



OSHA PRIMER

**A Brief Introduction to OSHA and the
Typical Regulatory Requirements for the
Commercial Lithographic Industry**

Printing Industries Press

OSHA

Primer

Version 3.0

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Introduction

What OSHA regulations do I need to comply with?

This is a common question we receive at Printing Industries of America, and it's because of this single question that we have developed the *OSHA Primer*.

OSHA regulates numerous industries, including the commercial lithographic (printing) industry. As printing operations are considered "manufacturing" they are regulated under the "General Industry" section of the OSHA standards. As long as there is one employee, every printing operation located in the U.S., regardless of the size, is required to comply with OSHA standards. The specific regulatory requirements will depend on the site-specific equipment, materials, operations, practices and processes. As a minimum, virtually all printing operations will need to address the most basic of OSHA regulations presented in this primer. Printing operations with larger facilities, more comprehensive operations, special equipment configurations, or a larger number of employees will find that additional regulations may apply and efforts beyond what is outlined in this primer will be needed in order to meet those compliance requirements.

Knowing that OSHA applies to a printing operation is just the beginning of a comprehensive compliance program. A printing operation must evaluate their facility operations and then determine which of the many OSHA regulations apply to the equipment, materials, and site specific conditions found at the facility. Once an understanding of the requirements and how they apply is established the next step is to develop the appropriate compliance programs, and then finally, implementing and integrating the compliance programs as a regular component of the business operation.

This primer serves as a tool for the first step. It is a simple resource to provide an overview of **FEDERAL OSHA**, general industry, regulations affecting the printing industry and some basic compliance information. This primer will not answer every question regarding OSHA compliance, nor does it provide the necessary details regarding every specific regulatory requirement. Rather, it is designed to be a valuable reference tool for those who are just being introduced to safety and OSHA regulations. For the more experienced, it can serve as a refresher on the basic regulations.

It should be noted that not every OSHA regulation will pertain to every printer across the country. For instance, a small printing operation that does not generate or store large amounts of hazardous waste (e.g., waste blanket wash or other solvents) would not be required to provide specific Hazardous Waste Operations and Emergency Response (HAZWOPER) training for their employees.

This document is only intended as a general reference of basic federal OSHA standards. Although every reasonable effort has been made to verify information contained in this primer, the user cannot rely upon this material as a guarantee of compliance. Printing Industries of America does not assume responsibility for completeness, accuracy, or interpretation of the same. It is ultimately the responsibility of the printing operation to meet the respective federal/state/local requirements or any additional regulations.

The Occupational Safety and Health Administration (OSHA), is an agency of the U.S. Department of Labor. OSHA's sole responsibility is employee safety and health protection within the workplace. OSHA is responsible for developing, implementing, and enforcing safety and health standards and regulations. OSHA works with employers and employees to foster effective safety and health programs which reduce workplace hazards.

OSHA was created under the Occupational Safety and Health Act of 1970. Prior to 1970, there were no uniform or comprehensive provisions to protect against workplace hazards. Through OSHA's standards and regulations, U.S. workers have been given the right to a safe and healthful work environment. Employers are compelled to meet applicable OSHA regulations to ensure that they provide a safe and healthy workplace. .

OSHA accomplishes its mission through three basic strategies:

- Effective enforcement;
- Outreach, education, and compliance assistance;
- Partnerships, alliances, and other cooperative and voluntary programs

Most printing operations will recognize the regulations, standards, and guidelines written by OSHA with regard to employee protection. OSHA's role of enforcing the compliance of these standards, although always having been present, has been more refined to be a strong presence. Further, OSHA has put efforts into outreach programs and partnerships specifically for training and education in order to create safe and healthful work environments.

OSHA oversees employer activities and administers the regulations either through the federal regional offices or through approved state plan programs. Both hold equal authority. Printing Operations with facilities located in a state where OSHA operates through a state program can contact the applicable OSHA office listed on page 23 with any questions regarding specific OSHA regulations.

When employees are safe and healthy business enjoys many benefits. They experience lower workers' compensation insurance costs, reduced medical expenditures, decreased payout for return-to-work programs, and lower costs for job accommodations for injured workers. There are also indirect benefits such as increased productivity, lower costs for training replacement workers and decreased costs for overtime.

Safety and Health Standards

The following is a partial list of Federal OSHA's "general industry" standards and regulations found at 29 CFR Part 1910) which includes printing operations.

The regulations identified below will apply to almost all printing operations, but depending on the specific circumstances or specific nature of operations, other regulations and standards not listed could also apply.

Walking-Working Surfaces

Description
1910.22 General Requirements
1910.23 – Guarding floor and wall openings and holes
1910.24 – Fixed industrial stairs
1910.25 – Portable wood ladders
1910.26 – Portable metal ladders
1910.27 – Fixed ladders
1910.29 – Manually propelled mobile ladder stands and scaffolds (towers)
1910.30 – Other working surfaces

Means of Egress

Description
1910.35 – Compliance with NFPA 101-2000, Life Safety Code
1910.36 – Design and construction requirements for exit routes
1910.37 – Maintenance, safeguards, and operational features for exit routes
1910.38 – Emergency action plans
1910.39 – Fire prevention plans

Platforms, Manlifts, and Vehicle-Mounted Work Platforms

Description
1910.66 – Powered platforms for building maintenance
1910.67 – Vehicle-mounted elevating and rotating work platforms
1910.68 – Manlifts

