

EAGLE

# C.L.A.W.S.



## COMPLIANCE SOLUTIONS

**C**ontainment  
**L**iquid Handling  
**A**ssessment  
**W**aste Management  
**S**afety Storage



**EAGLE**

**MANUFACTURING COMPANY**



WELLSBURG, WV 26070  
304-737-3171  
[www.eagle-mfg.com](http://www.eagle-mfg.com)

# EAGLE

# C.L.A.W.S.

## Program Summary

---

**EAGLE'S CLAWS Program** is designed as a compliance evaluation system utilized to promote employee and public safety, property protection and environmental conservation by specifying approved products that meet specific federal regulations concerning Containment, Liquid Handling, Waste Management, and Safety Storage of Hazardous Materials.

### REGULATORY AGENCIES



#### **U.S. Department of Labor Occupational Safety & Health Administration**

The Occupational Safety and Health Administration (OSHA), established under the Department of Labor by the OSHA Act of 1970, regulates the storage and use of toxic and hazardous substances as they relate to worker health and safety. OSHA regulations are found in Title 29 of the Code of Federal Regulations, Part 1910, Subpart H.

The OSHA Act requires employers to comply with OSHA standards and regulations and to protect employees from recognized hazards in the workplace. OSHA enforces its rules and regulations by inspecting the workplaces of employers. When violations are discovered during inspections, OSHA issues citations and proposes monetary penalties. OSHA encourages companies to participate in Voluntary Protection Programs. Employers who participate in these Voluntary Compliance Programs develop a new relationship with OSHA and are not subject to programmed inspections; however, compliance remains mandatory.

OSHA: (202) 219-8271  
<http://www.osha.gov>



#### **U.S. Environmental Protection Agency**

The Environmental Protection Agency (EPA) addresses through the Resource Conservation and Recovery Act (RCRA), the need for facilities with hazardous waste substances to store containers in some kind of containment system.

Stationary containers, such as tanks, as well as portable storage containers, such as 55 gallon drums, are required to have a system that will protect the environment from this waste if a leak were to occur. Hazardous waste regulations appear in Title 40 of the Code of Federal Regulations.

Portable container containment is addressed under Subpart I, Use and Management of Containers (EPA 40 CFR 264.175). Facilities dealing with the storage of hazardous materials may also be required to have containment if they are to meet the Uniform Fire Code (UFC) standards. Within the UFC standards, Section 80, Division III refers to Hazardous Materials Storage Requirements pertaining to containers and tanks and Division IV refers to Spill Control, Drainage Control and Secondary Containment with regard to hazardous materials.

EPA: (800) 621-3431  
<http://www.epa.gov>



#### **U.S. Department of Transportation**

The U.S. Department of Transportation (DOT) serves as the focal point in the Federal Government for the coordinated National Transportation Policy. The DOT has authority over the shipping and transporting of hazardous materials, including packaging and labeling. The DOT regulations can be found in the Code of Federal Regulations under Title 49 and are based largely upon the recommendations as per the United Nations (UN).



#### **National Fire Protection Association**

Since 1896, the National Fire Protection Association (NFPA) has been the most recognized non-profit organization in the world dedicated to the protection of human life and property from the hazards of fire.

NFPA: (800) 344-3555  
[www.nfpa.org](http://www.nfpa.org)

# Contents

Containment . . . . .	2 - 3
Liquid Handling . . . . .	4 - 5
Assessment . . . . .	6 - 7
Waste Management . . . . .	8 - 9
Safety Storage . . . . .	10 - 11
HDPE Chemical Resistance Guide . . . . .	12 - 13
Compliance Worksheet . . . . .	14 - 15
Glossary . . . . .	16
Eagle Overview . . . . .	17

## Compliance Evaluation

Conducted for \_\_\_\_\_

Facility Location \_\_\_\_\_

Date \_\_\_\_\_

Conducted By \_\_\_\_\_

Personnel Present \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Notes \_\_\_\_\_

\_\_\_\_\_





\_\_\_\_\_

\_\_\_\_\_

**Do you have damaged or leaking drums of liquid waste materials?**

Yes





No

Code(s)	Recommendations
<p><b>✓ DOT 49 CFR 173.3:</b> (c) Salvage Drums. Packages of hazardous materials that are damaged or found leaking and hazardous materials that have been spilled or leaked may be placed in a metal removable head salvage drum that is compatible with the lading and shipped for repackaging or disposal under the following conditions. (Meet 3 psi test)</p>	<p><b>Eagle Salvage Drums</b></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Model 1602</p> </div> <div style="text-align: center;">  <p>Model 1695</p> </div> </div>
<p><b>✓ DOT 49 CFR 173.25:</b> <b>Authorized Packages &amp; Overpacks</b> (a) Authorized packages containing hazardous materials may be offered for transportation in an overpack as defined in 171.8 of this subchapter, if all of the conditions of this section are met.</p>	<p><b>Eagle Overpack Drums</b></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Model 1690</p> </div> <div style="text-align: center;">  <p>Model 1650</p> </div> </div>

**Do you have secondary containment to protect against leakage or spills of hazardous liquid waste?**

Yes




No

Code(s)	Recommendations
<p><b>✓ EPA 40 CFR 264.175:</b> <b>Containment.</b> (a) Container storage areas must have a containment system that is designed and operated in accordance with paragraph (b) of this section (b) A containment system must be designed and operated as follows: (3) The containment system must have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.</p>	<p><b>Eagle Spill Containment Pallets, Platforms &amp; Work Stations</b></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>4 Drum Pallet Model 1645</p> </div> <div style="text-align: center;">  <p>6 Drum Platform Model 1686</p> </div> </div>
<p>Do you have a secure waste collection or dispensing center? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>8 Drum Platform Model 1688</p> </div> <div style="text-align: center;">  <p>2 Drum Work Station Model 1626</p> </div> </div>

