV PLANTS

## § 23.111. Solvents.

- (a) No dry cleaning or dyeing machine or system approved by the Department for the use of either a Class I, II, III or IV solvent shall have used therein any solvent other than that for which such machinery has been approved except that Class III solvent may be used in a machine or system approved for Class II solvent. These systems shall be provided with a name plate, setting forth the name of the manufacturer, model number and the type of solvent for which the equipment has been approved.
- (b) All transfers of solvents shall be effected through continuous piping and all pipe connections or threaded joints shall be made up with a suitable sealing compound and all outlets or drain lines shall be drained to settling or storage tanks.
- (c) No solvent shall be settled or stored in any open or unprotected vessel or tank, except scrubbing, spotting and brushing operations may be carried on in drycleaning or dyeing rooms with the use of not more than three pans or containers, which shall be metallic, and none of which shall contain more than three gallons of solvent. All solvents shall be returned to settling or storage tanks as soon as these operations are completed.

## § 23.112. Heating.

- (a) No steam boiler, furnace, steam generator, open flame or incandescent heating device, or exposed fire shall be permitted in any drycleaning, dyeing, tumbler, drying or distilling room.
- (b) All heating shall be by steam or hot water system or other system equivalent in safety with pipes, radiators or other devices installed with adequate clearances and properly protected when necessary, against contact with combustible goods or materials.

# § 23.113. Interlocking covers.

(a) Extractors, washers, and tumblers shall be provided with interlocking covers or doors to prevent the inside cylinder from moving when the outer door

is open. On extractors, such device shall also prevent the outer door from opening while the inside cylinder is in motion.

(b) Combination drycleaning units, in which the washing and extraction cycles are completed within the same enclosure, shall be provided with splash proof doors, or covers, with interlocking means to prevent cylinder rotation, under power, except for inching at slow speed, when doors or covers are open. During the extracting cycle the automatic mechanical or electrical interlock is designed to prohibit both operating the machine while the cover is open and opening the cover before the basket comes to rest.

## § 23.114. Approval.

- (a) No machinery, equipment or system shall be used in any drycleaning and dyeing plant unless the machinery, equipment or system has been approved for use in the dry cleaning and dyeing plant by the Board.
- (b) To secure approval of a drycleaning system or equipment, a petition shall be made to the Department of the Board in Harrisburg, Pennsylvania. The petition shall be accompanied by photographs or cuts, complete operating instructions, and copies of Underwriters' Laboratory, Inc. approval if the approvals are available.

## § 23.115. Ventilation.

- (a) A mechanical system of ventilation shall be installed in drycleaning areas and provided with means for remote control. Mechanical systems of ventilation shall have sufficient capacity to insure complete and continuous change of air in drycleaning rooms once every 3 minutes. The ventilation system shall operate automatically when any drycleaning equipment is in use. The ventilation system shall be automatically shut off upon operation of the fire protection or detection systems.
- (b) Drying tumblers and drying cabinets shall be ventilated to the outside air by means of properly constructed pipes or ducts connected to an exhaust fan of sufficient capacity to remove all dust, vapors or lint generated by the process. The fan shall be properly housed and so interlocked as to insure operation while the drying tumbler is in use. The fan spiders, blades or running rings shall be constructed of nonferrous metal. In no case shall the fan motor be mounted within the ventilating duct.

#### § 23.116. Fire extinguishers.

Fire extinguishers of a type and size approved by the Department shall be provided for each 500 square feet of floor space, or when separate rooms of less than 500 square feet of floor space are maintained, one extinguisher for each room. At least one 2 1/2 gallon approved foam type fire extinguisher shall be provided in any case.

## § 23.117. Unfired pressure vessels.

Unfired pressure vessels shall be built according to the requirements of Chapter 3a (relating to boilers and unfired pressure vessel regulations).

## CLASS II AND III PLANTS—ADDITIONAL REQUIREMENTS

## § 23.121. Fire protection devices.

- (a) As a means of fire extinguishing in any drycleaning, dyeing, tumbler or drying room, the rooms shall be equipped with steam pipes which shall be separate from and other than the pipes used for heating or power and shall be located near the ceiling. In these pipes there shall be not less than two openings for each room, all of which shall point toward the ceiling. The steam supply for these pipes shall be continually available for service while the plant is in operation and shall be sufficient to completely fill the room space in less than one minute. An outside screw and yoke valve shall be placed in the steam service lines or other lines outside of these rooms, which shall be accessible for operation in case of fire.
- (b) An approved system, using a fire detergent chemical or gas or an approved sprinkler system may be installed in lieu of a steam extinguishing system.
- (c) A steam fire protection system shall be extended and connected to all washers and tumblers so that the fire extinguishing agent may be admitted to the interior of the machine. The equipment shall provide a steam jet not less than 3/4 inch from a continuously available steam supply at a pressure not less than 15 pounds per square inch.

## § 23.122. Grounding.

The cylinders and shells of all drycleaning or dyeing machines or drying tumblers and the cabinet walls of all drying cabinets shall be permanently and effectively grounded to mitigate danger from static electricity. The grounding of the cylinder in each case shall be through the trunnion shaft.

# § 23.123. Lighting and fixtures.

Lighting shall be by electricity employing incandescent lights. All wiring shall be in rigid conduit installed in accordance with the provisions of Chapter 39 (relating to safety standards—general). Lighting fixtures, switches, communication and signalling equipment, other fixed portable devices, and all motors approved for such installations shall be of the explosion-proof type for Class II installations. Requirements for Class III drycleaning machinery are similar to those of Class II with the exception that explosion-proof motors and light fictures are not required for the Class III drycleaning machinery.