Occupational Health and Environment Control

Description
1910.94 – Ventilation
1910.95 – Occupational noise exposure
1910.97 – Nonionizing radiation

Hazardous Materials

Description
1910.101 – Compressed gases (general requirements)
1910.102 – Acetylene
1910.103 – Hydrogen
1910.104 – Oxygen
1910.105 – Nitrous oxide
1910.106 – Flammable and combustible liquids
1910.107 – Spray finishing using flammable and combustible materials
1910.108 – Dip tanks containing flammable or combustible liquids
1910.110 – Storage and handling of liquefied petroleum gases
1910.111 – Storage and handling of anhydrous ammonia
1910.119 – Process safety management of highly hazardous chemicals
1910.120 – Hazardous waste operations and emergency response (HAZWOPER)

Personal Protective Equipment

Description
1910.132 - General requirements
1910.133 - Eye and face protection
1910.134 - Respiratory Protection
1910.134 Appendix D - Information for Employees Using Respirators When not Required
1910.135 - Head protection
1910.136 - Occupational foot protection
1910.137 - Electrical protective devices
1910.138 - Hand Protection

General Environmental Controls

Description
1910.141 - Sanitation
1910.144 - Safety color code for marking physical hazards
1910.145 - Specifications for accident prevention signs and tags
1910.146 - Permit-required confined spaces
1910.147 - The control of hazardous energy (lockout/tagout)

Medical and First Aid

Description
1910.151 - Medical services and first aid

Fire Protection

Description
1910.156 – Fire brigades
1910.157 – Portable fire extinguishers
1910.158 – Standpipe and hose systems
1910.159 – Automatic sprinkler systems
1910.160 – Fixed extinguishing systems, general
1910.161 – Fixed extinguishing systems, dry chemical
1910.162 – Fixed extinguishing systems, gaseous agent
1910.163 – Fixed extinguishing systems, water spray and foam
1910.164 – Fire detection systems
1910.165 – Employee alarm systems

Compressed Gas and Compressed Air Equipment

Description
1910.169 - Air receivers

Materials Handling and Storage

Description
1910.176 – Handling materials – general
1910.178 – Powered industrial trucks
1910.181 – Derricks
1910.184 – Slings

Machinery and Machine Guarding

Description
1910.212 - General requirements for all machines
1910.213 - Woodworking machinery requirements
1910.215 - Abrasive wheel machinery
1910.217 - Mechanical power presses
1910.219 - Mechanical power-transmission apparatus

Hand and Portable Powered Tools and Other Hand-Held Equipment

Description
1910.242 - Hand and portable powered tools and equipment, general
1910.243 - Guarding of portable powered tools
1910.244 - Other portable tools and equipment

Welding, Cutting, and Brazing

Description
1910.252 – General requirements
1910.253 – Oxygen-fuel gas welding and cutting
1910.254 – Arc welding and cutting
1910.255 – Resistance welding

Electrical

Description
1910.302 - Electric utilization systems
1910.303 - General requirements
1910.304 - Wiring design and protection
1910.305 - Wiring methods, components, and equipment for general use
1910.306 - Specific purpose equipment and installations
1910.307 - Hazardous (classified) locations
1910.308 - Special systems
1910.331 - Scope
1910.332 - Training
1910.333 - Selection and use of work practices
1910.334 - Use of equipment
1910.335 - Safeguards for personnel protection

Toxic and Hazardous Substances

Description
1910.1000 – Air Contaminants
1910.1001 – Asbestos
1910.1017 – Vinyl chloride
1910.1020 – Access to employee exposure and medical records
1910.1025 – Lead
1910.1026 – Chromium (VI)
1910.1027 – Cadmium
1910.1028 – Benzene
1910.1030 – Bloodborne pathogens
1910.1030 Appendix A – Hepatitis B Vaccine Declination (Mandatory)
1910.1048 – Formaldehyde
1910.1052 – Methylene Chloride
1910.1096 – Ionizing radiation
1910.1200 – Hazard Communication
1910.1201 – Retention of DOT markings, placards and labels
1910.1450 – Occupational exposure to hazardous chemicals in laboratories

Recording and Reporting Rules

The following is a list of OSHA's recording and reporting rules found in 29 CFR Part 1904. The regulations identified below will apply to almost all printing operations, but depending on the specific circumstances or specific nature of operations, other regulations and standards could also apply.

Recording and Reporting Occupational Injuries and Illness

Description
1904.1 - Partial exemption for employers with 10 or fewer employees
1904 Subpart B Appendix A - Partially Exempt Industries
1904.4 - Recording criteria
1904.7 - General recording criteria
1904.9 - Recording criteria for cases involving medical removal under OSHA standards
1904.10 - Recording criteria for cases involving occupational hearing loss
1904.29 - Forms
1904.30 - Multiple business establishments
1904.32 - Annual summary
1904.33 - Retention and updating
1904.41 - Annual OSHA injury and illness survey of ten or more employers
1904.43 - Summary and posting of 2001 data
1904.44 - Retention and updating of old forms

