

Safety and Security in Hazardous Materials Transportation



Developed
Specifically for

UNIVERSITY of CALIFORNIA **Riverside**
Extension
Learn for Life

**Final
Project**

UC RIVERSIDE **iLearn**



Final Project

Instructions

(50 Points)

1. You are a hazardous materials shipper. Attached is a shipping paper (page FP-5) that one of your employees has prepared for a shipment direct from your firm to UCR, via Butterfinger Bob's Drayage. Please complete all paper work with your name listed as the shipper. (2 points)
2. Review the shipping paper and note any errors. Indicate on the attached shipping paper checklist (page FP-8 & 9), in the violation column, any errors noted. All subject areas discussed during this course (HMT, shipping papers, loading, etc.) should be considered when evaluating the shipping papers for errors. (8 points)
3. Next, prepare a correct shipping paper(s) (page FP-12 & 13) for the shipment according to CFR49. Indicate the vehicle number in the appropriate box if more than one vehicle (trailer) is used. You have only two trailers available for your shipment. (8 points)
4. On the "Marking, Labeling, Packaging, and Placarding Final Project Exercise" sheet (page FP-6) indicate: (Checklists for Marking and Labeling (page FP-10) and Placarding (page FP-11) are provided)
 - a. any required marking on each package of hazardous material (8 points)
 - b. the label(s) required on each package of hazardous material (8 points);
 - c. the identification code for an appropriate approved packaging of the type listed on the shipping paper. Include the identification code (UN 1A1, etc.) and the letter indicating the minimum test standard it must meet for the material it contains. (X, Y, or Z) (8 points);
 - d. and how each vehicle (trailer) must be placarded (page FP-7) (8 points).
5. The completed exercise shall be turned in during class on last class meeting (10th meeting).
6. This is an exercise to evaluate your understanding of all material covered during this course. Each student is expected to complete his/her own exercise.

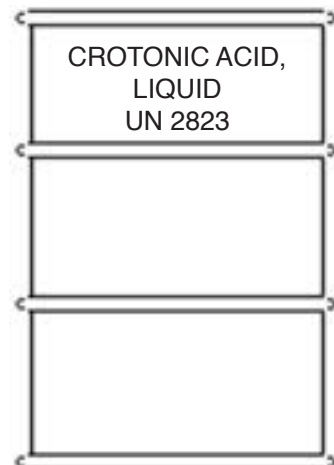
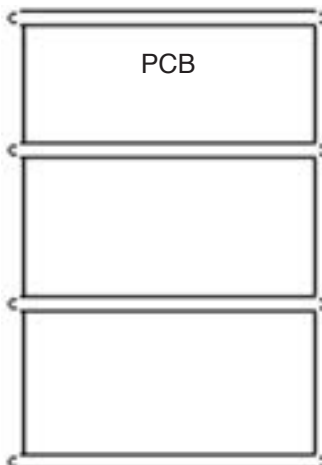
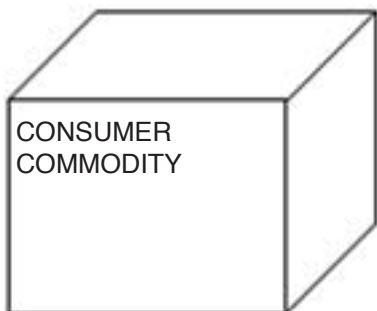
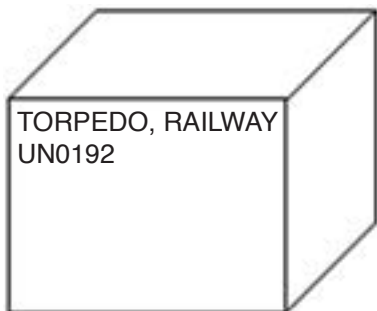
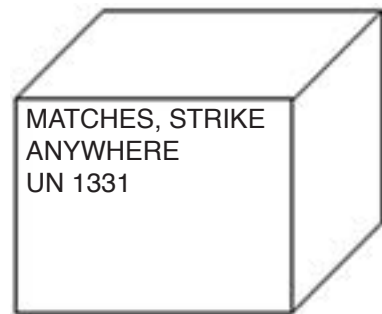
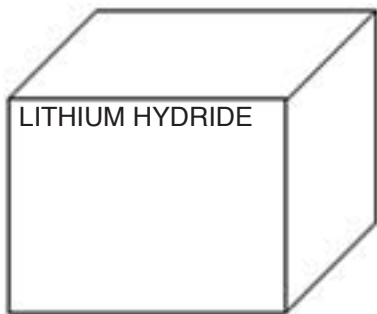
FP-4



