**FPST 2023 – Exercise – Hazard Communication**

**Part 1 - Sodium Cyanide SDS**

Ensure your answer is item “a.” under each question

1. What is the appearance of this material?
   1. White solid briquette
2. What does it smell like?
   1. Slight bitter almond odour
3. Recommended use
   1. Electroplating, Gold processing reagent, laboratory reagent, metal treatment
4. Regarding acute toxicity, which method of this material entering the body is the greatest concern?
   1. Oral
5. Pictograms(s)
   1. 形状

      低可信度描述已自动生成
6. This material is fatal if inhaled. What is the hazard statement code for this?
   1. H330
7. The SDS states to wear respiratory protection when around this material. What is the prevention statement code for this?
   1. P284
8. The SDS states to store this material in a locked location. What is the storage statement code for this?
   1. P405
9. What is the CAS number for sodium cyanide?
   1. 143-33-9 497-19-8
10. Access the NIOSH Pocket Guide to Chemical Hazards via the Center for Disease Control website. What is the synonym for sodium cyanide? (you must include the URL from the Center for Disease Control website to get credit)
    1. Azide, Azium, Sodium salt of hydrazoic acid
    2. URL: https://www.montcopa.org/DocumentCenter/View/478/NIOSH-Pocket-Guide-to-Chemical-Hazards---2007?bidId=\
11. What must be included in a Cyanide Emergency Kit?
    1. containing Amyl Nitrite Pearls; Hydroxycobalamine and Sodium Thiosulfate; Oxygen;
    2. “Space” or thermal blankets for treating patients for shock
12. What material forms when this material is heated above 300 °C?
    1. Hydrogen cyanide forms if heated above 300 °C. Contact with water, acids, acid salts and carbon dioxide lead to the liberation of hydrogen cyanide gas
13. If someone swallows sodium cyanide and they are not breathing, what should you not do?
    1. Do not use mouth to mouth, or mouth to nose ventilation, because of the danger to the rescuer, instead use a resuscitation bag and mask – (Oxy-Viva)
14. Is sodium cyanide a fire hazard?
    1. Sodium cyanide solid is not combustible and is not considered a fire risk, but may generate toxic, flammable, corrosive and explosive hydrogen cyanide gas if in contact with water, CO2 fire extinguishers, and some foam fire extinguishers if these contain acidic agents.
15. What two materials should gloves and body protection be constructed of to protect those working with sodium cyanide?
    1. PVC and chemical resistant materials
16. When conducting final clean up after a spill, you should use what type of mixture?
    1. Calcium/Sodium Hypochlorite
17. What precautions should you take when opening a container storing sodium cyanide?
    1. When opening a container storing cyanide, remove the lid, and move away to let the accumulated gas out of the container before returning to obtain the quantity required.
18. During an acute overexposure to this material, death occurs from what?
    1. Acute effects depend on the degree of cellular hypoxia. Death results from central nervous system failure. Inhalation which cause weakness, headache, dizziness, shortness of breath, chest pain, confusion, cyanosis (bluish skin due to deficient oxygenation of the blood), weak and irregular heartbeat, collapse, unconsciousness, coma and death.
19. Sodium cyanide will release what materials when it contacts acids and water?
    1. sodium cyanide will release toxic and flammable hydrogen cyanide gas in contact with these substances
20. Sodium cyanide will release what materials when it contacts chlorinating agents?
    1. Toxic cyanogen chloride gas.
21. Sodium cyanide is incompatible with what materials?
    1. Oxidizing agents, copper, zinc, magnesium, tin, or their alloys (i.e., bronze, brass, galvanised metals, etc.) and aluminium.
22. What is the estimated lethal oral dose of hydrogen cyanide for an adult?
    1. The lethal oral dose of hydrogen cyanide is estimated to be approximately 50 mg in an adult.
23. What amount of hydrogen cyanide (in parts per million) will cause instant death?
    1. 270
24. What is the classification of this material when it is being transported?
    1. Dangerous Goods by Road and Rail

**Part 2 - 29 CFR 1910.1200**

You must provide the regulatory citation that supports each of your answers unless otherwise noted. You may omit “29 CFR” from your citations. Ensure your answer is item “a.” under each question and the regulatory citation is “b.” when required.

1. Does this regulation require labeling of vodka?
   1. Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use are no need to label.
   2. 1910.1200(b)(5)(iv)
2. This section applies to any chemical which is known to be present in the workplace in such a manner that employees may be exposed under what situations?
   1. normal conditions of use or in a foreseeable emergency.
   2. 1910.1200(b)(2)
3. Does this regulation require labeling of food colorings?
   1. No.
   2. 1910.1200(b)(5)(iii)
4. How does the regulation define the word “use”?
   1. Use means to package, handle, react, emit, extract, generate as a byproduct, or transfer.
   2. 1910.1200(c)
5. What does 1910.1200(e)(1)(ii) require? (describe what this section requires to be done…do not just copy and paste it) (no citation is required)
   1. For a written hazard communication program concerning the hazard communication, besides the forms of warning, safety data sheets, and employee information and training, the employer should also provide the chosen methods to inform employees of the hazards of non-routine tasks, for example, the cleaning of reactor vessels as well as the hazards associated with chemicals contained in unlabeled pipes in their working areas.
6. Does this regulation require the labeling of cigarettes?
   1. No
   2. 1910.1200(b)(5)(iv)
7. The employer shall make the written hazard communication program available, upon request, to whom?
   1. Employees, their designated representatives, the Assistant Secretary and the Director
   2. 1910.1200(e)(4)
8. How does the regulation define the term “hazardous chemical”?
   1. Any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.
   2. 1910.1200(c)
9. Assuming certain conditions are met, what may you use instead of affixing labels to individual stationary process containers?
   1. Signs, placards, process sheets, batch tickets, operating procedures, or other such written materials
   2. 1910.1200(f)(7)
10. How does the regulation define the term “foreseeable emergency”?
    1. Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.
    2. 1910.1200(c)
11. How does the regulation define the word “chemical”?
    1. Any substance, or mixture of substances
    2. 1910.1200(c)
12. Can the employer remove the chemical manufacturer’s label on a container?
    1. The employer shall not remove or deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.
    2. 1910.1200(f)(9)
13. When are employees required to be trained?
    1. Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new chemical hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.
    2. 1910.1200(h)(1)