

# Nevada State Fire Marshal Division

## Hazardous Material Permitting Threshold Amounts

From the 2024 International Fire Code (IFC) Table 105.6.20, pursuant to NAC 477.323(4)

*For assistance determining what class an item belongs in, consult IFC Appendix E (Hazard Categories), an SDS (formerly MSDS) or a label on the product.*

### **MATERIAL TYPE**

### **AMOUNT**

#### **Flammable and Combustible Materials**

Flammable Gases (*except cryogenic fluids and LP Gases*)

200-cu.ft. at NTP

Combustible Liquids

More than 25 gallons inside a building or 60 gallons outside

Flammable Liquids

More than 5 gallons inside a building or 10 gallons outside

Flammable Solids

100 pounds

Dispensing of Combustible or Flammable Liquid fuel into a motor vehicle (gas station)

Any Amount

*Note: Liquefied Petroleum Gas (LPG) is not included in IFC Table 105.6.20; however, quantities exceeding 2,381-gallons w.c. exceed the SARA Title III reporting threshold of 10,000-pounds. See the information at the bottom of this document. In addition, LP-Gas installations may require a permit from the Nevada Board for the Regulation of Liquefied Petroleum Gas. Contact the LP-Gas Board at <https://www.nvlpgasboard.com/> for more information.*

#### *Examples*

*Flammable Gases: Acetylene, hydrogen*

*Combustible Liquids: Diesel fuel, oil based paints, liquids with a flash point at or above 100F and used motor oil*

*Flammable Liquids: Gasoline, lacquer based paints, solvents, liquids with a flash point below 100F*

*Flammable Solids: Ammo reloading powders, magnesium metal, cellulose nitrate, and phosphorus*

## **Corrosive Materials**

<u>Corrosive Gases</u>	200 cu.ft. NTP
<u>Corrosive Liquids</u>	55 gallons
<u>Corrosive Solids</u>	1000 pounds

### *Corrosive Materials Examples*

*Corrosive Gases: Ammonia, hydrogen chloride, fluorine and chlorine*

*Corrosive Liquids: Acids (sulfuric, hydrochloric, nitric); Bases (sodium hydroxide, potassium hydroxide)*

*Corrosive Solids: Caustic soda, lime*

## **Explosives in commercial construction** 50 pounds

*(Except when used in mining or the control of avalanches.*

*Additional exceptions apply, see the nine exceptions in IFC section 5601.1.)*

## **Toxic Materials**

<u>Toxic Gases</u>	any amount
<u>Toxic Liquids</u>	10 gallons
<u>Toxic Solids</u>	100 pounds

### *Toxic Materials Examples*

*Toxic Gases: Chlorine, hydrogen fluoride and hydrogen sulfide*

*Toxic Liquids: Automotive antifreeze, methyl bromide and phosphorus chloride*

*Toxic Solids: Pheno, barium chloride and arsenic*

## **Highly Toxic Materials**

<u>Highly Toxic Gases</u>	any amount
<u>Highly Toxic Liquids</u>	any amount
<u>Highly Toxic Solids</u>	any amount

### *Highly Toxic Material Examples*

*Highly Toxic Gases: Hydrogen cyanide, fluorine, ozone and phosgene*

*Highly Toxic Liquids: Hydrazine and hydrocyanic acid*

*Highly Toxic Solids: White phosphorus, arsenic trioxide and calcium cyanide*

## **Oxidizing Materials**

Gases (including oxygen) 504 cu.ft. NTP

### **Oxidizing Liquids**

Class 4 any amount

Class 3 1 gallon

*(An exception applies that can raise the permit threshold from 1 to 20 gallons for a Class 3 liquid. Refer to footnote "a" in Table 105.6.20 for details)*

Class 2 10 gallons

Class 1 55 gallons

### **Oxidizing Solids**

Class 4 any amount

Class 3 10 pounds

*(An exception applies that can raise the permit threshold from 10 to 200 pounds for a Class 3 solid. Refer to footnote "b" in Table 105.6.20 for details)*

Class 2 100 pounds

Class 1 500 pounds

### *Oxidizing Materials Examples*

*Gases: Oxygen, chlorine and fluorine*

*Liquids: Hydrogen peroxide, perchloric acid and nitric acid*

*Solids: Ammonium nitrate fertilizer, benzoyl and chromic acid*

## **Pyrophoric Materials**

Pyrophoric Gases any amount

Pyrophoric Liquids any amount

Pyrophoric Solids any amount

### *Pyrophoric Examples*

*Pyrophoric Gases: Diborane and hydrofluoric gas*

*Pyrophoric Liquid: Diethylphosphine*

*Pyrophoric Solids: Metallic lithium*

## **Organic Peroxides**

### **Organic Peroxide Liquids**

Class I	any amount
Class II	any amount
Class III	1 gallon
Class IV	2 gallons
Class V	no permit required