Most-Often-Cited Standards -Lithographic Printing

Cited Standard	Standard Title	Written Program ¹	Assessment Of Hazards ²	SOP ³
1910.146	Confined Spaces		✓	✓
1910.303 & .305	Electrical Wiring & Systems Designs		✓	
1910.38	Emergency / Evacuations	✓	✓	
1910.147	Energy Control (LOTO)	✓	✓	✓
1910.37 & .36	Exits / Egress		✓	
1910.106	Flammable and Combustible Substances		✓	
1910.157	Fire Protection / Extinguishers		✓	
1910.1200	Hazard Communication Standard	✓	✓	
1910.212	Machine Guarding		✓	
1910.219	Mechanical Power Apparatus		✓	
1910.95	Occupational Noise	✓	✓	
1904.2	Injury and Illness Reporting	✓		
1910.151	Medical Services and First Aid		✓	
1910.132 & .133	Personal Protective Equipment	✓	✓	✓
1910.178	Powered Industrial Trucks		✓	✓
1910.22	Working / Walking Surfaces		✓	

1 - Requires either a written program, plan, log, or certification

2 - Performance of a hazard assessment

3 - Requires a Standard Operating Procedure

Typical OSHA Standards for Lithographic Operations

Regulation	Scope	Applicability
Bloodborne Pathogens (1910.1030)	Covers the requirements an employer must meet in order to control, eliminate, or minimize occupational exposure to blood or other potentially infectious materials and bodily fluids.	All locations where employees are exposed to, or likely to be exposed to, blood or other potentially infectious materials and bodily fluids as part of their job duties
Confined Spaces (1910.146)	Covers the practices and procedures necessary to protect employees from the hazards associated with entering confined spaces such as maintenance pits, balers, and tanks.	All locations that require employees to enter confined spaces
Electrical (1910.303 & .305)	Covers the requirements an employer must take in order to address practical electrical safeguarding when working with and around electricity.	All locations where employees engage in servicing and maintenance where exposure to electrical energy occurs or is likely to occur
Emergency/ Evacuation (1910.38)	Covers emergency action plan procedures an employer must implement as required by OSHA to ensure employee safety during evacuations caused by fires, severe weather, and other emergencies.	All locations as required under OSHA
Energy Control Program - Lockout/Tagout (1910.147)	Covers the practices and procedures necessary to protect employees while performing servicing and maintenance tasks on equipment in which unexpected start up of the equipment or release of stored energy could cause injury. The standard establishes the minimum performance requirements for the control of such hazardous energy.	All locations where employees are exposed to hazardous energy during service and maintenance activities
Exits/Egress (1910.37 & .36)	Covers the maintenance, measurement, access, arrangement, and markings of permissible exit doors, pathways, and means to exit a building safely.	All locations and workplaces in the category of “General Industry”

Typical OSHA Standards for Lithographic Operations

Regulation	Scope	Applicability
Flammable and Combustible Substances (1910.106)	Covers the requirements and procedures involved with the storing and handling of flammable and combustible liquids such as blanket washes, alcohol, and roller cleaners.	All locations and workplaces that store and handle flammable and combustible liquids
Fire Protection/ Extinguisher (1910.157)	Covers the requirements for portable and fixed fire suppression equipment, fire detection systems, and alarm systems installed to meet fire protection requirements.	All locations that provide portable fire extinguishers at the workplace for use by employees
General Duty Clause [Section 5(a)(1)]	Requires: (a) Each employer shall: (1) furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees; (2) shall comply with occupational safety and health standards promulgated under this Act. (b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.	May be used by OSHA if: <ul style="list-style-type: none"> • There is not an applicable OSHA standard. • A recognized hazard is created in whole or in part by conditions not covered by a standard.
Hazard Communication Standard (1910.1200)	Covers the requirements employers must implement in order to effectively communicate hazard information to employees when handling and using chemicals in the workplace.	All locations which handle or use chemicals in the workplace, except self-employed and immediate members of farming families that do not employ outside workers

Typical OSHA Standards for Lithographic Operations

Regulation	Scope	Applicability
Hazardous Waste Operations and Emergency Response (HAZWOPER) (1910.120)	Covers clean-up operations involving hazardous substances that are conducted at uncontrolled hazardous waste sites and emergency response operations for releases of hazardous substances.	All locations engaged in the clean-up of hazardous wastes materials required by government authorities or by voluntary activities
Injury and Illness Reporting (1904.2)	Covers the maintenance of the required OSHA log and summary for work-related fatalities, injuries, and illnesses.	All employers covered by the Occupational Safety and Health Act (OSH Act)
Machine Guarding (1910.212)	Covers the types and methods of machine guarding necessary for protecting equipment operators and other employees from hazards such as moving parts, pinch points, flying chips, and sparks.	All locations and workplaces that operate and utilize machines and equipment with moving hazards
Medical Services/ First Aid (1910.151)	Covers the requirements an employer must take to ensure the availability of medical personnel for advice and consultation on matters of plant health and that suitable facilities for quick drenching or flushing of the eyes and body are provided within the work area for immediate emergency use.	All locations with designated employees who are trained to provide first aid response (only if outside emergency medical assistance is not available within 3–4 minutes)
Occupational Noise (Hearing) (1910.95)	Covers the requirements an employer must take to provide employee training, testing, and protection with regard to high noise hazards.	All locations where employees are exposed to ≥ 85 dB over an 8-hour time period are required to have a hearing conservation program
Personal Protective Equipment (PPE) (1910.132)	Covers the requirements an employer must take to assess hazards present at the workplace and provide appropriate personal protective equipment for the safety of the employees.	All locations where it is determined that the use of such equipment is necessary by reason of a hazard determination

