



THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING

WAIT, WHAT?

**Safety Training Materials That Everyone
Can Understand**

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Communications Research Manager

Safety Training Materials That Everyone Can Understand

What We'll Discuss:

1. What are **readability** and **suitability**?
2. **4 big questions** to answer **before** you start writing
3. **3 major tips** to use **when** you are writing
4. **Tools and resources** that can help you prepare safety training materials your audience will understand

Readability

MAINTENANCE AND REPAIR: Tenant will, at Tenant's sole expense, keep and maintain the Premises in good, clean and sanitary condition and repair during the term of this Lease and any renewal thereof. Tenant shall be responsible to make all repairs to the Premises, fixtures, appliances and equipment therein that may have been damaged by Tenant's misuse, waste or neglect, or that of the Tenant's family, agents or visitors. Tenant agrees that no painting will be done on or about the Premises without the prior written consent of Landlord. Tenant shall promptly notify Landlord of any damage, defect or destruction of the Premises or in the event of the failure of any of the appliances or equipment. Landlord will use its best efforts to repair or replace any such damaged or defective areas, appliances or equipment.

**Readability: How
NOT to do it**

- **Is the vocabulary too difficult for some or all of the audience?**
- **Are the sentences long and hard to follow?**

Suitability

- Does the format and layout make the main message easy to find?
- Does it look like a lot of work to read?
- Do illustrations help drive home the message?
- Is there a clear and specific call to action?

HAZARD ALERT

LADDERS



Am I in danger?

If you use a ladder on a construction site, then the answer is **YES**.

Falls are the leading cause of deaths and injuries in the construction industry.

- Each year, more than 4,000 construction workers are injured so seriously by ladder falls that they miss work.
- Each year, about 70 construction workers DIE in falls from ladders.



Electrocution Hazard

Falls aren't the only way to get hurt on a ladder!

Contact with overhead power lines is a common, and sometimes fatal, source of injury for those working with ladders. Make sure your ladder is positioned at least 10 feet from power lines.

Aluminum is an excellent conductor of electricity. Working around wiring? Fiberglass is a better choice.



A partner was electrocuted when meeting a metal ladder on the job site.

To avoid a fall ...

1 Inspect the ladder before every use

Inspect the rails, rungs, feet, and spreaders or rung locks of your ladder for defects or damage **every time** you use it. If you see any damage, **tag it "do not use"** and request another ladder in proper working order. And check your ladder's duty rating – certain ladders may not support you and your toolbox!



Not every defect is this obvious

2 Position your ladder properly

For all ladders:

- Make sure you have level, solid footing for your ladder.
- Position the ladder near your work to avoid overreaching.

For extension ladders:

- Set the base one foot away from the building for every four feet of height.
- Tie off the ladder at the top – and bottom where possible!



The minute you take to tie off could save your life

3 Use the ladder safely

- Maintain three-point contact with the ladder at all times.
- Do not stand on the top two rungs of a stepladder, or the top four rungs of an extension ladder.
- Have your partner hold the ladder to steady it as you ascend.
- **Don't carry tools and materials while climbing. Use a rope to haul or hoist materials to the upper level!**



Find out more about construction hazards.

Get more of these Hazard Alert cards – and cards on other topics.

Call 301-578-8500

Is a ladder the right tool for the job?

For work at heights, consider using a scaffold or aerial lift. The wider work platform and guard rails can substantially reduce your risk of falls.



If you think you are in danger:

Evacuate your equipment. Contact your union.

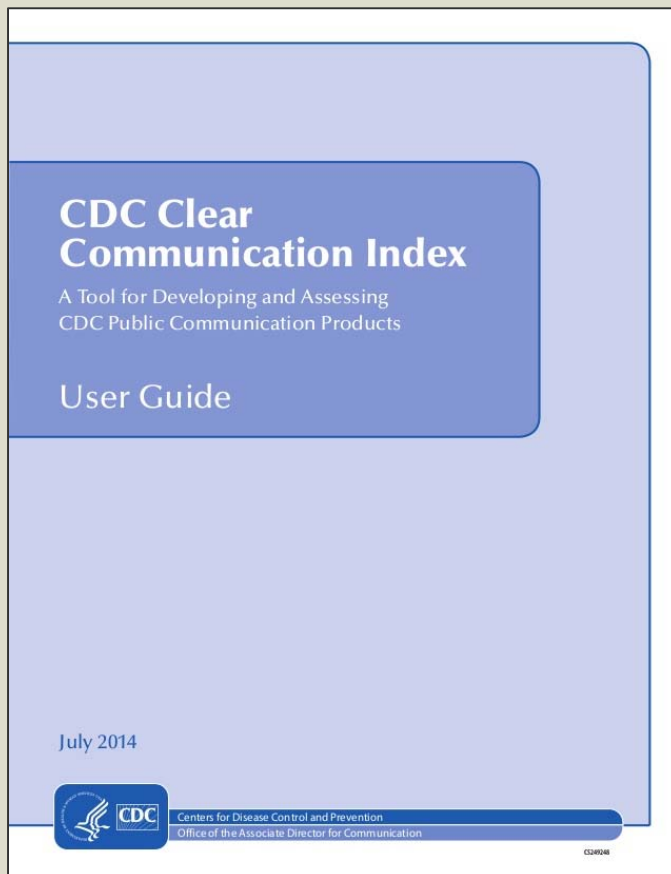
Call OSHA

1-800-321-OSHA

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www.cpwrt.com

Tools to Assess Readability and Suitability



CDC Clear Communication Index Score Sheet

Using the Score Sheet
The Index has a total of 20 items in 4 parts. These 20 items are presented as questions.

