

## Safety & Health Quick List

Chemical/Product Name:	Ammonia
Synonym:	Anhydrous Ammonia

CAS No: 7664-41-7

Hazard Statements: Flammable Gas – Category 2      NFPA rating: 3-1-0 outdoors; 3-3-0 indoors  
 Liquefied, compressed gas; PRVs may vent if tank is heated. Tanks may rupture with extreme heat; Cylinders may rupture if heated.  
 Acute Toxicity (inhalation hazard)-Category 4. May cause eye and respiratory damage, or death in extreme cases. (See section 4 below)  
 Skin Corrosion/Irritation: Category 1. May cause severe chemical burns.  
 Aquatic Hazard (Acute) – Category 1; Very toxic to fish and other aquatic life

NFPA Ratings:	4-Dangerous	3-Severe	2-Moderate	1-Slightly Hazardous
GHS Ratings:	1-Dangerous	2-Severe	3-Moderate	4-Slightly Hazardous

### Physical Properties

NFPA Rating: Health	3	Auto Ignition Temperature	1203 F
NFPA Rating: Flammability	1	Solubility in Water	Completely Soluble
NFPA Rating: Reactivity	0	Specific Gravity	0.696
GHS Classification: Corrosive	1	Flash Point	269 F
GHS Classification: Environmental Hazard	1	Vapor Pressure	124.3 psi
Fire Extinguisher Type	Use Fire Extinguishing media appropriate for the surrounding materials	Max Concentration	30%
Freeze Point (Fahrenheit)	-106	Boiling Point (Fahrenheit)	-28
LEL%	16%	RQ	100 lbs
UEL%	25%		
Vapor Density	0.5967		

### Exposure Guidelines

PEL/TLV	50 ppm	Corrosive	1
STEL	35 ppm	Irritant	1
Ceiling	N/A	IDLH	300 ppm
Skin Notation (S)	1	Odor Threshold	4.68 x 10 ppm
Carcinogen	N/A	Sensitizer	N/A

### Emergency Response

Initial Isolation and Protective Action Distances						
Name of Material	Small Spills			Large Spills		
	First Isolate in all Directions	Then Protect persons downwind during		First Isolate in	Then Protect persons	
		Day	Night		Day	Night
Ammonia, anhydrous	100 ft	0.1 mi	0.1 mi	See Tables Below		
Anhydrous ammonia						
Ammonia solution with more than 50% Ammonia	100 ft	0.1 mi	0.1 mi	500 ft	0.5 mi	1.2 mi

Container Type		Highway tank truck or trailer			
First Isolate in all Directions		500 ft			
Then Protect Downwind					
Day			Night		
Low (>6 mph)	Moderate (6-12 mph)	High (>12 mph)	Low (>6 mph)	Moderate (6-12 mph)	High (>12 mph)
0.6 mi	0.3 mi	0.3 mi	1.3 mi	0.5 mi	0.4 mi

Container Type		Multiple Small Cylinders			
First Isolate in all Directions		100 ft			
Then Protect Downwind					
Day			Night		
Low (>6 mph)	Moderate (6-12 mph)	High (>12 mph)	Low (>6 mph)	Moderate (6-12 mph)	High (>12 mph)
0.2 mi	0.1 mi	0.1 mi	0.5 mi	0.2 mi	0.1 mi

ERPG-1	25 ppm
ERPG-2	150 ppm
ERPG-3	1500 ppm

**Normal Tasks**

Sampling  
 Drum/Tote Filling  
 Strapping Tank/Truck  
 Hose Disconnect Unclear (Camlock Fitting)  
 Hose Disconnect Unclear (Dry Disconnect)  
 Line/Equipment Opening Unclear  
 Line/Equipment Opening Clear  
 Contaminated Equipment in Maintenance Shop  
 which can't be cleaned  
 Tank Cleaning (No Chemicals Present)  
 Tank Cleaning (Chemicals Present)

**PPE Group**

Group 7
Group 7
Group 7
Group 7
Group 7
Group 7
Group 7
Group 7
Group 7
Group 7

**Emergency Response Tasks**

Small Spill  
 Medium Spill  
 Large Spill  
 Downwing Monitoring (Vapor Only)  
 Liquid Contact (HAZMAT)

**PPE Group**

Group 7
Group 7
Group 7
Group 7
Group 7

**Lab Handling**

Inside Hood  
 Outside Hood

**PPE Group**

Group 13
Group 14

NUMBER	KEY CODE	DESCRIPTION
<b>GROUP 2</b>	GENERAL PROCESS AREA	Standard PPE - Hard Hat, Nomex Coveralls, Safety Side-Shield Glasses, Work Gloves (Leather)
<b>GROUP 7</b>	SLICKER SUIT	Standard PPE (Group 2) with Chemical Gloves, Boots, Slicker Suit and the Required Respirator
<b>GROUP 11</b>	STANDARD LAB -L	Nomex Lab Coat, Safety Side-Shield Glasses, Latex Gloves
<b>GROUP 12</b>	STANDARD LAB -N	Nomex Lab Coat, Safety Side-Shield Glasses, Nitrile Gloves
<b>GROUP 13</b>	LAB & RESPIRATOR	Group 11 or 12 along with a Cartridge Respirator
<b>GROUP 14</b>	LAB & SMOCK	Group 11 or 12 along with goggles and smock.
<b>Respirator Type</b>	Full Face, Organic Vapor, acid gas	
<b>Chemical Glove Type</b>	Neoprene	

**PPE Example**

