

Warehousing and Storage

There are approximately 2,100 employers with 162,000 employees working in warehousing, storage facilities and distribution centers in California. These are employers that primarily operate warehousing and storage facilities for general merchandise, refrigerated goods, and other warehouse products. They generally do not sell the goods they handle. These facilities may also provide logistical services that include distribution, labeling, inventory control and management, light assembly, order entry and fulfillment, packaging, and transport arrangement.

Why should employers be concerned?

Warehousing operations can expose employees to a wide variety of hazards that result in fatalities and serious injuries or illnesses. A leading cause of injuries in some warehousing operations is the improper implementation of a process quota system.

Warehousing and Storage (NAICS Code #493) was on Cal/OSHA's 2021-2022 High Hazard Industry List, with an average DART (Days Away, Restricted or Transferred) rate of 4.8 recordable injuries and illnesses per 100 full-time employees.

Between January 2019 and December 2021, Cal/OSHA conducted approximately 450 warehouse inspections. Of those:

- 32% were accident investigations where an employee suffered a fatality or serious injury or illness.
- 35% were in response to an employee filing a workplace safety or health complaint.
- 32% were conducted because warehousing is on Cal/OSHA's High Hazard Industry List.



Warehouses have also experienced one of the highest rates of COVID-19 outbreaks per establishment.

The most common hazards and resulting injuries and illnesses:

- **Material handling.** Overexertion in lifting and lowering, and repetitive motion. Warehouses have the highest musculoskeletal injury rates of any industry. By speeding up a process, robotics can also increase employee repetitive motion injury risks.
- **Excessive heat.** Many employees are exposed to temperatures above 82°F while working indoors.
- **Powered industrial trucks (e.g., forklifts), robotics, and other material handling equipment.** Being struck by or crushed.
- **Hazardous chemicals.** Employee exposures to container leaks/spills, and corrosive liquids present in battery-operated equipment.
- **Slips/trips/falls.** Besides uneven and slippery surfaces, employees are frequently exposed to falls from elevated locations.
- **Pallets.** Not wrapped or stacked properly.
- **Blocked aisles and exits.** Inadequate housekeeping.

What do employers need to do?

Injury and Illness Prevention Program

([section 3203](#)). This is the most important requirement that all employers must address in their workplaces. Section 3203 details what this program must consist of, and Cal/OSHA has developed the following guidance to help employers ensure that their program is effectively developed and implemented:

- [Guide to Developing Your Workplace Injury & Illness Prevention Program](#)
- [Injury & Illness Prevention Program for High Hazard Employers](#)

Dual employers. Warehousing employers that utilize outside staffing agencies (e.g., temporary employment agencies, staffing firms, employee-leasing companies) typically create a dual-employer situation. This commonly requires both employers to implement their respective Injury and Illness Prevention Programs in a manner that ensures the outsourced employees are protected along with the regular warehouse employees. Refer to the Cal/OSHA Policy & Procedure [C-1D](#) for details.

Foot protection ([section 3385](#)). Foot protection is required for employees who are exposed to foot injuries from hazards such as falling objects, crushing or penetrating actions. Foot protection for employee use must meet American Society for Testing and Materials (ASTM) F 2412-05 and ASTM F 2413-05 requirements.



Forklifts and other powered industrial trucks (sections [3650](#), [3662](#), [3664](#), [3668](#), [5146](#), [5155](#), and [5164](#)). Serious injury, illness, or death can result if:

- Employees are not properly trained on the specific types of equipment they are expected to operate.
- Policies on proper equipment operations are not enforced.
- The equipment is not properly maintained.
- Adequate ventilation controls are not implemented to control exhaust emissions, such as carbon monoxide and exhaust particulates, from industrial trucks powered by internal combustion engines.

Storage batteries ([section 5185](#)). Battery-powered trucks also pose serious fire and chemical burn hazards if they are not handled, charged, and maintained properly.

Reporting work-related fatalities and serious injuries ([section 342](#)). Employers must immediately report to Cal/OSHA any serious injury or illness (defined in [section 330\(h\)](#)), or death of an employee occurring in a place of employment or in connection with any employment.

Portable fire extinguishers ([section 6151](#)). Proper placement, use, employee training, maintenance, and testing of portable fire extinguishers is necessary when they are provided for employee use.

Air tank operating permits ([section 461](#)). An air tank, such as those used with a compressor, must not be operated unless a current permit has been issued. The permit must be posted in a conspicuous place in a weather-proof container on or near the air tank. Check with Cal/OSHA's [Pressure Vessel Unit](#) for additional information.