Typical OSHA Standards for Lithographic Operations

Regulation	Scope	Applicability
Powered Industrial Trucks (1910.178)	Covers the practices and procedures necessary to protect employees during the maintenance, training, and use of powered fork trucks, lift trucks, and motorized hand trucks.	All locations that have acquired and use powered industrial trucks
Working/Walking Surfaces (1910.22)	Covers the requirements an employer must implement to ensure all passageways, storerooms, service rooms, and other walking or working surfaces are kept clean and orderly and in a safe and sanitary condition.	All permanent places of employment

Basic Training Elements for Typical OSHA Standards

Regulation	Basic Elements of Training (not all inclusive)	Training Frequency			Certified Trainer Required
		Initially & When Change Occurs	Annual	Tri-Annual	
Bloodborne Pathogen 1910.1030(g)(1)(ii)	<ul style="list-style-type: none"> • Basic hazards of bloodborne pathogens; • Universal procedures; care and use of PPE; • Hepatitis B vaccinations; • Bodily fluid cleanup; • Good Samaritan exposure; • Follow-up records; • An explanation of: the standard; epidemiology and symptoms; modes of transmission; exposure control plan; appropriate methods for recognizing exposure to blood and other potentially infectious materials; use and limitations of methods to prevent or reduce exposure; information on the types, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment; • Appropriate actions and persons to contact; • Methods of reporting; • Post-exposure evaluations; • Signs and labels 	✓	✓		

Basic Training Elements for Typical OSHA Standards

Regulation	Basic Elements of Training (not all inclusive)	Training Frequency			Certified Trainer Required
		Initially & When Change Occurs	Annual	Tri-Annual	
Confined Space 1910.146(g)(2) & (k)(1)	<p>Authorized Entrants</p> <ul style="list-style-type: none"> Hazards faced during entry; Proper use of equipment; proper communication with the attendant; recognition of warning signs, or symptoms of exposure to a dangerous situation <p>Attendants</p> <ul style="list-style-type: none"> Hazards faced during entry; behavioral effects of hazard exposure; maintenance of entrants count; means to identify authorized entrants; rescue operations; proper communication with authorized entrants; monitoring activities Notify employees on location of confined spaces; identify warning signs; identify hazards; requests and use of permit for entry 	✓	✓		

Basic Training Elements for Typical OSHA Standards

Regulation	Basic Elements of Training (not all inclusive)	Training Frequency			Certified Trainer Required
		Initially & When Change Occurs	Annual	Tri-Annual	
Electrical Safety 1910.332 & 333	<p>Applicable employees must be trained in and familiar with the safety-related work practices required by 1910.331 through 1910.335 that pertain to their respective job assignments</p> <p>Unqualified Employees</p> <ul style="list-style-type: none"> • Basic electrical hazards of live equipment; • Prohibit the removal of locks and tags; • Familiar with any electrically related safety practices not specifically addressed by 1910.331 through 1910.335 but which are necessary for their safety <p>Qualified Employees</p> <ul style="list-style-type: none"> • Basic electrical safety procedures; • Use of electrical PPE; • Proper tools; • Skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment; • Skills to determine nominal voltage of exposed live parts, and clearance distances specified in 1910.333(c); • Corresponding voltages 	✓	✓		
Evacuation Plan (1910.38(a)(5))	<ul style="list-style-type: none"> • Identification of designated emergency coordinator; • Basic fire procedures; • Evacuation procedures; • Available emergency equipment; • Review of emergency action plan with each covered employee 	✓			

Basic Training Elements for Typical OSHA Standards

Regulation	Basic Elements of Training (not all inclusive)	Training Frequency			Certified Trainer Required
		Initially & When Change Occurs	Annual	Tri-Annual	
Fire Extinguishers 1910.157(g)(1) (Portable)	Where the employer has provided portable fire extinguishers for employee use employees must be familiar with <ul style="list-style-type: none"> • General principles of fire extinguishers; • Use of the fire extinguishers • Hazards involved with incipient stage fire fighting 	✓	✓		
First Aid 1910.151(b)	If required, one or more employees shall be adequately trained and certified in <ul style="list-style-type: none"> • First aid, including CPR when an employer cannot rely upon the reasonable proximity of an infirmary, clinic, or hospital 	✓	✓		✓
Hazard Communication Standard 1910.1200 (h)	<ul style="list-style-type: none"> • Categories of hazards or specific chemicals; • Location and availability of the written program, inventory list, and safety data sheets; • Methods and observations used to detect the presence or release of a hazardous chemical; • Physical, health, simple asphyxiation, combustible dust; • Measures employees can take to protect themselves; • Details of the employer developed hazard communication program; • Explanation of labeling systems, safety data sheets and the order of information, and how to obtain and use the appropriate hazard information – (By December 1st 2013 all employers must provide complete training on the new GHS label elements and safety data sheet (SDS) format. 	✓			
Hazardous Waste Operations and Emergency Response 1910.120(e)	Must follow OSHA's required training elements as described under the standard	✓	✓		✓