**Containment of hazardous materials is required for the protection of the environment from contamination as well as for the protection of employees who work in areas where hazardous materials are stored and used.**




**Do you have a single-drum mobile pumping station, waste collection station or drum storage building?**

Yes  No

Code(s)	Recommendations
<p>✓ <b>OSHA 29 CFR 1910.106 (e)(2)(iii): Separation and protection.</b> Areas in which flammable or combustible liquids are transferred from one tank or container to another container shall be separated from other operations in the building by adequate distance or by construction having adequate fire resistance. Drainage or other means shall be provided to control spills.</p>	<p><b>Eagle Single Drum Containment Unit, Drum Funnel, Drip Pan &amp; 4-Drum Building</b></p>  <p>Model 1612 w/1660 funnel</p>  <p>Model 1646RTC</p>  <p>Drip Pan Model 1670</p>
<p>Do you have drip pans under all drum faucets or leaks? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Do you have large diameter funnels to transfer liquids into drums? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Do you have drum covers or outside storage building to protect the integrity of drums stored outside as per 40 CFR 265.173? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	

**Do you have an area where hazardous materials are dispensed into containers?**

Yes  No

Code(s)	Recommendations
<p>✓ <b>Uniform Fire Code - Division IV, Section 80.402 (b)(2)(F). Dispensing and Use - Spill Control, Drainage Control and Secondary Containment.</b> "Rooms or areas where hazardous material liquids are dispensed into containers exceeding a 1-gallon capacity or used in open containers or systems exceeding a 5-gallon capacity shall be provided with a means to control spills. Secondary containment shall be provided when the capacity of an individual container exceeds 55 gallons or the aggregate capacity of multiple containers exceeds 100 gallons."</p>	<p><b>Eagle Stackers, IBC Containment &amp; Spill Pallets</b></p>  <p>Stacker</p>  <p>Model 1680</p>  <p>Model 1645</p>

**Do you have approved safety containers for the safe use and temporary storage of flammable liquids?**

 Yes

 No

### General Industry Code(s)

**OSHA 29 CFR 1910.106 (a)(29):**

**Safety can** shall mean an approved container, of not more than 5 gallons capacity, having a spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.

Are they in sound operating condition, leaktight, with flame arresters intact?  Yes  No

### Construction Standard Code(s)

**OSHA 29 CFR 1926.152**

Only approved containers and portable tanks shall be used for storage and handling of flammable and combustible liquids. Approved metal safety cans shall be used for the handling and use of flammable liquids in quantities greater than one gallon. For quantities of one gallon or less, only the original container or approved metal safety cans shall be used for storage, use and handling of flammable liquids.

### Recommendations

#### Eagle Type I & Type II Metal Safety Cans



UI-20FS  
Type I Safety Can



UI-50S  
Type I Safety Can



U2-26-S  
Type II Safety Can



U2-51-S  
Type II Safety Can

**UL & FM Approved**

**Do you have nonmetallic safety cans where abusive or corrosive conditions exist or oval safety cans where shelf space is limited?**

 Yes

 No

### MAXIMUM ALLOWABLE CONTAINER SIZE

LIQUID TYPE Container Type	FLAMMABLE			COMBUSTIBLE
	Class IA	Class IB	Class IC	Class II
Glass or approved plastic	1 pt.	1 qt.	1 gal.	1 gal.
Metal (other than DOT drums)	1 gal.	5 gal.	5 gal.	5 gal.
Safety cans (incl. polyethylene)	2 gal.	5 gal.	5 gal.	5 gal.

NOTE: Container Exemptions: medicines, foodstuffs, cosmetics and other common consumer items.  
REFERENCE: OSHA 29 CFR 1910.106

See safety can chemical compatibility on page 16.

### Recommendations

#### Eagle Safety Cans: Metal, Poly & Stainless Steel Cans



Models 1535 & 1537



Models 1541 & 1543



Model 1511

**The handling of hazardous liquids is subject to both safety and health regulations requiring protection for employees who work with flammable, combustible and explosive liquids.**

**Do you have any open containers or hazardous liquids being used in your cleaning operations?**

Yes

No

**Code(s)**

✓ **OSHA 29 CFR 1910.106 (e)(2)(ii):**  
Incidental storage or use of flammable and combustible liquids.

**Containers.** Flammable or combustible liquids shall be stored in tanks or closed containers.

✓ **OSHA 29 CFR 1910.106 (a)(9):**

**Closed container** shall mean a container as here-in defined, so sealed by means of a lid or other device that neither liquid nor vapor will escape from it at ordinary temperatures.

✓ **OSHA 29 CFR 1910.106 (e)(2)(iv)(a):**

Flammable liquids shall be kept in covered containers when not actually in use.

