

Optional Information

Name of School:

Date of Inspection:

Vocational Program/Course/Room:

Signature of Inspector:

Dip Tanks Containing Flammable or Combustible Liquids Self-Inspection Checklist

Guidelines: This checklist covers some of the regulations issued by the New Jersey Department of Community Affairs under the Uniform Fire Code (N.J.A.C. 5:70) and the U.S. Department of Labor - OSHA the General Industry standard 1910.125. The Uniform Fire Code has adopted the model code of the Building Officials and Code Administrators International, Inc. known as the "BOCA National Fire Prevention Code/1996" by reference. The checklist applies to dip tanks in educational buildings that use flammable or combustible liquids. It also applies to any vapor area containing dangerous quantities of flammable vapors in the vicinity of dip tanks, their drain boards or associated drying, conveying or other equipment, during operation or shutdown periods. Definitions of underlined terms have been included at the end of the checklist to help you understand some of the questions. This checklist must be used in conjunction with the checklists "Dip Tanks" and "Flammable and Combustible Liquids." Questions marked with the symbol (☞) may require the help of an outside expert.

This checklist does not address additional OSHA and Uniform Fire Code regulations covering hardening and tempering tanks; flow coating; roll coating, roll spreading, or roll impregnating; vapor degreasing tanks; cyanide tanks; spray cleaning and spray degreasing tanks; and electrostatic paint detearing. Please consult 29 CFR 1910.126 and N.J.A.C. 5:70 for details.

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05/2018

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Construction

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| 1. | In educational buildings, are dip tanks used only in a room designed for the purpose, protected with an approved automatic fire suppression system and separated vertically and horizontally from other areas as required by the building code? [N.J.A.C. 5:70-3.2{BOCA F-1305.2}] | Y N N/A DK |
| 2. | Are dip tanks, including any drainboards, constructed of noncombustible materials? [29 CFR1910.125(a) and N.J.A.C. 5:70-3.2{BOCA F-1305.4}] | Y N N/A DK |
| 3. | For dip tanks over 150 gallons in capacity or 10 square feet in liquid surface area, is there a properly trapped overflow pipe leading to a safe location outside the building? [29 CFR1910.125(b)(2) and N.J.A.C. 5:70-3.2{BOCA F-1305.4.1}] | Y N N/A DK |
| 4. | Is the overflow pipe at least 3 inches in diameter? [29 CFR1910.125(b)(2)(i)] | Y N N/A DK |
| 5. | Are all piping connections on the dip tank easily accessible for inspection and cleaning? [29 CFR1910.125(b)(2)(ii)] | Y N N/A DK |
| 6. | Is the bottom of the overflow connection not less than 6 inches from the top of the dip tank? [29 CFR 1910.125(b)(2)(iii) and N.J.A.C. 5:70-3.2{BOCA F-1305.4.1}] | Y N N/A DK |

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| 7. | If the dip tank is over 500 gallons in capacity, is it equipped with a bottom drain? [29 CFR1910.125(c) and N.J.A.C. 5:70-3.2{BOCA F-1305.4.2}] | Y N N/A DK |
| | Note: Bottom drains are not required if (i) the dip tank is equipped with an automatic closing cover, or (ii) the viscosity of the liquid at normal atmospheric temperature does not allow the liquid to flow or be pumped easily. | |
| 8. | Will the required bottom drain operate during a fire? [29 CFR1910.125(c)(2)(i)] | Y N N/A DK |
| 9. | Is the required bottom drain properly trapped and discharged to a safe location outside? [29 CFR1910.125(c)(ii) and (iii) and N.J.A.C. 5:70-3.2{BOCA F-1305.4.3}] | Y N N/A DK |
| 10. | Are required bottom drains automatically and manually arranged to quickly drain in the event of fire unless the viscosity of the liquid at normal atmospheric temperature makes this impractical? [N.J.A.C. 5:70-3.2{BOCA F-1305.4.2}] | Y N N/A DK |
| 11. | Is manual operation of required bottom drains available at a safely accessible location? [29 CFR1910.125(c)(3) and N.J.A.C. 5:70-3.2{BOCA F-1305.4.2}] | Y N N/A DK |
| 12. | If required bottom drains do not operate by gravity flow, is an automatic pump provided? [29 CFR1910.125(c)(4) and N.J.A.C. 5:70-3.2{BOCA F-1305.4.2}] | Y N N/A DK |
| 13. | Is the temperature of the liquid in each dip tank maintained below the liquid's boiling point and autoignition temperature? [29 CFR1910.125(g)] | Y N N/A DK |

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Electrical and Other Sources of Ignition