Final Project

Labeling, Packaging and Placarding Final Project Exercise

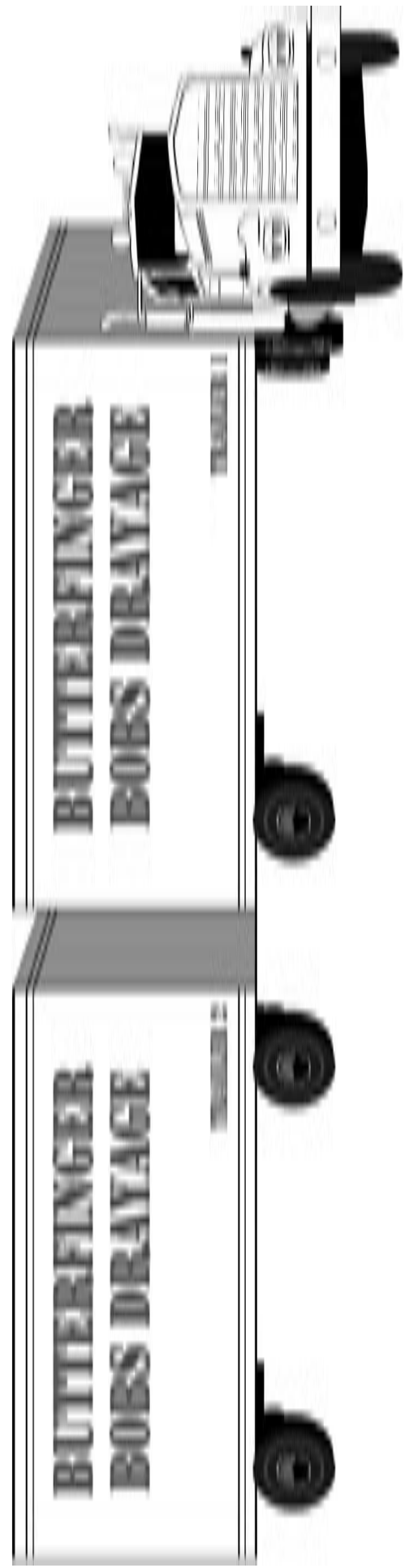
1. Draw in any required marking(s) on each package of hazardous materials.
2. Draw in the required label(s) on each package of hazardous materials.
3. Write on each container the identification code for an appropriate packaging (just one) that is approved for the material in the container (1A1, etc.). Also include the letter indicating the minimum test standard it must meet for the material it contains (X, Y, or Z).
4. Correct any shipping names and/or ID#s that you find on the container that are not consistent with CFR 49.





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5. Draw the required placard(s) on the trailer(s) that contain hazardous materials, consistent with what you indicated in your shipping papers.





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	SHIPPING PAPERS	49 CFR REFERENCE	VIOLATION
1	Shipping Paper	§172.200(a)	
2	Contents		
	Order/Color/X	§172.201(a)(1)	
	Legible/English	§172.201(a)(2)	
3	Shipping Name	§172.202(a)(1)	
4	Hazard Class	§172.202(a)(2)	
5	Identification Number	§172.202(a)(3)	
	Packing Group	§172.202(a)(4)	
6	Total Quantity/Unit of Measure	§172.202(a)(5) & (c)	
7	Sequence	§172.202(b)	
8	Additional Descriptions	§172.203	
	Exemption	§172.203(a)	
	Limited Quantity	§172.203(b)	
	Hazardous Substance	§172.203(c)	
	Radioactive Materials (RAM)	§172.203(d)	
	RAM - Ltd Qty (Not a Haz Waste or Substance)	§173.421(a)	
	RAM - Ltd Qty (Haz Waste or Substance)	§173.421(b)	
	Empty Packaging	§172.203(e)	
	Air Requirements	§172.203(f)	
	Rail Requirements	§172.203(g)	
	Highway Requirements	§172.203(h)	
	Water Requirements	§172.203(i)	
	Technical Names & NOS	§172.203(k)	
	Marine Pollutants	§172.203(l)	
	Poisonous (or Toxic) Materials	§172.203(m)	
	Emergency Response Information	§172.602(a) - (c)	
	Emergency Telephone Number	§172.604(a)	



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	MARKING	49 CFR REFERENCE	VIOLATION
1	Shipping Name	§172.301(a)	
2	Identification Number	§172.301(e)	
	Inhalation Hazard	§172.313	
3	Specifications	§172.304	
	In English	§172.304(a)(1)	
	Not Obscured	§172.304(a)(3)	
4	Name & Address of Consignee/Consignor	§172.301(d)	
5	Radioactive Materials	§172.310	
		§173.425(a) & (b)	
6	This Side Up (Liquid Hazardous Materials)	§172.312(a)(1) & (2)	
7	ORM	§172.316	
8	Marine Pollutants	§172.322	
9	Hazardous Substances/Solutions	§172.324(a)	
	Mixtures: "RQ", "EPA", "ICRA", or "D" Numbers	§172.324(b)	
	LABELING	49 CFR REFERENCE	VIOLATION
1	General Requirements & Table	§172.400	
2	One Material - Two Hazards	§172.402	
3	Poison Inhalation Hazard	§172.400(b) Table	
		§172.402(a) Table	
4	Cargo Aircraft Only	§172.402(b)	
5	Dangerous When Wet	§172.400(a)	
		HMT Col 6	
6	Radioactive Materials	§172.403	
	Transport Index (TI)	§173.403	
	Radionuclides	§173.435	
7	Mixed Packages	§172.404	
8	Placement of Label	§172.406(a)	



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PROJECT SCORE SHEET

Student name:

Item	Points Available	Points Achieved
Listed name as shipper	2 Points	
Shipping Paper Errors	8 Points	
Sub-Total	10 Points	

Item	Points Available	Points Achieved
Shipping Papers	8 Points	
Marking Required	8 Points	
Labeling Required	8 Points	
Packaging	8 Points	
Placarding	8 Points	
Sub-Total	40 Points	

	Points Available	Points Achieved
GRAND TOTAL	50 Points	