Do you have laboratory cans or faucet cans for safer transfers of flammables from dispensing containers?  Yes  No

**Recommendations**

**Eagle Plunger and Bench Cans  
Eagle Lab Cans & Faucet Cans**



Model P-711



Model B-601



Models 1511 & 1513



Model 1417

**Do you have adequate means of electrically bonding your containers during filling operations?**

Yes

No

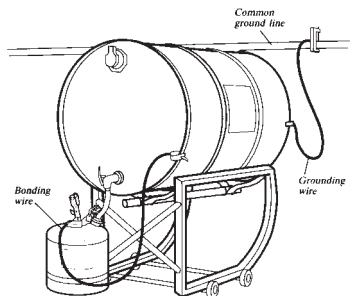
**Code(s)**

✓ **Uniform Fire Code - Division VIII, Section 79.803 (a) states:**

“Class I liquids shall not be run into containers unless the nozzle and containers are electrically interconnected. The provisions of this section shall be deemed to have been complied with where the metallic floor plates on which the container stands while filling are electrically connected to the fill stem or where the fill stem is bonded to the container during filling by means of a bond wire.”

**Recommendations**

**Eagle Grounding Wire**



Models 1950 & 1951

© Lab Safety Supply Inc., Janesville, WI  
Reproduced with permission

## Workplace fires and explosions kill 200 and injure more than 5,000 workers each year.

More than 75,000 workplace fires cost businesses more than \$2 billion and wreak havoc among workers and their families and destroy thousands of businesses each year. CLAWS Assessment surveys should be conducted at least annually and should include observations of worksite safety and housekeeping issues and should specifically address proper handling and storage of chemicals and wastes as specified in this guide.

### Objectives:

This assessment guide should give you a general understanding on how to:

- **Identify potential environmental, health and safety risks associated with hazardous materials handling and storage in the work environment.**
- **Conduct a thorough CLAWS compliance assessment and evaluation.**
- **Comply with specific OSHA, EPA, DOT and local fire codes concerning handling and storage of flammable materials.**
- **Specify approved products for compliance in these areas.**

## Facility Assessment:

**Know your facility! Know where your risk areas are, what materials are not being handled or stored in a manner that will let you be compliant with the many federal regulations. The CLAWS guide is an easy to use guide to evaluating your facility.**

### Part I - Identification

Divide the review facility into its functional or physical areas.

- Production area
- Machine Shop area
- Maintenance Area
- Laboratory Area
- Paint Shop Area
- Storage Area (Inside/Outside)
- Shipping Area

### Part II - Definition

For each specific physical or functional area, note the following:

- Areas where chemicals are stored or used
- Areas where water or oils are used in the process
- Areas where dispensing and filling takes place
- Areas where leaks or spills are prevalent
- Areas that have self containment or fire suppression
- The temperature, ignition, and ventilation controls
- Potential ignition sources
- Volume of human and equipment traffic

## Chemical & Waste Assessment

**Know your chemicals. Know exactly what types of chemicals are in your facility and where they are being stored. Make sure all chemicals are in proper containers with proper labeling. Maintain corresponding MSDS sheets for every chemical in case of emergency.**

### Part I - Identification

Make a list of all chemicals used or stored in each area  
Note any area that generates or accumulates waste materials  
Note volume of each chemical or waste and type of container  
Note the present method of storage (cabinet/counter/rack)  
Note the state of the chemical or waste (liquid or solid)  
Note any other pertinent information

### Part II - Definition

Review MSDS, bill of lading, container label, hazardous I.D. label, numbered placard or other chemical reference material for each chemicals characteristics:

- Hazardous Characteristics
- Storage Requirements
- Compatibility Considerations
- Other Safety Concerns

All chemicals should be properly labeled and have secure lids, if not, contact an expert and dispose of properly.

**Hazardous Characteristics** - is the material:

- Flammable or Combustible (flash point, boiling point)
- Toxic
- Corrosive
- Light Sensitive
- Oxidizer/Reducer
- Poisonous/Pesticides
- Require Special Handling?

### Storage Requirements

- Temperature (Minimum/Maximum)
- Ventilation of Vapors
- Ignition Control
- Segregation for Compatibility
- Special Identification
- Volume Limitation
- Spill Containment

**Compatibility Consideration** - when incompatible materials come into contact, fire, explosion, violent reactions or toxic gasses could result.

Do not store the following types of chemicals together:

- Acids and Bases
- Oxidizers and Organic Materials
- Oxidizers and Reducing Agents
- Other Incompatible Chemical Combinations

### Specification of approved products for facility compliance

Throughout the CLAWS guide you will find the necessary products that will help you meet the federal regulations. You may find the Compliance worksheets on pages 14 and 15 useful on your walk through to record these products. For additional information you may also check out our web site at [www.eagle-mfg.com](http://www.eagle-mfg.com).

**Do you have FM Approved waste receptacles for discarding oily and waste solvent rags.**

 Yes

 No

### Code(s)

✓ **OSHA 29 CFR 1910.108 (f)(2):**  
**(2) Waste Cans.** When waste or rags are used in connection with dipping operations, approved metal waste cans shall be provided and all impregnated rags or waste deposited therein immediately after use. The contents of waste cans shall be properly disposed of at least once daily at the end of each shift.

✓ **OSHA 29 CFR 1910.106 (h)(8)(iii):**  
**Waste and residues.** Combustible waste material and residues in a building or operating area shall be kept to a minimum, stored in closed metal waste cans, and disposed of daily.