Emergency eyewash and shower equipment ([section 5162](#)). Some batteries contain corrosive ingredients. Employees can experience eye and/or skin contact during maintenance and charging procedures, and suffer blindness or serious burns. In addition to wearing appropriate personal protective equipment (gloves, splash goggles, etc.), an emergency eyewash and shower that

meets ANSI Z358.1-1981 requirements needs to be near where exposures can occur.

Heat illness prevention in outdoor places of employment (section 3395). Employers must implement an effective Heat Illness Prevention Plan for all employees working outdoors where exposure to the risk of heat illness can be reasonably anticipated. This plan must contain procedures for the provision of water and access to shade; emergency response procedures; and acclimatization methods and procedures. Employees and their supervisors must be effectively trained on these procedures; the warning signs of heat stress; environmental and personal risk factors; and the importance of adequate water consumption and acclimatization.



Indoor heat (section 3396). There can also be significant warehouse worker exposure to excessive heat indoors. When the temperature or heat index reaches 82°F, employers must implement adequate measures that include:

- Procedures for the provision of water.
- Cool-down breaks.
- Air-conditioned rooms or areas for employees to rest.
- Emergency response procedures.
- Acclimatization methods and procedures.
- Training.

Employers must also use engineering controls, such as air conditioning or ventilation, to cool down the work environment if any of the following conditions exist:

- Temperature or heat index reaches 87°F.
- Employees wear clothing that restricts heat removal and temperatures reach 82°F.
- Employees work in a high-radiant heat area and the temperature reaches 82°F.

Additional cooling measures are needed for work in trailers on warm and hot days as temperatures inside can be much higher than outdoors.

Repetitive motion injuries (section 5110).

Employees performing a repetitive job, process, or operation are at risk of incurring repetitive motion injuries (RMIs). Employers covered by section 5110 must develop and implement a program designed to minimize RMIs that includes a worksite evaluation and implementation of control measures such as engineering controls (e.g., workstation redesign, adjustable fixtures, and tools) and administrative controls (e.g., job rotation and work pacing). Besides repetitive motion, warehouse employees can also be exposed to other ergonomic hazards such as heavy or awkward lifting, awkward postures, and high hand forces (e.g., pinch-gripping). Although not necessarily highly repetitive, these hazards can result in serious muscular skeletal injuries and should be controlled.

COVID-19 (section 3205). Prescribed control measures must continue to be implemented where necessary. Given the impact of the current pandemic and the potential risks of future pandemics, employers should always be prepared to do what is necessary to control the spread of infectious diseases within their workplace.

Workplace violence (Labor Code 6401.9).

Employers must be aware that violent incidents can occur at any workplace, including warehouses. Acts of workplace violence can be committed by current and former employees and supervisors, relatives, loved ones, or people who have no legitimate business being at the warehouse. Employers must take employees' reports on workplace violence incidents and respond appropriately. They must also keep a workplace violence incident log.

Warehouse quotas (AB 701 FAQ). Employers can still use quotas, but AB 701 places limits on them. AB 701 went into effect January 1, 2022 and creates 13 new sections of the California Labor Code regulating the use of quotas by “Warehouse Distributions Centers.” These include general warehousing and storage (NAICS 49310), durable goods merchant wholesalers (NAICS 423), nondurable goods merchant wholesalers (NAICS 424), and electronic shopping and mail-order houses (NAICS 454110). The law covers employers who directly or indirectly control 100 or more employees at a single warehouse distribution center or 1,000 or more employees at one or more warehouse distribution centers in California. Employees provided by outside staffing agencies may also be included where the employer controls the terms and conditions of employment for those employees. Increased work rates resulting from quotas can result in substantial increases in all types of injury and illness rates.

Most of the above hazards also represent the top-ten most cited Cal/OSHA violations (2019 through 2021) issued to warehousing employers. Be sure to read the corresponding T8 CCR regulations listed above for details on what is required. Half of these hazards also resulted in some of the largest fines that Cal/OSHA issued to warehousing and storage employers.

This fact sheet only provides an overview — it does not include all Cal/OSHA requirements that might pertain to warehousing and storage facilities. The information provided is not meant as a substitute for or legal interpretation of the occupational safety and health regulations. Employers are advised to refer directly to Title 8 California Code of Regulations (**T8CCR**) for detailed information applicable to their operations.

Resources

Cal/OSHA

For additional assistance, contact Cal/OSHA Consultation Services at 1-800-963-9424, InfoCons@dir.ca.gov, or www.dir.ca.gov/dosh/consultation.html, and other publications at www.dir.ca.gov/dosh/PubOrder.asp.

Fed/OSHA

- Safety and Health Topic: **Warehousing**
- Pocket Guide: **Warehousing**
- **eTools Grocery Warehousing:**
 - **Transport Techniques**
 - **Work Practice**
 - **Storage**
 - **Packaging**

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This document is available with active links at www.dir.ca.gov/dosh/dosh_publications
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