Basic Training Elements for Typical OSHA Standards

Regulation	Basic Elements of Training (not all inclusive)	Training Frequency			Certified Trainer Required
		Initially & When Change Occurs	Annual	Tri-Annual	
Hearing Protection 1910.95(k)	<ul style="list-style-type: none"> • Review annual hearing tests; • Effects of noise on hearing; • Purpose of hearing protectors; • Advantages, disadvantages, and attenuation of various types; • Instruction on selection, fitting, use, and care; • Purpose of audiometric testing; • Explanation of the test procedures 	✓	✓		
Lockout/Tagout 1910.147(c)(7)	<p>Affected Employees</p> <ul style="list-style-type: none"> • Purpose of lockout/tagout; • Basic information on locks and tags; • Prohibit removal of locks or tags; • Prohibit start up of locked equipment <p>Authorized Employees</p> <ul style="list-style-type: none"> • All of the above, plus thorough review of Lockout/Tagout plan; • Purpose and function of the energy control program; • Recognition of applicable hazardous energy sources; • Type and magnitude of the energy available; • Methods and means necessary for energy isolation and control; • Purpose and use of the energy control procedures; • Limitations of tags 	✓			

Basic Training Elements for Typical OSHA Standards

Regulation	Basic Elements of Training (not all inclusive)	Training Frequency			Certified Trainer Required
		Initially & When Change Occurs	Annual	Tri-Annual	
Personal Protective Equipment 1910.132(f)	<ul style="list-style-type: none"> • Results of hazard assessment; • When PPE is necessary; • What PPE is necessary; • Where PPE is located? • How to properly don, doff, adjust, and wear PPE; • Limitations of the PPE; • Proper care, maintenance, useful life, and disposal of the PPE; • Demonstration of understanding 	✓			
Powered Industrial Trucks—Forklifts 1910.178(l)	<p>A combination of formal instruction, practical training, and evaluation of the operator’s performance in the workplace.</p> <ul style="list-style-type: none"> • Operating instructions; • Warnings and precautions for the types of truck; • Differences between the truck and the automobile; • Truck controls and instrumentation; • Engine or motor operation; • Steering and maneuvering; • Visibility; • Fork and attachment adaptation, operation, and limitations; • Vehicle capacity, limitations and stability; • Vehicle inspection and maintenance; • Refueling and/or charging; • Surface conditions; • Hazardous (classified) locations; • Composition of loads; • Load stability, stacking and unstacking; • Pedestrian traffic; • Aisles and other restricted places; 	✓		✓	

Basic Training Elements for Typical OSHA Standards

Regulation	Basic Elements of Training (not all inclusive)	Training Frequency			Certified Trainer Required
		Initially & When Change Occurs	Annual	Tri-Annual	
Respirators 1910.134	<ul style="list-style-type: none"> • Types of respirators; • Purpose of respirators; • Proper selection, fitting, usage, or maintenance of the respirator; • Limitations and capabilities of the respirator; how to inspect, put on, remove, use, and check the seals of the respirator; • Procedures for maintenance and storage of the respirator; • How to recognize medical signs and symptoms that may limit effective use of respirators 	✓	✓		

OSHA "State Programs"

The Occupational Safety and Health Act of 1970 (the Act) encourages individual states to develop and operate their own job safety and health programs (known as State Plans). OSHA approves and monitors State Programs and provides up to 50 percent of an approved plan's operating costs.

The following are states that operate their own job safety and health programs:

Alaska Arizona California Connecticut* Hawaii	Illinois* Indiana Iowa Kentucky Maryland Michigan	Minnesota Nevada New Jersey* New Mexico New York*	North Carolina Oregon Puerto Rico South Carolina Tennessee	Utah Vermont Virgin Islands* Virginia Washington Wyoming
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* Most of the State Programs cover both the public and private sectors while five (Connecticut, Illinois, New Jersey, New York, and the Virgin Islands) cover only public employees.

The State Programs must set job safety and health standards that are "at least as effective as" comparable federal OSHA standards. Most State Programs adopt standards identical to federal OSHA. State Programs have the option to announce standards covering hazards not addressed by federal OSHA standards.

These "State Programs" must also conduct inspections to enforce their standards, cover public (state and local government) employees, and operate occupational safety and health training and education programs. In addition, most of these "State Programs" provide free on-site consultation to help employers identify and correct workplace hazards.

For more information on state programs go to <http://www.osha.gov/dcsp/osp/index>.



Safety Compliance Mini-Checklist

This abbreviated checklist is provided to highlight some of the broad and basic safety compliance topics a printer needs to address.

This checklist is not all-inclusive and should only be used as a general reference toward safety compliance.

General Safety

- Identify person(s) with the authority and responsibility for implementing safety programs.
- Develop a system that ensures employees comply with safe and healthy work practices (i.e., employee incentives, training and retraining programs, and/or disciplinary measures).
- Ensure there is a system that provides communication with affected employees on occupational safety and health matter (i.e., meetings, training programs, posting, written communications, and/or health and safety committees).
- Ensure a means for identifying and evaluating workplace hazards whenever new substances, processes, procedures, or equipment are introduced to the workplace and whenever the employer receives notification of a new or previously unrecognized hazard.
- Schedule periodic inspections to identify hazards and ensure compliance.
- Develop procedures for accident and near-miss investigations.
- Ensure quick corrections for unsafe or unhealthy conditions and work practices.
- Ensure employees are protected from serious or imminent hazards until they are corrected.
- Provide employee training in general safety and healthy work practices.
- Ensure employees know the safety and health hazards specific to their job assignments.
- Evaluate employee training needs whenever new substances, processes, procedures, or equipment are introduced to the workplace and whenever new or previously unrecognized hazards are presented.
- Ensure supervisors are knowledgeable of the safety and health hazards to which their employees may be exposed.

