



INDUSTRIAL SAFETY GUIDE

Factory & Industrial Facility Floor Safety - OSHA Compliant

This guide was developed by **Industrial Profile Systems (IPS)** to help facility managers, safety officers, and floor personnel maintain a safe, OSHA-compliant industrial workplace. The dos and don'ts below reflect federal OSHA standards and industry best practices across machine guarding, PPE, housekeeping, ergonomics, electrical safety, and more.

1. Personal Protective Equipment (PPE)

OSHA Standards: 29 CFR 1910.132-138 (General Industry PPE)

DO	DON'T
Conduct a workplace hazard assessment to determine required PPE	Don't allow workers to use PPE as the only line of defense - engineer hazards out first
Wear hard hats (ANSI Z89.1) in areas with overhead hazards	Don't wear loose clothing, jewelry, or untied hair near rotating machinery
Use safety glasses or face shields where flying debris, sparks, or chemicals are present	Don't modify or disable PPE in any way
Wear steel-toed or composite-toed footwear in all production areas	Don't share respirators or other tight-fitting PPE without proper cleaning/fit-testing
Don high-visibility vests when working near forklifts or vehicle traffic	Don't assume PPE is optional because a task is 'quick'
Use hearing protection (earplugs/muffs) in areas ≥ 85 dB TWA	Don't use expired or damaged PPE
Inspect all PPE before each use and replace damaged equipment immediately	Don't neglect PPE training - document all instruction and fit-testing

2. Machine Guarding & Safety Barriers

OSHA Standards: 29 CFR 1910.212 (General Machine Guarding), 1910.217 (Mechanical Power Presses)

DO	DON'T
Guard all points of operation, power transmission, and rotating parts	Never operate machinery with guards removed or bypassed
Use fixed guards wherever possible; interlocked guards where access is required	Don't reach into a machine's point of operation - always lock out first

DO	DON'T
Install light curtains and safety sensors on automated equipment and robot cells	Don't use improvised guards made from cardboard, tape, or zip ties
Inspect guards at the start of every shift and document findings	Don't defeat interlocks or safety sensors - ever
Follow ANSI/RIA R15.06 for robotic cell safety guarding design	Don't modify guard openings beyond manufacturer specifications
Use modular aluminum extrusion guarding for flexibility as layouts change	Don't allow unauthorized personnel inside robot work envelopes
Post 'Do Not Remove Guard' signage on all guarded machines	Don't assume a machine is safe because it appears to be stopped

3. Lockout / Tagout (LOTO)

OSHA Standard: 29 CFR 1910.147 (Control of Hazardous Energy)

DO	DON'T
Develop and implement a written LOTO program specific to your facility	Never rely on tagout alone when lockout is feasible
Train all authorized and affected employees annually on LOTO procedures	Don't remove another worker's lock - ever
Apply your personal lock before performing any service or maintenance	Don't skip LOTO because a task 'only takes a minute'
Verify zero energy state (test with meter, try to start) before working	Don't assume a machine is de-energized just because the power switch is off
Use equipment-specific LOTO procedures for every machine	Don't overlook stored energy (capacitors, springs, elevated parts, pressurized lines)
Account for ALL energy sources: electrical, hydraulic, pneumatic, gravity, thermal	Don't allow unauthorized personnel to perform LOTO
Conduct periodic LOTO audits (at least annually)	Don't use LOTO tags that are not OSHA-compliant (durable, standardized, legible)

4. Housekeeping & Floor Safety

OSHA Standards: 29 CFR 1910.22 (Walking-Working Surfaces), 1910.141 (Sanitation)

DO	DON'T
Keep all aisles, exits, and emergency equipment routes clear at all times	Don't block fire exits, extinguishers, electrical panels, or emergency stops
Clean up spills immediately using proper materials and wet-floor signage	Don't allow waste, scrap, or excess inventory to accumulate on the floor
Use floor marking tape to define walkways, hazard zones, and storage areas	Don't store materials in overhead areas beyond safe load limits
Store materials and tools in designated locations only	Don't ignore damaged flooring, broken grates, or uneven surfaces
Implement a daily 5S routine (Sort, Set in Order, Shine, Standardize, Sustain)	Don't run cables, hoses, or cords across walkways without proper cable management

DO	DON'T
Ensure floor surfaces are non-slip; apply anti-fatigue matting at standing workstations	Don't allow clutter to build up near machine access points
Conduct weekly housekeeping inspections and document results	Don't neglect the area under and around conveyors and workstations

5. Ergonomics & Workstation Design

OSHA Reference: 29 CFR 1910.900 (Ergonomics), General Duty Clause (Section 5(a)(1))

DO	DON'T
Conduct ergonomic assessments at every workstation and address findings	Don't require sustained awkward postures (bent wrists, twisted trunk, overhead reach)
Provide height-adjustable workstations for workers of varying sizes	Don't ignore early symptoms of musculoskeletal disorders - address them immediately
Position tools and materials within the worker's primary reach zone	Don't set production quotas that force workers to sacrifice safe technique
Use anti-fatigue mats, footrests, and padded edges at standing positions	Don't position monitor screens above eye level or at extreme angles
Implement job rotation to reduce repetitive motion exposure	Don't use hand tools that cause excessive vibration without anti-vibration controls
Use mechanical assists (lift tables, hoists, balancers) for loads over 50 lbs	Don't overlook footwear - inadequate support contributes to fatigue and injury
Train employees on proper lifting technique and body mechanics	Don't place heavy items above shoulder height or below knee height

