

Univeristy of Delaware
Department of Occupational Health and Safety
Maximum Allowable Quantity of Hazardous Materials per Control Area
Based on the 2006 International Building Codes

		Unsprinklered				Sprinklered				Additional amount permitted if material is stored in Rated Safety Cabinets, Gas Cabinets or Vented Enclosures			
Material	Class	One Floor Above Grade (100%)	Two Floors Above Grade (75%)	Three Floors Above Grade (50%)	Four Floors Above Grade (12.5%)	One Floor Above Grade (100%)	Two Floors Above Grade (75%)	Three Floors Above Grade (50%)	Four Floors Above Grade (12.5%)	One Floor Above Grade (100%)	Two Floors Above Grade (75%)	Three Floors Above Grade (50%)	Four Floors Above Grade (12.5%)
Corrosive Liquids		500 gal	375 gal	250 gal	62 ½ gal	1000 gal	750 gal	500 lbs	125 gal	500 gal	375 gal	250 gal	62 ½ gal
Corrosive Solids		5000 lbs	3750 lbs	2500 lbs	625 lbs	10,000 lbs	7500 gal	5000 lbs	1250 lbs	5000 lbs	3750 lbs	2500 lbs	625 lbs
Corrosive Gas		150 ft ³	112 ½ ft ³	75 ft ³	18 ¾ ft ³	810 ft ³	607 ½ ft ³	405 ft ³	101 ¼ ft ³	N/A	N/A	N/A	N/A
Combustible Liquids	II	120 gal	90 gal	60 gal	15 gal	240 gal	180 gal	120 gal	30 gal	120 gal	90 gal	60 gal	15 gal
	IIA	320 gal	240 gal	160 gal	40 gal	640 gal	480 gal	320 gal	80 gal	320 gal	240 gal	160 gal	40 gal
	IIB	13,200 gal	9900 gal	6600 gal	1650 gal	26,400 gal	19,800 gal	13,200 gal	3300 gal	13,200 gal	9900 gal	6600 gal	1650 gal
Explosives		Not Allowed	Not Allowed	Not Allowed	Not Allowed	1 lbs	¾ lb	½ lb	⅛ lb	2 lbs	1 ½ lbs	1 lb	¼ lb
Flammable Cryogenics		45 gal	33 ¾ gal	22 ½ gal	5 ⅔ gal	90 gal	67 ½ gal	45 gal	11 ¼ gal	N/A	N/A	N/A	N/A
Oxidizing Cryogenics		45 gal	33 ¾ gal	22 ½ gal	5 ⅔ gal	90 gal	67 ½ gal	45 gal	11 ¼ gal	N/A	N/A	N/A	N/A
Flammable Gas	Gaseous or Liquefied	30 gal	22 ½ gal	15 gal	3 ¾ gal	60 gal	45 gal	30 gal	7 ½ gal	30 gal	22 ½ gal	15 gal	3 ¾ gal
Flammable Liquids	1A	30 gal	22 ½ gal	15 gal	3 ¾ gal	60 gal	45 gal	30 gal	7 ½ gal	30 gal	22 ½ gal	15 gal	3 ¾ gal
	1B	60 gal	45 gal	30 gal	7 ½ gal	120 gal	90 gal	60 gal	15 gal	60 gal	45 gal	30 gal	7 ½ gal
	1C	90 gal	67 ½ gal	45 gal	11 ¼ gal	180 gal	135 gal	90 gal	22 ½ gal	90 gal	67 ½ gal	45 gal	11 ¼ gal
Combination of Flammable Liquids (1A, 1B, 1C)	NOTE: Cannot exceed an individual quantity limitation	120 gal	90 gal	60 gal	15 gal	240 gal	180 gal	120 gal	30 gal	120 gal	90 gal	60 gal	15 gal
Flammable Solids		125 lbs	93 ¾ lbs	62 ½ lbs	15 ⅔ lbs	250 lbs	187 ½ lbs	125 lbs	31 ¼ lbs	125 lbs	93 ¾ lbs	62 ½ lbs	15 ⅔ lbs