Do you have liquid waste cans for hazardous and combustible waste?  Yes  No

Do you have receptacles for clean, safe disposal of ashes and cigarettes?  Yes  No

### Recommendations

**Eagle Metal or Poly Oily Waste Cans, Butt Cans & Disposal Cans**



Model 1525



Model 1208 & 1208



Model 935FL



Model 1205 & 1202  
Butt Can

**Do you have approved containers for shipping small quantities of hazardous liquids contained in bottles, jars, cans or 5 gallon pails?**

 Yes

 No

### Code(s)

✓ **DOT 49 CFR 173.12:**  
**(b) Outside packaging.** The outside packaging must be a DOT specification metal or fiber drum. It may also be a polyethylene drum capable of withstanding:  
 (1) The vibration and compression tests specified in 178.19-7 (c)(1) and (2), and  
 (2) A four foot drop test as specified in 178.224-2 (b).  
**(c) Inside packagings.** The inside packagings must be either glass packagings not exceeding 1-gallon rated capacity, or metal or plastic packagings not exceeding a rated capacity of 5 gallons.

### Recommendations

**Eagle Lab & Overpack Drums**



Model 1650




Model 1601

**Waste management is required to decrease the potential exposure associated with handling hazardous waste. The main hazard is flammability. To help prevent fire, hazardous waste needs special precautions for storage, handling and use.**


**Do you have flammable or combustible hazardous waste stored in drum storage cabinets?**

Yes       No

Code(s)	Recommendations
<p>✓ <b>OSHA 29 CFR 1910.106 (e)(2)(ii)(b):</b> Incidental storage or use of flammable and combustible liquids.</p> <p>(b) The quantity of liquid that may be located outside of an inside storage room or storage cabinet in a building or in any one fire area of a building shall not exceed:</p> <p>(1) 25 gallons of Class IA liquids in containers                      (2) 120 gallons of Class IB, IC, II, or III liquids in containers                      (3) 660 gallons of Class IB, IC, II, or III liquids in a single portable tank.</p>	<p><b>Eagle Drum Cabinets</b></p>  <p>Model HAZ 1926</p>
<p>✓ <b>OSHA 29 CFR 1910.106 (d)(3)(i&amp;ii):</b> Design, construction, and capacity of storage cabinets –(I) <b>Maximum capacity.</b> Not more than 60 gallons of Class I or Class II liquids, nor more than 120 gallons of Class III liquids may be stored in a storage cabinet.</p>	

**Do you have biohazard waste receptacles for temporary accumulation of waste contaminated with potentially infectious materials?**

Yes       No

Code(s)	Recommendations
<p>✓ <b>OSHA 29 CFR 1910.1030</b></p> <p>The blood borne pathogens section applies to all occupational exposure to blood or other potentially infectious materials.</p>	<p><b>Eagle Bio-Haz Cans</b></p>  <p>Model 945BIO      Model 943BIO</p>
<p>✓ <b>OSHA 29 CFR 1910.1030</b></p> <p>(d)(4) Housekeeping. (i) General. Employers shall ensure that the worksite is maintained in a clean and sanitary condition. (g) Communication of hazards to employees. (1)(i)(A) Warning labels shall be affixed to containers of regulated waste, (B) Labels required by this section shall include the Biohazard symbol. (C) These labels shall be fluorescent orange or orange-red, with lettering and symbols in contrasting color.</p>	

**Do you have flammables and combustibles stored in safety storage cabinets?**

Yes       No

### Code(s)

### Recommendations

**✓ OSHA 29 CFR 1910.106 (e)(2)(ii)(b):** Incidental storage or use of flammable and combustible liquids.

#### *Eagle Safety Cabinets*

(b) The quantity of liquid that may be located outside of an inside storage room or storage cabinet in a building or in any one fire area of a building shall not exceed:



ADD-15

Model 1932

(1) 25 gallons of Class IA liquids in containers.

(2) 120 gallons of Class IB, IC, II, or III liquids in containers.

(3) 660 gallons of Class IB, IC, II, or III liquids in a single portable tank.

Do your cabinets have operational self-closing doors as per the Uniform Fire Code 79.202?       Yes       No



Model 1947

**✓ OSHA 29 CFR 1910.106 (d)(3)(i & ii):** Design, construction, and capacity of storage cabinets –(i) **Maximum capacity.** Not more than 60 gallons of Class I or Class II liquids, nor more than 120 gallons of Class III liquids may be stored in a storage cabinet.

(ii) **Fire resistance.** Storage cabinets shall be designed and constructed to limit the internal temperature to not more than 325°F when subjected to a 10-minute fire test using the standard time-temperature curve as set forth in Standard Methods of Fire Tests of Building Construction and Materials, NFPA 251-1969. All joints and seams shall remain tight and the door shall remain securely closed during the fire test. Cabinets shall be labeled in conspicuous lettering, FLAMMABLE-KEEP FIRE AWAY.

(a) Metal cabinets constructed in the following manner shall be deemed to be in compliance. The bottom, top, door, and sides of cabinet shall be at least No. 18 gauge sheet iron and double walled with 1½-inch air space. Joints shall be riveted, welded or made tight by some equally effective means. The door shall be provided with a three-point lock, and a door sill shall be raised at least 2 inches above the bottom of the cabinet.



Model 1945

**4 to 120 gallon cabinets available**

**Improper storage and handling of flammable liquids is the leading cause of industrial fires. Proper storage of flammable liquids can help eliminate millions of dollars of damage and help save the lives of your employees.**

**Do you have drums containing flammable or combustible liquid stored in drum storage cabinets?**

Yes       No

**Code(s)**

**Recommendations**

**✓ Uniform Fire Code 79.201**

**(g) Storage Cabinets. 1. General.** When provisions of this code require that liquid containers be stored in storage cabinets, such cabinets and storage shall be in accordance with this section. Cabinets shall be conspicuously labeled in red letters on contrasting background **FLAMMABLE—KEEP FIRE AWAY**.

