



Conveyor Safety Labeling

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Safety labeling is an integral part of conveyor design, manufacture and implementation. Safety comes in many forms, but from a general perspective, accident prevention is where safety begins. And this is a critical point, especially when you consider all the possible points of injury on a typical conveyor.

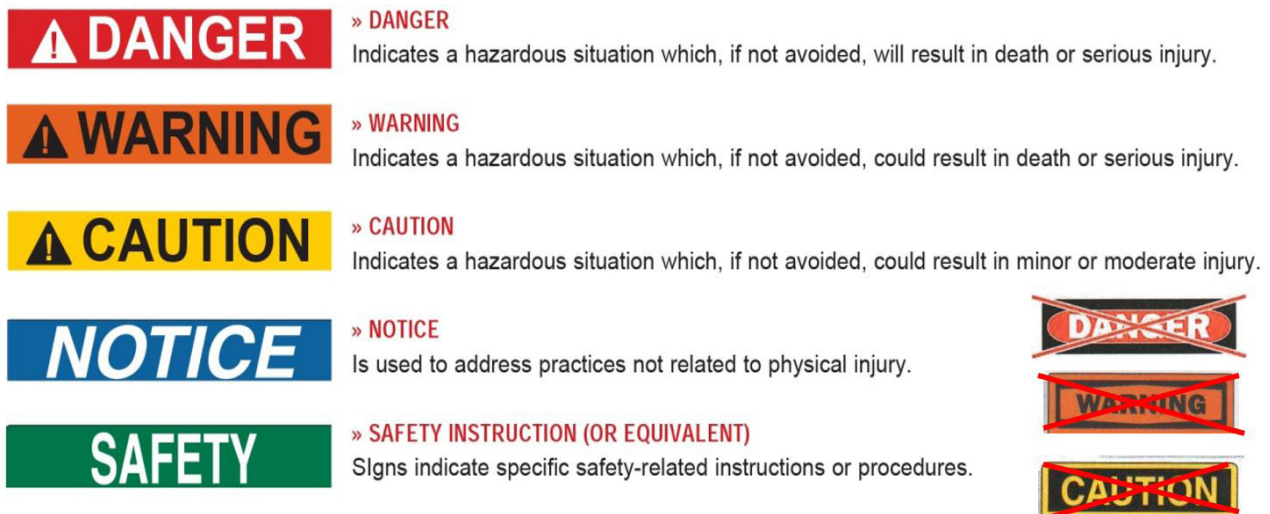
If that's not enough to raise eyebrows, last year, OSHA fines continued to rise, which are compounded for every day a company fails to correct the violation. Complying with ANSI and OSHA requirements makes "getting it right" all that much more important.

Today, there is a perception that safety labeling is well established, that no new information affects what is already being implemented or enforced. Many conveyor designers and manufacturers, when confronted with the codes and the reason for the label requirements, are the first to admit they either do not label properly 100 percent of the time or are ignoring key code requirements. Design engineers and safety managers

are often lulled into a false sense of security when it comes to labeling equipment. This puts them and the companies they represent both financially and physically at risk.

Safety labeling needn't be a mystery. Of course, it does help if your supplier can lend support in terms of verbiage, visuals and what labels are needed where. The design is more than a matter of word choice. It must comply with ANSI Z535.4, which defines the signal word text (Danger, Warning, Caution, Notice and Safety) along with the colors and newly required safety alert symbol. The old-style designs that did not include the safety alert symbol were made obsolete in 2002.

Figure 1 Required safety alert symbol



Once the format is selected, someone must determine the level of hazard. Danger, for example, is reserved for situations that are likely to cause death or serious injury, while Caution is reserved for situations that could cause minor to moderate injury. That said, making this decision is somewhat subjective though critical. You, as the manufacturer, are ultimately responsible for ensuring the equipment you manufacture, install or service has proper labeling. OSHA 29 U.S.C 654.5(a)1 says:

“Each employer shall 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.”

This doesn't mean that once the equipment is installed, additional labels won't be needed. In many cases, additional labeling is required based on post-installation audits.

Code compliance is made more complex considering all the various sources of information defining proper labeling. In addition to the newer National Electrical Codes, such as NEC 2020/2023, customers must also consider OSHA, ANSI and NFPA as well as UL for labeling requirements and specifications.