6. Electrical Safety

OSHA Standards: 29 CFR 1910.303-333 (Electrical), NFPA 70E (Arc Flash)

DO	DON'T
Only allow qualified electricians to perform electrical work	Never perform energized work unless de-energizing creates greater hazard
Complete arc flash hazard analysis and label all electrical panels	Don't use extension cords as permanent wiring solutions
Use GFCI protection on all 120V outlets in wet or damp locations	Don't overload outlets, circuits, or extension cords
Inspect power cords, extension cords, and plugs regularly for damage	Don't store materials in front of or on top of electrical panels
Keep 3 feet of clear space in front of all electrical panels (36" minimum)	Don't use damaged cords - remove them from service immediately
Follow NFPA 70E for arc flash PPE selection when energized work is required	Don't allow unqualified personnel near open electrical panels
Ground all electrical equipment and verify grounding before use	Don't bypass or defeat overcurrent protection devices (breakers, fuses)

7. Fire Safety & Emergency Preparedness

OSHA Standards: 29 CFR 1910.155-165 (Fire Protection), 1910.38 (Emergency Action Plans)

DO	DON'T
Maintain a written Emergency Action Plan (EAP) and review it with all employees	Don't block fire exits with equipment, pallets, or stored materials
Conduct fire drills at least annually; document participation	Don't prop fire doors open - they exist to contain fire and smoke
Inspect fire extinguishers monthly and certify annually by a licensed contractor	Don't allow excessive accumulation of combustible materials (rags, paper, packaging)
Keep sprinkler heads clear of storage - maintain 18" clearance below heads	Don't use improper containers for flammable liquids
Store flammable liquids in approved flammable storage cabinets (FM/UL listed)	Don't neglect hot-work permits - welding and cutting are leading fire ignition sources
Post evacuation routes and assembly points at all exits	Don't disable smoke detectors or sprinkler systems for any reason
Designate and train fire wardens for each area of the facility	Don't assume employees know the EAP - train and drill regularly

8. Forklift & Material Handling Safety

OSHA Standard: 29 CFR 1910.178 (Powered Industrial Trucks)

DO	DON'T
Train and certify all forklift operators before allowing unsupervised operation	Never allow untrained personnel to operate powered industrial trucks
Conduct pre-shift inspections on every powered industrial truck - document results	Don't carry passengers on forklifts not designed for it
Clearly mark forklift lanes and pedestrian walkways with floor tape and signage	Don't exceed rated load capacity or travel with elevated loads
Slow down and sound horn at all blind intersections and building entrances	Don't speed - 5 mph max in most facilities; 3 mph near pedestrians
Keep loads low (6-10") when traveling; tilt mast back for stability	Don't use forklifts to lift people unless using an OSHA-approved work platform
Remove forklifts from service immediately when defects are found	Don't leave a running forklift unattended
Recertify forklift operators every 3 years, or after any incident	Don't turn on ramps or inclines with loads

9. Hazard Communication (HazCom / GHS)

OSHA Standard: 29 CFR 1910.1200 (Hazard Communication), aligned with GHS Rev. 7

DO	DON'T
Maintain a current Safety Data Sheet (SDS) for every hazardous chemical on site	Never transfer chemicals into unlabeled or improperly labeled containers
Make SDS binders or electronic access available to all employees on all shifts	Don't allow SDS documents to become outdated - update within 3 months of revision

DO	DON'T
Ensure all chemical containers are properly labeled (product name, hazard pictograms, signal word)	Don't mix chemicals without verifying compatibility via SDS
Train employees on GHS label elements and how to read an SDS	Don't store incompatible chemicals near each other (acids near bases, oxidizers near flammables)
Include chemical hazards in your written Hazard Communication Program	Don't dispose of chemicals down drains - follow local environmental regulations
Conduct annual HazCom training refreshers when new chemicals are introduced	Don't ignore health symptoms that may be related to chemical exposure
Post emergency response information near areas where hazardous chemicals are used	Don't skip HazCom training for seasonal or temporary workers

OSHA Violation Penalty Reference (2025)

Violation Type	Maximum Penalty (per violation)
Other-than-Serious	\$16,550
Serious	\$16,550
Repeat	\$165,514
Willful	\$165,514
Failure to Abate	\$16,550 per day beyond abatement date

**Penalty amounts are subject to annual adjustment. Consult OSHA.gov for the most current figures.*

How IPS Solutions Support Safety Compliance

Industrial Profile Systems' T-slot aluminum extrusion products are purpose-built for industrial safety environments. Safety Guarding systems - including modular fence panels, corner and middle posts, angle brackets, safety hangers, and hinged access doors - make it easy to build OSHA-compliant barriers around machines and work cells. Paired with SensaGuard interlock switches, light curtains, and GuardLink taps, IPS creates complete safety ecosystems that protect workers and support regulatory requirements.

Ergonomic Workstations are engineered for long-term workplace comfort, helping reduce fatigue and musculoskeletal injury risk. Machine Enclosures, Robot Base Frames, and Conveyors are designed with safety as a first principle - modular, adaptable, and built to last in demanding industrial environments.

Need help designing a safety-compliant layout? IPS offers no-cost engineering support with every order.

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