**2. Quantities.** The quantity of Class I or Class II liquids shall not exceed 60 gallons and the total quantities of all liquids in a storage cabinet shall not exceed 120 gallons.

**3. Construction.** Cabinets may be constructed of wood or metal. Cabinets shall be listed or constructed in accordance with the following:

**A. Unlisted metal cabinets.** Metal cabinets shall be of steel having a thickness of not less than 0.043 inch. The cabinet, including the door, shall be double walled with 1½-inch air space between the walls. Joints shall be riveted or welded and shall be tight fitting. Doors shall be well fitted, self-closing and equipped with a latching device. The bottom of the cabinet shall be liquid-tight to a height of at least two inches.

**Eagle Drum Cabinets**



Model 1926



Model 1928

**Do you have adequate facilities for storage of corrosives, pesticides or paint and ink products?**

Yes       No

**Maximum Storage Quantities For Cabinets**

Liquid Class	Maximum Storage Capacity
Flammable/Class I	60 gal.
Combustible/Class II	60 gal.
Combustible Class III	120 gal.
Combination of Classes	120 gal.*

\* Not more than 60 gallons may be Class I and Class II liquids. No more than 120 gallons of Class III liquids may be stored in a storage cabinet, according to OSHA 29 CFR 1910.106(d)(3) and NFPA 30 Section 4-3.1.

Note: Not more than three such cabinets may be located in a single fire area, according to NFPA 30 Section 4-3.1.

**Recommendations**

**Eagle Acid Corrosive, Pesticide, and Paint & Ink Cabinets**



Model CRA-47

# High Density Polyethylene Chemical Resistance Guide

70°F 140°F (21°C)(60°C)		70°F 140°F (21°C)(60°C)		70°F 140°F (21°C)(60°C)	
Reagent		Reagent		Reagent	
Acetaldehyde	S O	Butter	S S	Dichlorobenzene (O&P)	U U
Acetic acid 1-10%	S S	Butyl acetate 100%	O U	Diethylene glycol	S S
Acetic acid 10-50%	S O	Butyl alcohol 100%	S S	Disodium phosphate	S S
Acetic acid 50-100%	S O	Butylene glycol	S S	Dioxane	S S
Acetic anhydride	S S	Butylic acid 100%	S S	Emulsions photographic	S S
Acetone	S S	Caffeine citrate saturated	S S	Ether	O O
Acids, aromatic	S S	Calcium bisulfide	S S	Ethyl acetate 100%	O O
Acrylic emulsions	S S	Calcium bromide	S S	Ethyl alcohol 100%	S S
Adipic acid	S S	Calcium carbonate sat'd.	S S	Ethyl alcohol 35%	S S
Aluminum chloride dilute	S S	Calcium chlorate saturated	S S	Ethylbenzene	O U
Aluminum chloride conc.	S S	Calcium chloride saturated	S S	Ethylene glycol	S S
Aluminum fluoride conc.	S S	Calcium hydroxide	S S	Ferric chloride sat'd.	S S
Aluminum sulfate conc.	S S	Calcium hypochloride	S S	Ferric nitrate sat'd.	S S
Alume (all types) conc.	S S	bleach sol'n	S S	Ferrous ammonium citrate	S S
Amino acetic acid	S S	Calcium nitrate 50%	S S	Ferrous chloride sat'd.	S S
Ammonia 100% dry gas	S S	Calcium sulfate	S S	Ferrous sulfate	S S
Ammonium acetate	S S	Camphor crystals	S S	Fluoboric acid	S S
Ammonium bromide	S S	Camphor oil	U U	Fluorine	S U
Ammonium carbonate	S S	Carbon dioxide 100% dry	S S	Fluosilicic acid 32%	S S
Ammonium chloride sat'd.	S S	Carbon dioxide 100% wet	S S	Fluosilicic acid conc.	S S
Ammonium fluoride 20%	S S	Carbon dioxide cold sat'd.	S S	Formaldehyde	S S
Ammonium hydroxide	S S	Carbon disulfide	O U	10-30%	S S
Ammonium		Carbon monoxide	S S	30-40%	S O
metaphosphates sat'd.	S S	Carbon tetrachloride	U U	Formic acid 20%	S S
Ammonium nitrate sat's.	S S	Carbonic acid	S S	Formic acid 50%	S S
Ammonium		Carnauba wax	S S	Formic acid 100%	S S
persulfate sat'd	S S	Carrot juice	S S	Fructose saturated	S S
Ammonium phosphate	S S	Castor oil conc.	S S	Fuel oil	S U
Ammonium sulfate sat'd.	S S	Catsup	S S	Furfural 100%	O U
Ammonium sulfide sat'd.	S S	Caustic soda	S O	Furfuryl alcohol	S O
Ammonium		Cedar leaf oil	U U	Galtic acid saturated	S S
thiocyanate sat'd.	S S	Cedar wood oil	U U	Gasolene	S U
Amyl acetate 100%	O U	Chlorine liquid	O U	Glucose	S S
Amyl alcohol 100%	S S	Chlorobenzene	O U	Glycerine	S S
Amyl chloride 100%	O U	Chloroform	U U	Glycol	S S
Aniline 100%	S U	Chlorosulfonic acid 100%	U U	Glycolic acid 30%	S S
Anise seed oil	O U	Chrome alum sat'd.	S S	Grape juice	S S
Antimony chloride	S S	Chromic acid 10-20%	S O	Grapefruit juice	S S
Aqua regia	O U	Chromic acid 50%	S O	Heptane	O U
Aromatic hydrocarbons	U U	Cider	S S	Hexachlorobenzene	S S
Arsenic	S S	Cinnamon	S S	Hexane	U U
Aspirin	S S	Cinnamon oil	U U	Hydrobromic acid 50%	S S
Barium carbonate sat'd.	S S	Citric acid sat'd.	S S	Hydrochloric acid 10%	S S
Barium chloride saturated	S S	Citronella oil	O U	Hydrochloric acid 30%	S S
Barium hydroxide	S S	Cloves (ground)	S S	Hydrochloric acid 35%	S S
Barium sulfate saturated	S S	Coconut oil alcohols	S S	Hydrocyanic acid	S S
Barium sulfide saturated	S S	Cod liver oil	S S	Hydrocyanic acid sat'd.	S S
Beer	S S	Coffee	S S	Hydrofluoric acid 40%	S S
Benzaldehyde	S O	Copper chloride sat'd.	S S	Hydrofluoric acid 60%	S S
Benzene	O U	Copper cyanide sat'd.	S S	Hydrofluoric acid 75%	S S
Benzene sulfonic acid	S S	Copper fluoride 2%	S S	Hydrogen 100%	S S
Benzoic acid		Copper nitrate sat'd.	S S	Hydrogen bromide 10%	S S
Crystals	S S	Copper sulfate dilute	S S	Hydrogen chloride gas dry	S S
Saturated	S S	Corn oil	S S	Hydrogen peroxide 30%	S S
Bismuth carbonate sat'd.	S S	Cottonseed oil	S S	Hydrogen peroxide 90%	S O
Black liquor	S S	Cranberry sauce	S S	Hydroquinone	S S
Bleach lye 10%	S S	Creola	S O	Hydrogen sulfide	S S
Borax cold saturated	S S	Cuprous chloride sat'd	S S	Hypochlorous acid conc.	S S
Boric acid dilute	S S	Cuprous oxide	S S	Inks	S S
Brine	S S	Cyclohexane	U U	Iodine crystals	O O
Bromic acid 10%	S S	Cyclohexanone	U U	Isobutyl alcohol	S S
Bromine liquid 100%	O U	Decalin	S U	Isopropyl alcohol	S S
Bromochloromethane	U U	Detergents synthetic	S S	Isopropyl ether	O U
Butadlene	U U	Developers photographic	S S	Kerosene	O O
Butanediol 10%	S S	Dextrin saturated	S S	Lactic acid 10%	S S
Butanediol 60%	S S	Dextrose saturated	S S	Lactic acid 90%	S S
Butanediol 100%	S S	Dibutyl ether	O U	Lanolin	S S

