Warnings That Work: Four Keys to Effective Warnings

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Warning! Do not attempt to iron clothes while wearing them.
Warning! Do not use microwave to dry pets.
Warning! Remove baby from stroller before folding for storage.

Warnings like these (all real) suggest that manufacturers need such patently silly warnings to "idiot-proof" their products and protect against liability. But do they? How do you know when to warn and what kind of warning to use? Is there any real guidance that a manufacturer can rely on? The answer is a qualified *yes.* While no one can predict with absolute certainty how a jury will act, product liability law suggests that four principles should guide you in developing and evaluating your company's warnings:

- Analyze the hazards first.
- Warn only as a last resort.
- Meet standards.
- Test your warnings.

Analyze the Hazards First

The law says a manufacturer has a duty to warn of foreseeable hazards that are not open and obvious. Determining foreseeability is not always easy, but the standard is "reasonableness," not perfection. You don't have to warn against every imaginable misuse of a product (folding up the baby in the stroller)—only those that are reasonably foreseeable.

Most manufacturers put too many warnings on their product, rather than too few. A good example is the original label on a free-standing basketball hoop: it listed nearly a dozen warnings in small print, one of which was not to place the hoop in the street, where players could be hit by cars. Too many warnings detract attention from the important ones and cause users to glaze over and stop reading. How do you decide when to warn? Analyze your product's hazards in terms of these two issues:

- Likelihood of occurrence
- Seriousness of injury

Focus your warnings on those non-obvious hazards that are likely to occur and that could cause serious injury. After such an analysis, the label on the

basketball hoop was reduced to only two warnings—which could be made bigger and more visible, and therefore more likely to be read and heeded.

Warn Only as a Last Resort

Good engineering practice teaches a hierarchy of responses to identified hazards:

1. Design the hazard out.
2. Shield or guard the hazard.
3. Warn against the hazard.

The best warning in the world cannot fix a bad design—and won't protect a company from liability for a defectively designed product. Warnings should be reserved for residual hazards—those that cannot be eliminated by other means. For this reason, it's a good idea to conduct a hazard analysis in the early stages of product development, and to repeat it every time the design changes. It's a lot easier to fix a design problem when the product is still in the form of engineering drawings than when it's already being fabricated.

Include some non-engineers in the hazard analysis, and maybe even bring in someone from outside the company. More than once, I have visited a plant to consult about product warnings only to point out a design problem that no one in the company had recognized—not because I'm especially astute, but simply because I looked at the product from a different perspective. The more hazards you can eliminate with a safer design, the better.

Meet Standards

Standards for warnings vary among products. Some, such as most government-issued standards, are mandatory and have the force of law. An example is the warning on the driver's visor of SUVs addressing rollover potential. Other standards, such as those developed by industry associations in concert with standards organizations such as the American National Standards Institute (ANSI) are typically voluntary—compliance is not mandatory, but manufacturers do comply because the standards represent "best practices" in a particular industry. Or certain warnings may be required to gain a certification, such as Underwriters Laboratories (UL) approval. In some cases, there may be no written standards, but a standard of practice has emerged in a particular industry. For example, almost every hammer manufacturer puts a warning on the handle reminding users to wear safety goggles.

Standards may require certain wording and/or a certain format. If no format is specified, the ANSI Z535.4 standard for Product Safety Signs and Labels[1] is a good choice to follow. It is widely used in many different industries, and its red,

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[1] ANSI Z-535.4-2002 is available from Global Engineering Documents at http://global.ihs.com.

orange, and yellow DANGER, WARNING, and CAUTION labels are familiar to almost everyone.

Meeting standards is not a guarantee that your warning is liability-proof—but it *is* often seen as a minimum requirement.

Test Your Warnings

An effective warning tells the user what the hazard is, what to do to avoid the hazard, and what could happen if the warning is ignored. In other words, an adequate warning gives the user the information he or she needs to stay safe. But how can you be sure your warnings will be understood?

One way is to test them. Like product usability testing, warnings testing can be elaborate or not. Even a simple test such as showing two user groups different versions of a warning and then asking them open-ended questions about what the hazard was, how to avoid it, and what could happen if they ignored the warning should tell you a lot. Such testing not only will give you good information, but it can also help if the adequacy of your warning is ever at issue in a lawsuit. The jury will see that you went to some effort to protect your users— and chose your warnings based on what worked.

Products liability law is a difficult and complex area, even for lawyers. As yet there is no bright-line rule to use in judging the adequacy of a warning:

> "No easy guideline exists for courts to adopt in assessing the adequacy of product warnings and instructions…courts must focus on various factors, such as content and comprehensibility, intensity of expression, and the characteristics of expected user groups."[2]

Effective warnings promote safe use of your products and reduce injuries—and lawsuits. Following the guidelines presented here will help you design warnings that work.

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[2] *Restatement of the Law Third, Torts: Product Liability,* American Law Institute Publishers, St. Paul, MN 1998, Section 2, Comment I, p. 29.