

Page: 1 of 7

Title:

Approver: Joe Berry

# Berry Bros. General Contractors, Inc. Corporate Policy Procedure

(HSE) Health, Safety & Environmental Policies and Procedures Manual

Section # 28

Doc # SWP - 28

Revision: 2

FLAMMABLE AND COMBUSTIBLE LIQUIDS

CONTENTS	SUBPART
PURPOSE	Α
EXPOSURE MONITORING	В
HAZARD COMMUNICATION	С
PERSONAL PROTECTIVE EQUIPMENT	D
PERSONAL HYGIENE	E
STORAGE	F
SPILLS AND LEAKS	G
SIGNS AND MARKINGS	Н
TRAINING	I
GENERAL INFORMATION	J
STORAGE	K

#### SUBPART A - PURPOSE

The host employer shall have processes and/or procedures that require the approved methods of flammable and combustible liquids use. The purpose of this plan is to help protect all employees from the potential hazards associated with using flammables and combustible liquids, as outlined in 29 CFR 1910.106.

### **SUBPART B - EXPOSURE MONITORING**

Every effort should be made to protect all employees from dangerous quantities of flammable vapors or mists, or combustible residues, dusts, or deposits from flammable and combustible liquids.

## <u>SUBPART C - HAZARD COMMUNICA</u>TION

Hazards of all flammable and combustible liquids must be evaluated, and that information concerning their hazards is transmitted to all employees. This



Page: 2 of 7

Title:

Approver: Joe Berry

# Berry Bros. General Contractors, Inc. Corporate Policy Procedure

(HSE) Health, Safety & Environmental Policies and Procedures Manual

Section # 28

Doc # SWP - 28

Revision: 2

FLAMMABLE AND COMBUSTIBLE LIQUIDS

transmittal of information is accomplished by means of comprehensive hazard communication programs, which include:

- Container labeling
- Other forms of warning
- Material safety data sheets (MSDS's)
- employee training

### **SUBPART D - PERSONAL PROTECTIVE EQUIPMENT**

Hazards associated with the use of flammable and combustible liquids are identified at the facility and measures have been taken to eliminate or reduce their presence with engineering and administrative controls.

Where engineering and administrative controls do not eliminate or minimize exposure to the hazard, use personal protective equipment to protect all employees.

#### SUBPART E - PERSONAL HYGIENE

If flammable and combustible liquids contact the skin, employees must flush the affected areas immediately with plenty of water, followed by washing with soap and water. Any worker who handles flammable and combustible liquids thoroughly washes his/her hands, forearms, and face with soap and water before eating, using tobacco products, using toilet facilities, applying cosmetics, or taking medication.

#### **SUBPART F - STORAGE**

Follow the manufacturer and host employer's recommendations (as indicated on the container label) for the safe storage of flammable and combustible liquids at the work facility. All flammable and combustible liquids shall be stored in cool, well-ventilated areas in tightly sealed containers that are labeled in accordance with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.



Page: 3 of 7

Title:

Approver: Joe Berry

# Berry Bros. General Contractors, Inc. Corporate Policy Procedure

(HSE) Health, Safety & Environmental Policies and Procedures Manual

Section # 28

Doc # SWP - 28

Revision: 2

FLAMMABLE AND COMBUSTIBLE LIQUIDS

### Above Ground Storage Tanks

The distance between any two outside above ground flammable liquid storage tanks shall not be less than 3 feet. Where unstable flammable liquids are stored, the distance between such tanks shall not be less than one-half the sum of their diameters.

### **SUBPART G - SPILLS AND LEAKS**

Whenever spills, leaks, ruptures, or breakdowns occur that may lead to employee exposure to flammable and combustible liquids, we monitor (using area or personal sampling) after the cleanup to ensure that exposures have returned to the level that existed prior to the incident.

#### SUBPART H - SIGNS AND MARKINGS

In all areas used for fueling, servicing fuel systems for internal combustion engines, and receiving or dispensing of flammable or combustible liquids, conspicuous and legible signs are posted that prohibits smoking.