## CLASS IV PLANTS—ADDITIONAL REQUIREMENTS

## § 23.131. Equipment.

- (a) Fans. The fans required by this subchapter for every drycleaning, dyeing, tumbler or drying room shall be of sufficient size or number to prevent concentrations of fumes above 50 parts per million of atmosphere for carbon tetrachloride systems or 200 parts per million of atmosphere for perchlorethylene and similar types of systems.
- (b) *Electrical*. Lighting shall be by electricity. All electrical equipment, devices, and wiring shall be in rigid conduit installed in accordance with the requirements of Chapter 39 (relating to safety standards—general).
- (c) Automatic indraft. Class IV systems shall have an automatic indraft of air with sufficient negative pressure to overcome the effects of the overhead exhaust fan. It is recommended that this indraft of air go on automatically at any time the loading door is open, whether or not the portion of the cycle is such that the door is open or closed. As a substitute for the automatic operation of the indraft at times other than the prescribed door-opening times, a visual and audible alarm may be used to indicate that the machine is not being operated properly.
- (d) Safety valve. On machines utilizing steam pressure, an approved type safety valve shall be installed on the low pressure side of the steam-reducing valve. In no case may the valve be adjusted for a pressure higher than the design pressure of the equipment.
- (e) *Machine exposure*. Where members of the public are customarily admitted to the vicinity of the drycleaning machine, only the front or customer side of the drycleaning machine shall be exposed in the customer area. The working or maintenance portion of the equipment shall be separated from the front of the machine by a solid partition.

## § 23.132. Spotting and scrubbing.

The use of any flammable solvent for brushing, scouring, scrubbing, soaking, flame-proofing and water-proofing is prohibited. The use of these fluids for spotting purposes shall be limited to 1 gallon with storage in and application from an approved safety can.

#### **SOLVENT TANKS**

## § 23.141. General requirements.

(a) Underground solvent storage tanks. Underground storage tanks for Class III and Class III solvents shall be placed at least 2 feet apart, not less than 2 feet below the surface, not less than 2 feet from foundations and footings, and entirely surrounded by clean earth or sand well tamped in place. All tanks shall rest on a

6 inch concrete pad. The limit of individual tank capacity as shown in the table under subsection (b) may not be exceeded without the approval of the Department.

(b) Construction. Horizontal tanks used for the storage of volatile or flammable solvents shall be made of galvanized steel, open hearth steel or wrought iron of a minimum gauge United States Standard, depending upon the capacity as given in the following table:

	Minimum Thickness Material			
Capacity	Gauage Equivalent Pounds per			
(in gallons)	Gauge	(in inches)	Square Foot	
1 to 560	15	5/64	3.125	
561 to 1,000	12	7/64	4.375	
1,101 to 4,000	7	3/16	7.50	

- (c) *Joints*. All joints of tanks shall be riveted and caulked, welded or brazed, and shall be thoroughly and effectively covered with asphaltum or other nonrusting paint or coating.
- (d) Ventilation. All storage tanks for Class II, III and IV solvents shall have at least a 1 1/4 inch vent pipe and not less than 1 1/2 inches for tanks over 3,000 gallons, run from the top of the tank to a point terminating in the atmosphere, without trap, which shall end at least 12 feet above level or source of supply, suitably supported and in a location remote from fire escapes and not nearer than 3 feet measured horizontally and vertically from any window or other opening. The tank vent pipe shall terminate in a gooseneck or other approved vent protected in the outer end by a 30 by 30 mesh brass or equivalent wire screen.
- (e) Filling pipes. The end of the filling pipe for all underground storage tanks shall be carried to a suitable location outside of any building, and shall be provided with a lock, or equivalent protection, which shall be kept securely locked or closed except during filling operations. This filling pipe shall be closed by an approved cap or plug and, if it is located in a driveway or other places subject to vehicular traffic, set in an approved steel box with cover or otherwise suitably protected to prevent damage to it. A self-closing liquid tight cover shall be required on all inside gauge openings. No gauge opening shall be located below the grade floor but shall be at least one foot higher than the point of fill.
- (f) Inside above ground tanks. Class II, inside above ground tanks may not exceed 550 gallons and the individual tank capacity may not exceed 275 gallons except that treatment tanks or purifiers may not exceed an individual capacity of 350 gallons and shall in no event exceed in capacity any individual storage tank to which they may be connected. Class III clean solvent tanks, dirty solvent tanks, extractor drain tanks, fillers and other such containers shall have an individual capacity not in excess of 275 gallons.

## § 23.142. Fuel oil storage tanks.

- (a) The main supply tank of oil-burning boilers or heating equipment shall be located outside of the building. If it is located in the building, it shall be buried at least 2 feet underground or located within a fireproof enclosure of at least 12 inches in thickness, six of which shall be of sand solidly tamped and the other six of concrete. The sand shall be between the tank and the enclosure. The fuel tank shall be located at least 15 feet away from the heating plant, 2 feet from all foundation footings, and shall be filled and vented outside the building.
- (b) The requirements of subsection (a) apply if the storage tanks for fuel oil, when not more than two tanks of 275 gallons each are used, need not be located outside the building or in a fireproof enclosure when automatic stop valves are provided so that the oil does not flow except when the blower is running and the oil is in combustion, and the tanks are located not less than 7 feet from the furnace. Fuel oil supply tanks shall not be installed in or under the drycleaning room.

## § 23.143. Shipping drums or containers.

Class II and III solvents in individual shipping drums or containers shall not be stored in any building containing a cleaning plant, public assemblage or building used for living, housing or dwelling purposes, but shall be stored in a one story building without basement, having masonry walls properly vented and located in a reasonable distance from these buildings. These drums or containers shall be protected from the sun and other heat producing devices or equipment.

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