# High Density Polyethylene Chemical Resistance Guide

70°F 140°F (21°C)(60°C)		70°F 140°F (21°C)(60°C)		70°F 140°F (21°C)(60°C)	
Reagent		Reagent		Reagent	
Lard	S	Pine oil	O	Sodium nitrate	S
Lead acetate sat'd.	S	Plating solutions		Sodium nitrite	S
Lead nitrate	S	Brass	S	Sodium perborate	S
Lemon juice	S	Cadmium	S	Sodium phosphate	S
Lemon oil	O	Chromium	S	Sodium sulfide 25%	
Lime juice	S	Copper	S	to saturated	S
Linseed oil	S	Gold	S	Sodium sulfite sat'd	S
Magnesium sulfate sat'd.	S	Indium	S	Sodium thiosulphate	S
Margarine	S	Lead	S	Soybean oil	S
Magnesium		Nickel	S	Stannous chloride sat'd.	S
carbonate sat'd.	S	Rhodium	S	Stannic chloride sat'd.	S
Magnesium		Silver	S	Starch solution sat'd.	S
chloride saturated	S	Tin	S	Stearic acid 100%	S
Magnesium		Zinc	S	Sulfuric acid 0-50%	S
hydroxide sat'd.	S	Potassium		Sulfuric acid 70%	S
Magnesium nitrate sat'd.	S	bicarbonate sat'd.	S	Sulfuric acid 80%	S
Mercuric chloride	S	Potassium borate 1%	S	Sulfuric acid 96%	O
Mercuric cyanide sat'd.	S	Potassium bromate 10%	S	Sulfuric acid 96% conc.	O
Mercurous nitrate sat'd.	S	Potassium bromide sat'd.	S	Sulfuric acid fuming	U
Mercury	S	Potassium carbonate	S	Sulfurous acid	S
Methyl alcohol 100%	S	Potassium chlorate sat'd.	S	Tartaric acid	S
Methyl ethyl ketone 100%	U	Potassium chloride sat'd.	S	Tannic acid 10%	S
Methylsulfuric acid	S	Potassium cyanide sat'd.	S	Tea	S
Methylene chloride 100%	U	Potassium dichromate 40%	S	Tetrahydrofurane	O
Milk	S	Potassium ferri/ferro		Toluene	U
Mineral oils	S	cyanide	S	Tomato juice	S
Molasses	S	Potassium nitrate sat'd.	S	Transformer oil	S
Mustard (prepared)	S	Potassium perborate sat'd.	S	Trisodium	
Naphtha	O	Potassium		phosphate sat'd.	S
Napthalene	S	perchlorate 10%	S	Trichloroethylene	U
Natural gas (wet)	S	Potassium		Turpentine	O
Nickel chloride sat'd.	S	permanganate 20%	S	Urea	S
Nickel nitrate conc.	S	Potassium sulfate conc.	S	Urine	S
Nickel sulfate	S	Potassium sulfide conc.	S	Vanilla extract	S
Nicotinic acid	S	Nickel sulfate	S	Vaseline	S
Nitric acid 0-30%	S	Potassium sulfite conc.	S	Vinegar com.	S
Nitric acid 30-50%	S	Potassium		Wetting agents	S
Nitric acid 70%	S	persulfate sat'd.	S	Whiskey	S
Nitric acid 85-90%	U	Propane gas	S	Wines	S
Nitrobenzene 100%	U	Properyl alcohol	S	Xylene	U
Nitroglycerine	O	Propyl alcohol	S	Yeast	S
Octane	S	Propylene glycol	S	Zinc chloride sat'd.	S
Oleura conc.	U	Pyridine	S	Zinc oxide	S
Olive oil	S	Rayon coagulating bath	S	Zinc sulfate sat'd.	S
Orange juice	S	Resorcinol	S		
Ozalic acid dilute	S	Salicytic acid	S		
Ozalic acid saturated	S	Sea water	S		
Ozone	O	Shortening	S		
Palm oil	S	Silicic acid	S		
Paraffin oil	S	Silver nitrate sol'n.	S		
Peanut butter	S	Soap solution conc.	S		
Perchloroethylene	U	Sodium acetate sat'd.	S		
Pepper (fresh ground)	S	Sodium benzoate 35%	S		
Peppermint oil	O	Sodium bicarbonate sat'd.	S		
Perchloric acid 50%	S	Sodium bisulfate sat'd.	S		
Petroleum ether	U	Sodium bisulfite sat'd.	S		
Petroleum jelly	S	Sodium borate	S		
Phenol	S	Sodium carbonate conc.	S		
Phosphoric acid 0-30%	S	Sodium chlorate sat'd.	S		
Phosphoric acid 30-90%	S	Sodium chloride sat'd.	S		
Phosphoric acid over 90%	S	Sodium cyanide	S		
Photographic solutions	S	Sodium dichromate sat'd.	S		
Phthalic anhydride	S	Sodium ferricyanide sat'd.	S		
Pickling baths		Sodium ferricyanide	S		
Sulfuric acid	S	Sodium fluoride sat'd.	S		
Hydrochloric acid	S	Sodium hydroxide conc.	S		
Sulfuric-nitric	S	Sodium hypochlorite	S		