### **SUBPART I - TRAINING**

Under no circumstances will any employees be involved in processes or procedures that involve the use of flammable and combustible liquids until they have been thoroughly trained in the hazards of the liquids.

#### **SUBPART J - GENERAL INFORMATION**

Perform maintenance and operating practices according to established procedures that will tend to:

- Control leakage
- Prevent the accidental escape of flammable or combustible liquids
- Clean up spills promptly



Page: 4 of 7

Title:

Approver: Joe Berry

## Berry Bros. General Contractors, Inc. Corporate Policy Procedure

(HSE) Health, Safety & Environmental Policies and Procedures Manual

Section # 28

Doc # SWP - 28

Revision: 2

### FLAMMABLE AND COMBUSTIBLE LIQUIDS

 Keep at least one portable fire extinguisher having a rating of not less than 12-B units in the following locations:

Storage Area	Extinguisher Location
Any room used for storing flammable or	Outside the room, within 10 feet of the
combustible liquids	door opening
Any Class I or Class II liquid storage area	Between 10 and 25 feet from the area
located outside of a storage room but	
inside a building	

Prohibit open flames and smoking in flammable or combustible liquid storage areas.

Flammable liquids shall not be dispensed into containers unless the nozzle and container are electrically interconnected.

Do NOT store materials that will react with water in the same room with flammable or combustible liquids.

No loose combustible material, empty or full drum or barrel, shall be permitted within the diked area.

Maintain adequate aisles:

- For unobstructed movement of personnel.
- So that fire protection equipment can be brought to bear on any part of flammable or combustible liquid storage, use, or any unit physical operation.

Adequately maintain AND periodically inspect and test all fire protection equipment to make sure they:

Are always in satisfactory operating condition.



Page: 5 of 7

Title:

Approver: Joe Berry

# Berry Bros. General Contractors, Inc. Corporate Policy Procedure

(HSE) Health, Safety & Environmental Policies and Procedures Manual

Section # 28	
Doc # SWP - 28	
Revision: 2	

FLAMMABLE AND COMBUSTIBLE LIQUIDS

Will serve their purpose in time of emergency.

If maintenance work in a flammable or combustible liquid processing area is necessary, **then** obtain authorization from a responsible representative of the employer.

Perform hot work, such as welding or cutting operations, use of spark-producing power tools, and chipping operations ONLY under supervision of a responsible individual in charge who makes an inspection of the area to be sure that:

- It is safe for the work to be done.
- Safe procedures will be followed for the work specified.

## **SUBPART K - STORAGE**

Comply with the following requirements for container and portable tank storage:

REQUIREMENT	DETAIL
Approved containers	Use only approved containers and portable tanks for storing flammable or combustible liquids (see Note A below).
Emergency venting	Provide each portable tank with one or more devices installed in the top with sufficient emergency venting capacity to limit internal pressure under fire exposure conditions to 10 p.s.i.g. or 30% of the bursting pressure of the tank, whichever is greater.  Ensure that the total venting capacity is not less than that specified in 29 CFR 1910.106(b) (2) (v) (c) or (e). Use at least one pressure-activated vent having a minimum capacity of 6,000 cubic feet of free air (14.7 p.s.i.a. and 60 degrees F). Set the vent to open at not less than 5 p.s.i.g. IF fusible vents are used, THEN they must be actuated by elements that operate at a temperature not exceeding 300 degrees F.
Size	Flammable and combustible liquid containers must be in compliance with 29 CFR 1910.106, Table H-12, Maximum Allowable Size of Containers and Portable Tanks. EXCEPTION: Glass or plastic containers of no more than 1-gallon capacity may be used for a Class IA or Class IB flammable liquid IF the containers meet the requirements of 29 CFR 1910.106(d) (2) (iii)(a) or (b).
Storage Cabinet	Store no more than the following quantities in a storage cabinet:



Page: 6 of 7

Title:

Approver: Joe Berry

## Berry Bros. General Contractors, Inc. Corporate Policy Procedure

(HSE) Health, Safety & Environmental Policies and Procedures Manual

Section # 28

Doc # SWP - 28

Revision: 2

FLAMMABLE	AND CC	MRUSTIRI	I F I IQUIDS
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Office occupancies	* 60 gallons of Class I or Class II liquids, OR  * 120 gallons of Class III liquids. Use only storage cabinets that are:  * Designed and constructed to limit the internal temperature to not more than 325 degrees F when subjected to a 10-minute fire test (see Note B below); AND  * Labeled in conspicuous lettering, Flammable Keep Fire Away. NOTE: Metal and wood cabinets that meet the construction requirements of 29 CFR 1910.106(d) (3) (ii) (a) and (b) are considered to be in compliance.  Prohibit the storage of flammable and combustible liquids in office occupancies EXCEPT that which is required for
	maintenance and operation of building and operation of equipment. IF storing flammables or combustibles in office occupancies, THEN store them in:  * Closed metal containers stored in a storage cabinet,  * Safety cans, OR  * An inside storage room that does NOT have a door opening into the part of the building used by the public.
Mercantile occupancies and other retail stores	Remove leaking containers to a storage room or take to a safe location outside the building and transfer the contents to an undamaged container. Store according to Table H-14 or H-15 and in buildings or in portions of such buildings cut off by standard firewalls. Material creating no fire exposure hazard to the flammable or combustible liquids may be stored in the same area.
General purpose public warehouses	Comply with 29 CFR 1910.106(d) (5) (v).
Flammable and combustible liquid warehouses or storage buildings	Comply with 29 CFR 1910.106(d) (5) (vi).
Storage outside buildings Inside storage rooms	Comply with 29 CFR 1910.106(d) (6) (i). (See B below.)  Use only inside storage rooms which meet the following requirements:  Comply with the requirements for:  * Design and construction in 29 CFR 1910.106(d)(4)(i);  * Rating and capacity in 29 CFR 1910.106(d)(4)(ii);  * Wiring in 29 CFR 1910.106(d)(4)(iii); AND  * Ventilation in 29 CFR 1910.106(d) (4) (iv).



Page: 7 of 7

Title:

Approver: Joe Berry

# Berry Bros. General Contractors, Inc. Corporate Policy Procedure

(HSE) Health, Safety & Environmental Policies and Procedures Manual

FLAMMABLE AND COMBUSTIBLE LIQUIDS

Section	#	28	2
---------	---	----	---

Doc # SWP - 28

Revision: 2

Maintain one clear aisle at least 3 feet wide in every inside
storage room. Do NOT stack containers over 30 gallons capacity
on top of one another. Dispense liquids using only:
* An approved pump, OR
* A self-closing faucet

IF storing flammable or combustible liquids outside buildings, THEN:

- Store a maximum of 1,100 gallons of flammable or combustible liquids adjacent to buildings which are:
  - Located on the same premises
  - Under the same management
- Protect the storage area against tampering or trespassers where necessary Keep the storage area free of weeds, debris and other combustible material not necessary to the storage
- IF the quantity stored exceeds 1,100 gallons, THEN maintain a minimum distance of 10 feet between buildings and the nearest container of flammable or combustible liquid.

#### Notes:

- Metal containers and portable tanks meeting the requirements of and containing products authorized by 49 CFR Chapter I (regulations issued by the Hazardous Materials Regulations Board, Department of Transportation), are acceptable.
- Fire tests for metal cabinets must use the standard time-temperature curve as set forth in Standard Methods of Fire Tests of Building Construction and Materials, NFPA 251-1969.

Revision Date:	9/30/09, 10/21/14



Page: 8 of 7

Title:

Approver: Joe Berry

# Berry Bros. General Contractors, Inc. Corporate Policy Procedure

(HSE) Health, Safety & Environmental Policies and Procedures Manual

Section # 28

Doc # SWP - 28

Revision: 2

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