### **Organic Peroxide Solids**

Class I	any amount
Class II	any amount
Class III	10 pounds
Class IV	20 pounds
Class V	no permit required

### *Organic Peroxide Material Examples*

*Organic Peroxide Class I: Benzoyl peroxide over 98% concentration and t-butyl hydroperoxide 90%*

*Organic Peroxide Class II: 25% acetyl peroxide and t-butyl peroxybenzoate 98%*

*Organic Peroxide Class III: Cumene hydroperoxide 86% and decanoyl peroxide 98.5%*

*Organic Peroxide Class IV: 70% benzoyl peroxide and t-butyl hydroperoxide 70%*

*Organic Peroxide Class V: Benzoyl peroxide 35%*

## **Unstable (Reactive) Materials**

### **Unstable (Reactive) Liquids**

Class 4	any amount
Class 3	any amount
Class 2	5 gallons
Class 1	10 gallons

### **Unstable (Reactive) Solids**

Class 4	any amount
Class 3	any amount
Class 2	50 pounds
Class 1	100 pounds

### *Unstable Materials Examples*

*Unstable Class 4: Dry picric acid*

*Unstable Class 3: Hydrogen peroxide over 52%*

*Unstable Class 2: Hydrazine, acrolein and sodium perchlorate*

*Unstable Class 1: Acetic acid, paraldehyde and tetrahydrofuran*

## **Water-reactive Materials**

### **Water-reactive Liquids**

Class 3	any amount
Class 2	5 gallons
Class 1	55 gallons

### **Water-reactive Solids**

Class 3	any amount
Class 2	50 pounds
Class 1	500 pounds

### *Water-reactive Material Examples*

*Water-reactive Class 3: Aluminum alkyls and bromine pentafluoride*

*Water-reactive Class 2: Calcium carbide, sodium metal and lithium hydride*

*Water-reactive Class 1: Sodium hydroxide and acetic anhydride*

## **Compressed Gases**

<i>Carbon dioxide used in carbon dioxide enrichment systems</i>	875cf (100lbs)
<i>Carbon dioxide used in insulated liquid carbon dioxide Beverage dispensing applications</i>	875cf (100lbs)
<i>Corrosive</i>	200cf
<i>Flammable (except cryogenic fluids and liquified petroleum gases)</i>	200cf
<i>Highly toxic</i>	any amount
<i>Inert and simple asphyxiant</i>	600 cf
<i>Oxidizing (including oxygen)</i>	504 cf
<i>Pyrophoric</i>	any amount
<i>Toxic</i>	any amount

## **Cryogenic Fluids**

### **Inside building**

<i>Flammable</i>	more than one gal.
<i>Inert</i>	60 gallons
<i>Oxidizing (includes oxygen)</i>	10 gallons
<i>Physical or health hazard not indicated above</i>	any amount

### **Outside building**

<i>Flammable</i>	60 gallons
<i>Inert</i>	500 gallons
<i>Oxidizing (includes oxygen)</i>	50 gallons
<i>Physical or health hazard not indicated above</i>	any amount

### **SARA Title III Reporting Thresholds**

A higher hazardous material reporting fee is required by NRS 477.045 and 459.3813 and by NAC 477.323(10) for certain materials in large quantities or for particularly hazardous chemicals.

For Extremely Hazardous Substances (EHS) from the Title III List of Lists, either 500 lbs. or the Threshold Planning Quantity (TPQ), whichever is less. [Click here for a link to the Tier II List of Lists.](#) (Revised as of March, 2015)

For all grades of gasoline combined at a retail gas station, the threshold is 75,000 gallons in above or below ground tanks. Please note that conversion from a quantity in gallons to weight in pounds is required by federal regulations.

For all grades of diesel fuel combined at a retail gas station, the threshold is 100,000 gallons in above or below ground tanks. The same conversion from volume in gallons to weight in pounds is also required by federal regulations.

This means that some gas stations will not be required to report SARA Title III quantities for these fuels, but are still subject to permitting under the much lower IFC thresholds listed above.

For all other hazardous chemicals: 10,000 pounds.

#### **Common materials and their 10,000 pound threshold equivalent, reporting limits are:**

<u>Material</u>	<u>Reporting Required Over</u>
Liquefied Petroleum Gas (LPG)	2,381 gallons w.c. (water capacity)
<i>Conversion factor used for commercial propane at 60-degrees F is 4.20-lbs./gallon of liquid according to information supplied by the staff of the LP-Gas Board.</i>	