### Legend:

**S = Satisfactory**

**O = Some Attack**

**U = Unsatisfactory**

### Note:

The above information concerns general chemical resistance only. Since other factors such as permeation, ESCR, and container design are involved full compatibility testing is recommended.





# Glossary

**Approved** - approved, or listed by a nationally recognized testing laboratory.

**Bloodborne Pathogens** - pathogenic micro-organisms that are present in human blood and can cause disease in humans.

**Boiling Point** - the boiling point of a liquid at a pressure of 14.7 pounds per square inch absolute (p.s.i.a.).

**Bonding** - the interconnecting of two objects with clamps and wire to equalize the electrical potential to help prevent static sparks that could ignite flammable materials.

**Closed Container** - a container sealed by means of a lid or other device that neither liquid nor vapor will escape from it at ordinary temperatures.

**Container** - any can, barrel or drum.

**Contaminated** - the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

**Fire Area** is defined by NFPA Code 30 as an area of a building separated from the remainder of the building by construction having a fire resistance of at least 1 hour and having all communicating openings properly protected by an assembly having a fire resistance rating of at least 1 hour. The NFPA also provides a special provision for the grouping of flammable cabinets in an industrial facility due to the lack of walls or barriers. In an industrial occupancy, additional cabinets may be located in the same fire area if the additional cabinets, or the group of not more than three (3) cabinets, is separated from the other cabinets or group of cabinets by at least 100 feet (30m).

**Flammable Aerosol** - an aerosol which is required to be labeled "Flammable" under the Federal Hazardous Substances Labeling Act. Such aerosols are considered Class IA liquids.

**Flame Arrester** - a mesh or perforated metal insert within a flammable storage container (safety can, cabinet) which protects its contents from external flames or ignition by absorbing and dissipating heat entering the can, therefore keeping the vapor pressure below its ignition point.

**Flashpoint** - the lowest temperature at which a flammable vapor-air mixture above the liquid will ignite when an ignition source is present.

**FM - Factory Mutual** - a national testing laboratory and approval service recognized by OSHA.

**Grounding** - the conducting connection between a container and "ground," usually with a wire, to prevent generation of static electric sparks.

**Liquid** - any material which has a fluidity greater than that of 300 penetration asphalt when tested in accordance with ASTM Test for Penetration for Bituminous Materials.

**Regulated Waste** - liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

## UN Markings: UN 1H2/X340/S/96USA/M4990

1- Type of Container (drum), H-material of construction (plastic), 2- Removable head/X-Testing performance (X=Groups I, II, & III), 340-Max. Wt. of Container (Kg)/S-solids/96 - Year of Manufacture, USA-State Authorization Mark/M - certification compliance, 4990 -Testing Agency number.

**Vapor Pressure** - the pressure, measured in pounds per square inch (absolute) exerted by a volatile liquid as determined by the "Standard Method of Test for Vapor Pressure of Petroleum Products" (Reid Method).