		Unsprinklered				Sprinklered				All Materials Stored in Rated Safety Cabinets, Gas Cabinets or Vented Enclosures – Add An Additional:			
Material	Class	One Floor Above Grade (100%)	Two Floors Above Grade (75%)	Three Floors Above Grade (50%)	Four Floors Above Grade (12.5%)	One Floor Above Grade (100%)	Two Floors Above Grade (75%)	Three Floors Above Grade (50%)	Four Floors Above Grade (12.5%)	One Floor Above Grade (100%)	Two Floors Above Grade (75%)	Three Floors Above Grade (50%)	Four Floors Above Grade (12.5%)
Toxic Materials		500 lbs	375 lbs	250 lbs	62 ½ lbs	1000 lbs	750 lbs	500 lbs	125 lbs	500 lbs	375 lbs	250 lbs	62 ½ lbs
Toxic Gas		810 ft ³	607 ½ ft ³	405 ft ³	101 ¼ ft ³	810 ft ³	607 ½ ft ³	405 ft ³	101 ¼ ft ³	N/A	N/A	N/A	N/A
Highly Toxic Materials		10 lbs	7 ½ lbs	5 lbs	1 ¼ lbs	20 lbs	15 lbs	10 lbs	2 ½ lbs	N/A	N/A	N/A	N/A
Highly or Acutely Toxic Gas		20 ft ³	15 ft ³	10 ft ³	2 ½ ft ³	20 ft ³	15 ft ³	10 ft ³	2 ½ ft ³	N/A	N/A	N/A	N/A
Organic Peroxide		5 lbs	3 ¾ lbs	2 ½ lbs	³ / ₅ lbs	10 lbs	7 ½ lbs	5 lbs	1 ¼ lbs	5 lbs	3 ¾ lbs	2 ½ lbs	³ / ₅ lb
Oxidizer		10 lbs	7 ½ lbs	5 lbs	1 ¼ lbs	20 lbs	15	10 lbs	2 ½ lbs	10 lbs	7 ½ lbs	5 lbs	1 ¼ lbs
Oxidizing Gas	Gaseous or Liquefied	1500 ft ³	1125 ft ³	750 ft ³	187 ½ ft ³	3000 ft ³	2250 ft ³	1500 ft ³	375 ft ³	1500 ft ³	1125 ft ³	750 ft ³	187 ½ ft ³
Pyrophoric Material		Not Allowed	Not Allowed	Not Allowed	Not Allowed	4 lbs	3 lbs	2 lbs	½ lb	4 lbs	3 lbs	2 lbs	½ lb
Pyrophoric Gas		Not Allowed	Not Allowed	Not Allowed	Not Allowed	50 ft ³	37 ½ ft ³	25 ft ³	6 ¼ ft ³	N/A	N/A	N/A	N/A
Reactive Material other than already listed		5 lbs	3 ¾ lbs	2 ½ lbs	³ / ₅ lb	10 lbs	7 ½ lbs	5 lbs	1 ¼ lbs	5 lbs	3 ¾ lbs	2 ½ lbs	³ / ₅ lb
Waste Reactive		50 lbs	37 ½ lbs	25 lbs	6 ¼ lbs	100 lbs	75 lbs	50 lbs	12 ½ lbs	50 lbs	37 ½ lbs	25 lbs	6 ¼ lbs

Below Grade Floors: One floor below grade will meet the requirements for the Second Floor. Two floors below grade will meet the requirements for the third floor. No hazardous materials or chemicals can be stored 3 floors below grade.

Explanations: A control area is not necessarily defined as a laboratory. Usually it is a group of laboratories surrounded by one hour fire rated walls and two hour fire rated floors. There is a maximum number of control areas allow be floor:

**Two Floors Below Grade: 2
One Floor Below Grade: 3
One Floor Above Grade: 4**

**Two Floors Above Grade: 3
Three Floors Above Grade: 2
Four Floors Above Grade: 2**

Examples:

Flammable Liquid	1A	Flash Point < 73 °F (23 °C) and a Boiling Point < 100 °F (38 °C)	1-1-Dichloroethylene Ethylamine Ethyl Chloride Ethyl Ether	Isopentane Isopropyl Chloride	Methyl Formate Pentane Propylene Oxide
	1B	Flash Point < 73 °F (23 °C) and a Boiling Point >100 °F (38 °C)	Acetone Benzene Carbon Disulfide 1,2-Dichloroethylene Ethyl Acetate	Ethyl Alcohol Ethyl Benzene Hexane Methyl Acetate Methanol	Methyl Ethyl Ketone Isopropyl Acetate Isopropyl Alcohol Toluene
	1C	Flash Point > 73 °F (23 °C) and a Boiling Point <100 °F (38 °C)	Isoamyl Acetate Amyl Alcohol	Methyl Isobutyl Ketone Propyl Alcohol	Xylene
Combustible Liquid	II	Flash Point > 100 °F (38 °C) and a Boiling Point < 140 °F (60 °C)	Fuel Oil Naphtha		
	IIA	Flash Point > 140 °F (60 °C) and a Boiling Point < 200 °F (93 °C)			
	IIC	Flash Point > 200 °F (93 °C)			