Recordkeeping/Reporting

- Use a dedicated bulletin board for all safety notices.
- Post OSHA notice informing workers of safety and health protections and obligations under federal law.
- Post notice informing employees of right to access medical and exposure records.
- Maintain OSHA form 300, log, and summary of recordable workplace injuries and illnesses sign, and post summary portion from every February 1 to April 30 for the previous year. Keep forms for five years.
- Retain medical and employee exposure records for 30 years after the employee leaves the company.
- Post emergency contacts and phone numbers in prominent locations.
- Post warning signs in appropriate places (e.g., high noise, high voltage, no smoking)
- Keep current and maintain all unique operating permits for such areas as elevators, air pressure tanks, and liquefied petroleum gas tanks.

Hazard Communication

- Develop and maintain a written hazard communication program.
- Create and maintain list or inventory of all current hazardous substances on site.
- Obtain and maintain current Safety Data Sheets (SDS) for all hazardous substances.
- Ensure SDSs are available to all employees.
- Archive obsolete SDSs in an inactive file and retain for 30 years.
- Ensure appropriate container labeling for all chemicals and substances.
- Develop and maintain an internal labeling system and update container labels for all in-plant containers as necessary.
- Provide employee training program with appropriate documentation.

Personal Protective Equipment (PPE)

- Perform workplace hazard assessment to determine if hazards are present or are likely to be present which necessitate the use of personal protective equipment.
- Establish a written certification that the assessment was performed.
- Supply appropriate PPE as identified from hazard assessment.
- Enforce the use of PPE for affected employees.
- Institute an employee training/retraining program regarding PPE.
- Maintain training records identifying employees trained, date of training, type of training, and retraining date and type.

Eye and Face Protection:

- All employees exposed to eye and face hazards must wear appropriate PPE.

Foot Protection:

- Each affected employee shall wear protective footwear when working in areas where there is a danger of falling or rolling objects or hazards that could pierce the sole of the foot.

Hand Protection:

- Hand PPE (e.g., gloves) should be worn when exposure to chemicals, absorption of harmful substances, severe abrasions, cuts, punctures, chemical or thermal burns, mechanical injury, or exposure to extreme temperatures can occur.

Respiratory Protection:

- Evaluate workplace to determine if respirators are required (e.g., confined spaces and areas of overexposure to harmful substances like chemical vapors or dusts).
- Develop a written program outlining the use of respirators and circumstances for use, including medical testing for employees prior to use of units.
- Develop and implement an employee training program on proper use and limitations of respirators.

Machines and Machine Guarding

- Guard all hazardous moving parts (rollers, chains, belts, couplings, ingoing nips, etc.) where accidental contact producing significant injury can or is likely to occur.
- Ensure that all existing guards are undamaged and in place.
- Ensure that machines are **not** operated with missing guards.
- Maintain proper housekeeping around and under equipment.
- Ensure that applicable hazardous nip points have appropriate guarding.
- Ensure proper procedures and guarding are used to avoid contact with knives and blades.
- Ensure all finger and/or nip guards are in place and adjusted properly.
- Ensure that existing interlocks and other safety devices on guards are in place and operating properly.
- Develop and conduct employee training program on proper placement of guards and safe operating procedures.

Control of Hazardous Energy—Lockout/Tagout

- Develop and implement a written program.
- Develop and maintain site-specific energy control procedures for each applicable piece of equipment.
- Develop and conduct an employee training program regarding the performance of lockout/tagout as well as minor service and maintenance procedures.
- Perform annual Periodic Inspections on the energy control procedures and the authorized employee training skills.
- Establish a written certification that the Periodic Inspection was performed.

Helpful Resources

The following are websites and links for information on safety and OSHA regulations.

- **Printing Industries of America**
200 Deer Run Road
Sewickley, Pennsylvania 15143
800-910-4283
www.printing.org
- **OSHA Home Page**
www.osha.gov
- **OSHA Publications**
www.osha.gov/pls/publications/publication.html
- **All About OSHA**
www.osha.gov/Publications/all_about_OSHA.pdf
- **Employer Rights and Responsibilities Following an OSHA Inspection**
www.osha.gov/Publications/osha3000.html
- **OSHA Small Business Handbook**
www.osha.gov/Publications/smallbusiness/small-business.html
- **Job Hazard Analysis**
www.osha.gov/Publications/osha3071.html
- **OSHA “It’s the Law” Poster**
www.osha.gov/Publications/osha3165.pdf
- **Illness and Injury Recordkeeping**
www.osha.gov/recordkeeping/pub3169text.html

Glossary of OSHA Terms

Affected Employee: An employee who works within an area exposed to lockout/tagout and/or service and maintenance operations but who does not perform service or maintenance.

Amputation: The loss of all or part of a limb or appendage.

Authorized Employee: An individual specifically trained in the use of Lockout/Tagout procedures and is authorized to perform service and maintenance activities. Authorized employees also include those persons responsible for properly locking and tagging machinery that is to be serviced.