FLAMMABLE AND COMBUSTIBLE LIQUIDS DEFINED		
Flammable		
Flashpoint less than 100 °F.		
Class	Flashpoint	Boiling Point
IA	<73°F	<100°F
IB	<73°F	>100°F
IC	73°F - 100°F	—
Combustible		
Flashpoint at or above 100°F.		
Class	Flashpoint	Boiling Point
II	100° - 140°F	—
IIIA	140° - 200°F	—
IIIB	+200°F	—

Liquid volatility increases with temperature. Classes change with mixtures and contamination. Reference: OSHA 29 CFR 1910.106 (a)(18)

SAFETY CAN-CHEMICAL COMPATIBILITY							
Reagent	1	2	3	Reagent	1	2	3
Acetic Acid	N	Y	Y	Fuel Oil	Y	Y	Y
Acetone	Y*	Y	Y	Gasoline	Y	Y	Y
Aniline	N	Y	Y	Heptane	Y	Y	Y
Benzene	N	Y	Y	Hexane	Y	N	Y
Butadiene	N	N	Y	Kerosene	Y	Y	Y
2-Butanone	Y*	Y	Y	Methanol	N	Y	Y
Butylene	Y	N	Y	Methylene Chloride	N	N	Y
Chlorofluorocarbons	N	N	Y	Methyl Ethyl Ketone	N	N	Y
Cyclohexane	Y	N	N	Methyl Isobutyl Ketone	Y*	Y	Y
Cyclohexanone	N	N	Y	Pentane	Y	N	Y
Ethanol	N	Y	Y	Petroleum Ether	Y	N	Y
Ethyl Acetate	N	Y	Y	Toluene	Y	N	Y
Ethyl Ether	Y*	N	Y	Trichloroethylene	N	N	Y
Ethylene Glycol	N	Y	Y	Xylene	Y	Y	Y

KEY		
Galvanized Steel or Terne Plate-1	Polyethylene- 2	Stainless Steel-3
Use when chemical purity is not critical. Some chemicals may adversely affect paint.	Use for storing acids/caustics and other corrosive chemicals.	Use when chemical purity is critical.
Y=Yes N=No	* May discolor solvent if water present.	
© Lab Safety Supply, Inc., Janesville, WI - Reproduced with permission.		
CAUTION: Resistance to mixed solvents is unpredictable. Guide DOES NOT apply to mixtures, even if the can is compatible with all components of the mixture.		

The material contained in this publication is provided for general information purposes only and should not be considered as advice on any specific safety, legal or regulatory issue. Eagle Manufacturing Company assumes no responsibility, obligation or liability in conjunction with the use or misuse of the material herein or of the CLAWS program. For specific product information, call Eagle's customer service department at 304-737-3171 or e-mail at sales@eagle-mfg.com for free video and product literature.



## Great People • Great Products

### A TRADITION OF QUALITY



For over 100 years, Eagle Manufacturing Company has been making products for an ever changing world. In the beginning, it was glass jars, and later, the technology that led to the production of metal lids for glass jars led to the production of oilers (1907), steel gasoline cans (1917), metal Type I and Type II Safety Cans (1957), metal Oily Waste Cans (1962), and Safety Storage Cabinets (1967).

Eagle has built a track record of successfully adapting to this ever changing world. In 1981, Eagle introduced the first non-welded, galvanized steel Safety Cans and in 1987 introduced its full line of high density polyethylene products. Since 1990, Eagle has introduced over 75 new products, including its high density polyethylene hazardous waste management products.

In 1997, Eagle introduced its new generation of Safety Storage Cabinets. Eagle's newly designed and manufactured cabinets have set new industry standards for quality, durability and value.



Eagle remains committed to working closely with industry to develop new technology and provide a full range of products to meet their needs.

### A TRADITION OF INNOVATION



Throughout its history, Eagle has been universally recognized as a leader in providing innovative products. That tradition continues today. From concept, through design and testing, Eagle's product development group utilizes

state-of-the-art technology. Innovative design is only one part of a successful new product equation. Eagle's management has committed the necessary resources to insure that manufacturing equipment and processes are also state-of-the art.

### EAGLE SELLS EAGLE PRODUCTS

As the safety marketplace moves toward "one-stop" shopping, the Eagle brand name—and what it stands for—has assumed a growing role in distinguishing Eagle from its competitors. The brand tells our customers what they can expect: easy to use features, innovative applications, solid value, and exceptional service.



### EAGLE QUALITY POLICY



Our Goals Are:

***To Excel in Manufacturing and Marketing and to be the Supplier of Choice to our Customers.***

We must be certain that our products:

- Are designed for their intended purpose;*
- Are correctly made;*
- Are of the highest quality; and*
- Are readily available so that our customers' orders can be shipped promptly.*

Everyone at Eagle Works Together As A Team To Achieve These Goals.

### QUALITY ASSURANCE FOR THE FUTURE

#### ISO-9001 Certification

In December 1996, Davy Scott Registrar Services, Inc. certified Eagle's Quality System to the ISO-9001 standard. The significance of ISO certification is two-fold. First, the documentation of our operating procedures enables us to operate more efficiently. Second, certification assures our customers that our quality standards are among the best in the world.

In order to maintain and improve upon these quality standards, Eagle has three certified ISO-9001 Quality Management System auditors on staff. Also, semi-annual independent audits are conducted to insure that Eagle continues to meet ISO-9001 standards.



**Look for  
Eagle's new line  
of guards and  
protectors.**



**This compliance  
guide should be  
used in  
conjunction with  
the Compliance  
Solutions catalog  
and/or CD-ROM  
package**



**EAGLE MANUFACTURING CO.**

2400 Charles Street  
Wellsburg, WV 26070

304-737-3171 • fax 304-737-1752

[www.eagle-mfg.com](http://www.eagle-mfg.com)

[sales@eagle-mfg.com](mailto:sales@eagle-mfg.com)