Given the seriousness of the issue, effectively communicating safety threats is only part of the challenge. Learning to recognize potential hazards in unique applications is yet another. When auditing your own facility, here are some things to consider for safety labeling:

WHO TO WARN

The warning must affect the behavior of:

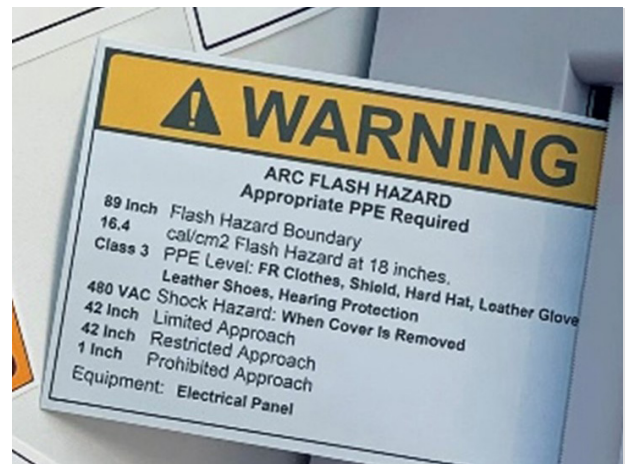
- Foreseeable users of the product
- Those endangered by a product's use
- Purchasers, installers, employees
- Advisers, trainers, supervisors



DUTY TO WARN

Manufacturer/supplier MUST warn if:

- The product is dangerous without the warning.
- The degree of danger is or should be known to the manufacturer/supplier.
- The specific danger is not obvious, known to or readily discernible to the user.
- Danger arises during a foreseeable use (or misuse) of the product.
- Equipment is typically manufactured and tested as a fully operational component at the factory.
- Temporary Arc Flash warnings are required when the conveyor is connected to internal power during debug and test.
- Temporary Arc Flash warnings must be removed when the equipment is disassembled for shipment to the customer.
- Labels with temporary adhesives are available that ensure the temporary warnings stay in place until removed and then can be removed without leaving adhesive residue.



WHEN TO DESIGN

The manufacturer should incorporate needed labels as part of the design.

- Should be designed during the product development process, not as an afterthought.
- Must be designed with all users in mind.
- Product design must have provision for affixing the Warning signs.



OSHA STANDARDS ARE GENERIC

OSHA does not specify technical aspects of signs such as sign size, font size or placement on the sign. It is your responsibility to ensure the equipment you manufacture, install or service has proper labeling.

OSHA 1910.145(e)(2) states: *"The wording of any sign should be easily read and concise. The sign should contain sufficient information to be easily understood. The wording should make a positive, rather than negative suggestion and should be accurate in fact."*

ANSI CODES ARE SPECIFIC

- Where applicable, ANSI (American National Standards Institute) standards should be followed.
- ANSI is the most common standard used to specify formats, colors and symbols for safety signs.
- EXAMPLE: The ANSI standard would go into detail on sign classification, signal words and symbols and how to design the sign.

Some common examples of basic signage are listed below.

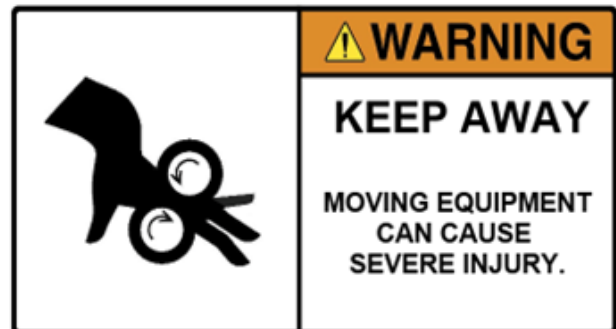
1. Labels should not be hidden under channel covers.
2. Signs must be clearly visible.
3. Keep ALL warning labels clean and clear of any obstructions.
4. Motor rollers can become hot! Label accordingly.
5. Workplace and traffic routes may require additional protections/guarding/labeling if near hazardous equipment.
6. Warn if equipment can start and stop without warning.