Annual Summary: Consists of a copy of the occupational injury and illness totals for the year from the OSHA No. 300, and the following information: The calendar year covered; company name; establishment address; certification signature, title, and date.

Annual Survey: Each year, BLS conducts an annual survey of occupational injuries and illnesses to produce national statistics. The OSHA injury and illness records maintained by employers in their establishments serve as the basis for this survey.

Bureau of Labor Statistics (BLS): The Bureau of Labor Statistics is the agency responsible for administering and maintaining the OSHA recordkeeping system and for collecting, compiling, and analyzing work injury and illness statistics.

Certification: The person who supervises the preparation of a document such as the Log and Summary of Occupational Injuries and Illnesses, OSHA No. 300, certifying that it is true and complete by signing the last page of, or by appending a statement to that effect to, the annual summary.

Cooperative Program: A program jointly conducted by the States and the Federal Government to collect occupational injury and illness statistics.

Employee: One who is employed in the business of his or her employer affecting commerce.

Employee Representative: Anyone designated by the employee for the purpose of gaining access to the employer's log of occupational injuries and illnesses.

Employer: Any person engaged in a business affecting commerce that has employees.

Energy Control Procedure: A written document that contains those items of information an authorized employee needs to know in order to safely control hazardous energy during servicing or maintenance of machines or equipment.

Energy-Isolating Device: Any mechanical device that physically prevents the transmission or release of energy. These include, but are not limited to, manually operated electrical circuit breakers, disconnect switches, line valves, and blocks.

Energy Source: Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Establishment: A single physical location where business is conducted or where services or industrial operations are performed; the place where the employees report for work, operate from, or from which they are paid.

Exposure: The reasonable likelihood that a worker is or was subject to some effect, influence, or safety hazard; or in contact with a hazardous chemical or physical agent at a sufficient concentration and duration to produce an illness.

Federal Register: The official source of information and notification on OSHA's proposed rulemaking, standards, regulations, and other official matters, including amendments, corrections, insertions, or deletions.

First Aid: Any one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and so forth, which do not ordinarily require medical care. Such treatment and observation are considered first aid even though provided by a physician or registered professional personnel.

First Report of Injury: A workers' compensation form which may qualify as a substitute for the supplementary record, OSHA No. 301.

Guard: A protection barrier that prevents entry into the point of operation and/or restricts access to a significant hazard.

Hazard Area: An area located within or around machinery in which a person is exposed to risk of injury or area that can cause damage to a person's health.

Inch-Safe-Service: A method of hazard control accepted by OSHA that offers effective alternative employee protection when performing certain minor service activities.

Incident Rate: The number of injuries, illnesses, or lost workdays related to a common exposure base of 100 full-time workers. The common exposure base enables one to make accurate inter-industry comparisons, trend analysis over time, or comparisons among firms regardless of size. This rate is calculated as:

$$N/EH \times 200,000^*$$
 where:

$$N = \text{Number of Injuries and Illnesses with Days Away From Work} + \text{Number of Injuries and Illnesses Resulting in Days with Restricted Work}$$

$$EH = \text{Total Number of Hours Worked by All Employees}$$

*Base for 100 Full-Time Equivalent Workers

Lock: Keyed device, specified in type and color, used for the purposes of Lockout/Tagout.

Lockout: The placement of a lockout device on an energy-isolating device, in accordance with an established procedure, ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device: Any device that uses positive means that accepts a lock, either key or combination type, to hold the device in a safe position, thereby preventing the energizing of machinery or equipment.

Lockout/Tagout (LOTO): An OSHA standard that requires employers to establish and implement energy control procedures to protect employees from an accidental discharge of energy when performing service and maintenance.

Log and Summary (OSHA No. 300): The OSHA recordkeeping form used to list injuries and illnesses and to note the extent of each case.

Lost Workdays: The number of workdays (consecutive or not), beyond the day of injury or onset of illness, the employee was away from work or limited to restricted work activity because of an occupational injury or illness.

(1) **Lost workdays—away from work.** The number of workdays (consecutive or not) on which the employee would have worked but could not because of occupational injury or illness.

(2) **Lost workdays—restricted work activity.** The number of workdays (consecutive or not) on which, because of injury or illness: (1) The employee was assigned to another job on a temporary basis; or (2) the employee worked at a permanent job less than full time; or (3) the employee worked at a permanently assigned job but could not perform all duties normally connected with it.

The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked even though able to work.

Mechanical Hazard: A source of potential injury to a person which is created by motion of machinery, equipment components, or material.

Medical Treatment: Includes treatment of injuries administered by physicians, registered professional personnel, or lay persons (i.e., non-medical personnel). Medical treatment does not include first aid treatment (one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and so forth, which do not ordinarily require medical care) even though provided by a physician or registered professional personnel.

Minor Servicing and Maintenance: These are tasks performed during normal production operations that are routine, repetitive, and integral to production, where alternative employee protection is provided and that does not require extensive disassembly of the equipment.

Nip Guard: A special bar and/or rod that is located at the actual ingoing nip point of a machine to prevent access to an in-running nip.

North American Industrial Classification System (NAICS): The United States system for industry classification that replaces the 1987 Standard Industrial Classification (SIC) Codes.

Normal Production: The normal and intended operations of a machine or piece of equipment for the purpose of manufacturing the intended product.