14. Are open flames, spark production devices, or heated surfaces hot enough to ignite vapors absent from the vapor area? [29 CFR1910.125(e)(1)(ii) and N.J.A.C. 5:70- 3.2{BOCA F-1305.6}] Y N N/A DK
15. ☞ In each vapor area and any adjacent area, do all electrical wiring and equipment conform to applicable hazardous area requirements? [29 CFR1910.125(e)(1)(i) and N.J.A.C. 5:70-3.2{BOCA F-1305.6.1}] Y N N/A DK
16. Are any portable containers used to add liquid to the tank electrically bonded to the tank and positively grounded to prevent static electrical sparks or arcs? [29CFR 1910.125(e)(2)] Y N N/A DK
17. ☞ Are heating systems used in a drying operations installed in accordance with NFPA 86A-1969 and provided with mechanical ventilation before and during operation? [29CFR 1910.125(e)(3)(i) and (ii)] Y N N/A DK
18. Do these heating systems shut down automatically if any ventilating fan fails to maintain adequate ventilation? [29CFR 1910.125(e)(3)(iii)] Y N N/A DK

Operations and Maintenance

19. Are all vapor areas free of combustible debris and as free as possible from combustible stock? [29 CFR1910.125(e)(4)(i) and N.J.A.C. 5:70-3.2{BOCA F-1305.7}] Y N N/A DK

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20. Are rags and other material contaminated with liquids or coating operations placed in approved waste cans immediately after use? [29 CFR1910.125(e)(4)(ii) and N.J.A.C. 5:70-3.2{BOCA F-1305.7.1}] Y N N/A DK

Note: Metal waste cans must have self-closing lids.

21. Are the contents of these waste cans properly disposed of at least once daily at the end of the day? [29CFR1910.125(e)(4)(iii) and N.J.A.C. 5:70-3.2{BOCA F- 1305.7.1}] Y N N/A DK

22. Are "No Smoking" signs in large letters on a contrasting color background conspicuously posted in the vicinity of dip tanks? [29CFR1910.125(e)(5)] Y N N/A DK

Fire Extinguishers

23. Are suitable manual and automatic fire extinguishers available for areas in the vicinity of dip tanks? [29CFR1910.125(f)(2)(i) and N.J.A.C. 5:70-3.2{BOCA F- 1305.8}] Y N N/A DK

Note: Consult you local fire official for assistance. The BOCA National Fire Prevention Code requires at least one portable fire extinguisher with a minimum 40-B:C rating located with 30 feet of travel distance from the dip tank.

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Dip Tank Covers

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| 24. | If dip tank covers are arranged to close automatically in the event of a fire, are they actuated by approved automatic devices and arranged for manual actuation and operation? [N.J.A.C. 5:70-3.2{BOCA F-1305.9}] | Y N N/A DK |
| 25. | Are dip tank covers constructed of substantial noncombustible material or of the tin-clad type with enclosing metal applied with locked joints? [N.J.A.C. 5:70- 3.2{BOCA F-1305.9.1}] | Y N N/A DK |
| 26. | Are covers kept closed when tanks are not used? [N.J.A.C. 5:70-3.2{BOCA F-1305.9.3}] | Y N N/A DK |
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Definitions:

Combustible liquid means any liquid having a flashpoint at or above 100^o F (37.8^o C), but below 200^o F (93.3^o C) except any mixture having components with flashpoints of 200^o F (93.3^o C), or higher, the total volume of which makes up 99 percent or more of the total volume of the mixture.

Dip Tank means a tank, vat, or container containing a liquid other than water that is used to clean an object, coat an object, alter the surface of an object, or change the character of an object (OSHA definition). Please note that the definition of a dip tank under the BOCA Code is different and includes only those tanks that contain *flammable* or *combustible liquids*.

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Explosion-proof means enclosed in a case or pipe that is capable of withstanding an explosion of a specified gas or vapor which may occur within it and of preventing the ignition of a specified gas or vapor surrounding the enclosure by sparks, flashes, or explosion of the gas or vapor within, and which operates at such an external temperature that it will not ignite a surrounding *flammable* atmosphere.

Flammable liquid means any liquid having a flashpoint below 100^o F (37.8^o C), except any mixture having components with flashpoints of 100^o F (37.8^o C) or higher, the total of which makes up 99 percent or more of the total volume of the mixture.

Vapor Area means any space containing a dip tank, including its drain boards, associated drying or conveying equipment, and any surrounding area where the vapor concentration exceeds 25% of the lower flammable limit (OSHA definition). Please note that the definition of vapor area under the BOCA Code is different and means any area containing dangerous quantities of flammable vapors in the vicinity of dip tanks, their drainboards or associated drying, conveying, or other equipment, during operation or shutdown periods.

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