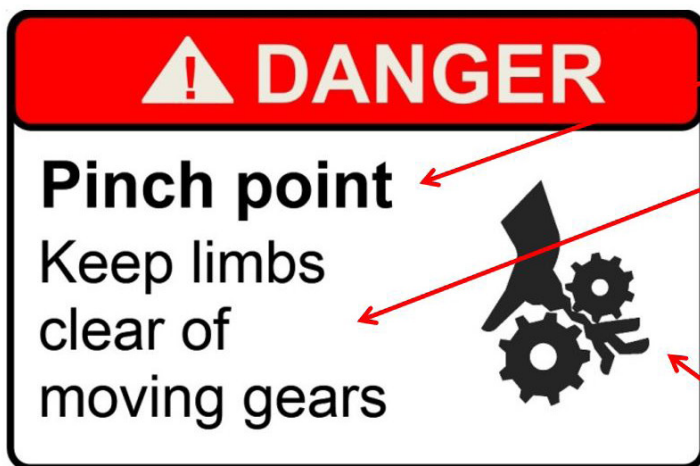
7. Employees who encounter the equipment must be warned of the dangers of an unexpected start. Hands can be crushed between products or products and channel.



8. As with all powered machinery, the drive-related components – including sprockets, chains, shafts, universal joints and pneumatic devices – can be dangerous. Use guards to prevent accidental contact with these parts along with warning labels to identify the hazards.



ANSI LABEL DESIGN EXAMPLE



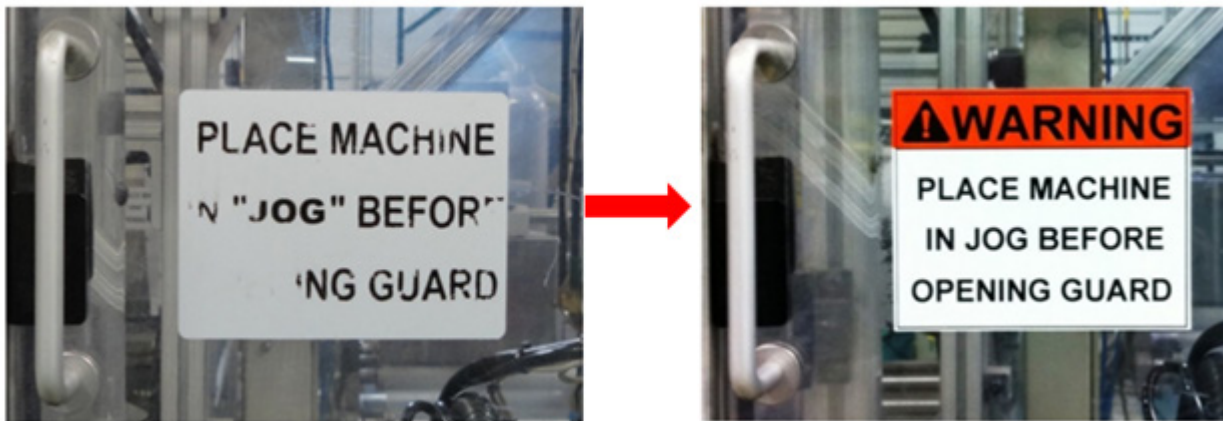
Identify the hazard

How to avoid the hazard

Consequence of not avoiding the hazard

There is much to consider. Finding the right tools to help manage the constant changes, updates and new signage is a never-ending task. Remember, this is not a one and done procedure. The responsibility of communicating hazards in and around the conveyor is a constant challenge and more than justifies the development of a continuous improvement program. It's when you finally think your signage is up to date that accidents happen, so maintaining a consistent policy on safety is critical.

For example, signage must be maintained and replaced if damaged or worn out per ANSI Z535.4 Article 10.2.2.



In summary, don't rely as much on your own knowledge, but leverage the knowledge of the many experts as possible by taking advantage of any tools, procedures or tips that can augment your routine or challenge your own perceptions. If you are unsure, get a set of fresh eyes to review the situation. If you don't by the time you realize it, it will be too late and no excuse; OSHA does not accept excuses, will relieve you of the financial and personal loss that could result from relying on inadequate or faulty assumptions.

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About HellermannTyton

HellermannTyton is a global manufacturer of identification, cable management and connectivity solutions for the commercial data, telecommunications, OEM and industrial markets. HellermannTyton offers an integrated approach to design, operation and delivery to optimize service and solutions for local and global customers. The company's engineered solutions and innovative products are designed and constructed to meet the strictest quality standards while delivering reliable implementation at the lowest cost.

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