Occupational Injury: Any injury such as a cut, fracture, sprain, amputation, etc., which results from a work accident or from a single instantaneous exposure in the work environment.

Occupational illness: Any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment. It includes acute and chronic illnesses or diseases which may be caused by inhalation, absorption, ingestion, or direct contact.

Occupational Safety and Health Administration (OSHA): The federal agency within the department of Labor generally responsible for developing, implementing, and enforcing workplace safety and health standards and regulations.

Pinch Point: Any point other than the point of operation at which it is possible for a part of the body to be caught between the moving parts of a press or auxiliary equipment, or between moving and stationary parts of a press or auxiliary equipment, or between the material and moving part or parts of the press or auxiliary equipment.

Point of Operation: The area of the machine where the machine performs work such as cutting, pressing, printing, shearing, and forming.

Posting: The annual summary of occupational injuries and illnesses must be posted at each establishment by February 1 and remain in place until May 1 to provide employees with the record of their establishment's injury and illness experience for the previous calendar year.

Premises, Employer's: Consist of the employer's total establishment; they include the primary work facility and other areas in the employer's domain such as company storage facilities, cafeterias, and restrooms.

Recordable Cases: All work-related deaths and illnesses, and those work-related injuries which result in: loss of consciousness; restriction of work or motion; transfer to another job; or require medical treatment beyond first aid.

Recordkeeping System: Refers to the nationwide system for recording and reporting occupational injuries and illnesses mandated by the Occupational Safety and Health Act of 1970 and implemented by Title 29, Code of Federal Regulations, Part 1904. This system is the only source of national statistics on job-related injuries and illnesses for the private sector.

Report Form: Refers to survey form OSHA No. 300-S which is completed and returned by the surveyed reporting unit.

Restriction of Work or Motion: Occurs when the employee, because of the result of a job-related injury or illness, is physically or mentally unable to perform all or any part of his or her normal assignment during all or any part of the workday or shift.

Safety data sheet (SDS): A written document developed for a hazardous chemical intended to provide workers and emergency personnel with procedures for handling or working with the chemical. Also, previously known as a Material Safety Data Sheet (MSDS).

Safety Device: A press control or attachment that:

- Restrains the operator from inadvertently reaching into the point of operation;
- Prevents normal press operation if the operator's hands are inadvertently within the point of operation;
- Automatically withdraws the operator's hands if the operator's hands are inadvertently within the point of operation as the dies close; or
- Presents the initiation of a stroke, or stops a stroke in progress, when there is an intrusion through the sensing field by any part of the operator's body or by any other object.

Servicing and Maintenance: These are extensive service tasks performed during normal production operations that are generally applied when it is necessary to remove or bypass a guard or other safety device, or it is necessary to place any part of an employee's body into a point of operation, or where any associated danger zone exists during machine operating cycles and where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy. Such tasks can include constructing, repairing, installing, inspecting, modifying, lubricating, and some cleaning and/or clearing activities.

Small Employers: Employers with no more than 10 full- and/or part-time employees among all the establishments of their firm at any one time during the previous calendar year.

Special Tool: Any hand-held tool designed for the safe placement or removal of material or parts within or from the point of operation.

Standard Industrial Classification (SIC): A classification system developed in 1987 by the Office of Management and Budget for use in the classification of establishments by type of activity in which engaged.

State (when mentioned alone): Refers to a State of the United States, the District of Columbia, and U.S. territories and jurisdictions.

State Agency: State agency administering the OSHA recordkeeping and reporting system. Many States cooperate directly with the BLS in administering the OSHA recordkeeping and reporting programs. Some States have their own safety and health laws which may impose additional obligations.

Supplementary Record (OSHA No. 301): The form (or equivalent) on which additional information is recorded for each injury and illness entered on the log.

Tagout: The placement of a tag on an energy-isolating device, in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may *not* be operated until the tag is removed.

Tagout Device: Any prominent warning device, such as a tag and a means of attachment that can be securely fastened to an energy-isolating device in accordance with an established procedure.

Trip Nip Guard: A movable protective bar located at an ingoing nip that, when pushed, activates the interlocked safety system of the equipment.

Two-Hand Control: An actuating means requiring the concurrent use of both hands of the operator to engage the equipment.

Work Environment: Consists of the employer's premises and other locations where employees are engaged in work-related activities or are present as a condition of their employment. The work environment includes not only physical locations, but also the equipment or materials used by the employee during the course of his or her work.

Workers' Compensation Systems: State systems that provide medical benefits and/or indemnity compensation to victims of work-related injuries and illnesses.

About Printing Industries of America

Printing Industries of America is the world's largest graphic arts trade association, representing an industry with more than one million employees. It serves the interests of more than 10,000 member companies. Together with its nationwide affiliate network, Printing Industries delivers products and services that enhance the growth, efficiency, and profitability of its members and the graphic communications industry through advocacy, education, research, and technical information.



The Environmental Health and Safety (EHS) Department at Printing Industries of America has a number of resources available to assist printers with the process of establishing a safety program and complying with regulatory requirements including sample safety programs, fact sheets, safety posters and additional resources that can be found online at www.printing.org/page/5412.

The EHS staff is also available to answer OSHA related questions via phone (800-910-4283) or email (rhartwig@printing.org), and provides consulting services such as assistance with compliance management, responding to OSHA inspections, on-site compliance audits, and employee safety training.