

## **2-29 Hazardous Materials Awareness**

Meet the requirements defined in NFPA472, Standard for Professional Competence of Responders to Hazardous Materials Incidents, Section 2-2, First Responder Awareness.

- 29-1** Identify the definition of hazardous material.
- 29-2** Describe “standard care”
- 29-3** State or organizations that receive notification of hazardous materials inventories.
- 29-4** Describe Titles I and III of the Superfund Amendments and Reauthorization Act.
- 29-5** Identify the initial notification procedures for hazardous materials incidents in the local emergency response plan or the organization’s standard operating procedures.
- 29-6** Describe the functions of the State Emergency Response Commission and the Local Emergency Planning Committee.
- 29-7** Identify the five levels of responders to hazardous materials emergencies.
- 29-8** Identify the Incident Command System.
- 29-9** Identify the role of the first responder at the awareness level during a hazardous materials incident and given the local emergency response plan or the organization’s standard operating procedures.
- 29-10** Describe other rights and responsibilities afforded the worker in addition to SARA Title III.
- 29-11** Describe the life cycle of hazardous materials.
- 29-12** Identify terms used in reference to hazardous materials.
- 29-13** Identify the general routes of entry for human exposure to hazardous materials.
- 29-14** Describe the differences between
  - 29-14.1 Exposure and contamination
  - 29-14.2 Acute and chronic
  - 29-14.3 Internal and external exposure
- 29-15** Identify the ways hazardous materials are harmful (at incidents) to:
  - 29-15.1** People
  - 29-15.2** Environment
  - 29-15.3** Property
- 29-16** Identify three methods to limit exposure.
- 29-17** Identify the signs and symptoms of exposure to hazardous materials.
- 29-18** Identify the health hazards associated with hazardous materials.
- 29-19** Identify typical occupancies and locations where hazardous materials are manufactured, transported, stored, used and disposed of.
- 29-20** Identify the definitions of hazardous materials, the DOT hazard classes, common examples of materials in each hazard class and the primary hazards associated with each by hazard class.
- 29-21.** Identify typical container shapes that may indicate hazardous materials.
- 29-22** Identify markings or colors of containers that may indicate hazardous materials are present.
- 29-23** Identify U.S. placards and labels that indicate hazardous materials.

- 29-24** Identify facility and transportation markings and colors that indicate hazardous materials, including:
  - 29-24.1** UN/NA identification numbers
  - 29-24.2** NFPA 704 markings
  - 29-24.3** Military hazardous materials markings
  - 29-24.4** Special hazard communications markings
  - 29-24.5** Pipeline markers
  - 29-24.6** Container markings
- 29-25** Identify the basic information on Material Safety Data Sheets (MSDS) and shipping papers that indicate hazardous materials:
  - 29-25.1** Identify where to find MSDS
  - 29-25.2** Identify entries on a MSDS that indicate the presence of hazardous materials.
  - 29-25.3** Identify the entries on shipping papers that indicate the presence of hazardous materials.
  - 29-25.4** Match the name of the shipping papers found in transportation (air, highway, rail, and water) with the mode of transportation.
  - 29-25.5** Identify the person responsible for having the shipping papers in each mode of transportation.
  - 29-25.6** Identify where the shipping papers are found in each mode of transportation.
  - 29-25.7** Identify where the papers may be found in an emergency in each mode of transportation.
- 29-26** Identify examples of clues (other than occupancy, container shape, markings, placards, MSDS and shipping papers) that use the senses of sight, sound, and odor to indicate hazardous materials.
- 29-27** Identify the limitations of using the senses in determining the presence or absence of hazardous materials.
- 29-28** Identify difficulties encountered in determining the specific names of hazardous materials in both facilities and transportation.
- 29-29** Identify sources for obtaining the names of UN/NA identification numbers for, or type of placard associated with, hazardous materials in:
  - 29-29.1** Transportation.
  - 29-29.2** A facility

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- 29-30** Identify the three methods for determining the appropriate guide page for a specific hazardous material.
- 29-31** Identify the two general types of hazards found on each guide page.
- 29-32** Describe the difference between the isolation distances in the orange-bordered guide pages and the protective action distances in the green-bordered pages.
- 29-33** Identify the definitions for each of the following protective actions:

- 29-33.1** Isolate hazard area and deny entry
  - 29-33.2** Evacuate
  - 29-33.3** In-place protections
- 29-34** Identify the shapes or recommended initial isolation and protective action zones.
- 29-35** Identify the difference between small and large spills as found in the Table of Isolation Distances.
- 29-36** Identify the circumstances under which the following distances are used at hazardous materials incidents.
  - 29-36.1** Table of initial isolation and protective action distances.
  - 29-36.2** Isolation distances in the numbered guides.
- 29-37** Identify the recommended personal protective equipment for a named hazardous material.
- 29-38** Identify the five-step process developed to safely address an incident involving hazardous materials.
- 29-39** Identify the basic precautions to be taken to protect a firefighter and others in a hazardous materials incident given the local emergency response plan or the standard operating procedures of the authority having jurisdiction.