- Questions 1-11 in Part A apply to all materials.
- Questions 12-20 in Parts B, C, and D may not apply to all materials.
- Choose one answer for each item you score.
- Only score a point when all instances of an item in the material meet the criteria.

More detailed descriptions and examples of each item can be found in the User Guide.

Part A: Core
The items in this section (1-11) apply to all materials.

Questions	Score (Check one per question)
Main Message and Call to Action	
1. Does the material contain one main message statement? <i>A main message is the one thing you want to communicate to a person or group that they must remember. A topic, such as heart disease or seasonal flu, isn't a main message statement. If the material contains several messages and no main message, answer no. (User Guide page 5)</i> NOTE: If you answered No to Question 1, score 0 for Questions 2-4 and continue to Question 5.	<input type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0
2. Is the main message at the top, beginning, or front of the material? <i>The main message must be in the first paragraph or section. A section is a block of text between headings. For a Web material, the first section must be fully visible without scrolling. (User Guide page 6)</i>	<input type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0
3. Is the main message emphasized with visual cues? <i>If the main message is emphasized with font, color, shapes, lines, arrows or headings, such as "What you need to know," answer yes. (User Guide page 7)</i>	<input type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0
4. Does the material contain at least one visual that conveys or supports the main message? <i>For example, count photographs, line drawings, graphs and infographics as visuals. If the visual doesn't have a caption or label, answer no. If the visual has human figures who aren't performing the recommended behaviors, answer no. (User Guide page 8)</i>	<input type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0
5. Does the material include one or more calls to action for the primary audience? <i>If the material includes a specific behavioral recommendation, a prompt to get more information, a request to share information with someone else, or a broad call for program or policy change, answer yes. If the call to action is for someone other than the primary audience, answer no. (User Guide page 10)</i>	<input type="checkbox"/> Yes = 1 <input type="checkbox"/> No = 0
Save Form	Next Page

2 Office of the Associate Director for Communication Revised July 2014

DOES IT WORK?

Heat Stress in Construction Hazard Alert



Heat is a serious hazard in construction. Your body builds up heat when you work and sweats to get rid of extra heat. But sometimes your body may not cool off fast enough. This can happen if you are up on a roof pouring hot asphalt or you are lifting heavy loads.

Too much heat can make you tired, hurt your job performance, and increase your chance of injury. You can get skin rash. You can also get:

- **Dehydration.** When your body loses water, you can't cool off fast enough. You feel thirsty and weak.
- **Cramps.** You can get muscle cramps from the heat even after you leave work.
- **Heat exhaustion.** You feel tired, nauseous, headachy, and giddy (dizzy and silly). Your skin is damp and can look muddy or flushed. You may faint.



YES!

When we asked the apprentices what the card's **MAIN MESSAGE** was, readers of the new card were...

- **Three times as likely** to mention taking breaks in the shade on hot days
- **Three times as likely** to mention drinking water frequently
- **Four times as likely** to mention wearing light, breathable clothes in hot weather



**How can I make sure MY training materials
are communicating my message clearly?**



The “Big Four” Questions

1. WHO is your primary audience?

SAFETY DATA SHEET	
<small>Effective Date: 06/12/2015 Replaces 05/01/2012</small>	
Ready Mix Concrete	
1. Identification	
Product name: Ready Mix Concrete Other names of identification/Trade Name/Company Name: Freshly Mixed Unadorned Concrete Recommended use: Ready Mix Concrete is used as a construction material. Recommended restrictions: None known Manufacturer (Contact) info: Vulcan Materials Company and its subsidiaries and affiliates 1200 Urban Center Drive Birmingham, AL 35242	
General Phone Number: 1.866.401.3424 Emergency Phone Number: 1.866.401.3424 (24 Hour Company, 24hours/Day, 7 Days/week) Website: www.vulcanmaterials.com	
2. Hazard(s) Identification	
Physical hazard: Not Classified Signal word: Danger	Health hazard: Skin corrosion/Irritation-Category 1B Serious eye damage/Eye Irritation-Category 1 Carcinogenicity-Category 1A Specific target organ toxicity, single exposure- Category 3 Specific target organ toxicity, repeated exposure- Category 2
	
Hazard statement: Causes severe skin burns and eye damage Causes serious eye damage May cause cancer (Inhalation) May cause respiratory irritation May cause damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation)	
Precautionary statement: Prevention <ul style="list-style-type: none"> • Observe special instructions before use. Do not breathe until all safety precautions have been read and understood. • Do not breathe dust, fume, or vapors. Use only outdoors or in a well ventilated area. • Wash hands thoroughly after handling. • Use personal protective equipment as required. Wear protective gloves, protective clothing, eye protection, and face protection. Response	
06/01/2015	READY MIX CONCRETE - Page 3 of 8



The “Big Four” Questions

- **WHO** is your primary audience?
- **WHAT** do you know about their reading skills and background knowledge?



The “Big Four” Questions

- **WHO** is your primary audience?
- **WHAT** do you know about their reading skills and background knowledge?
- **WHAT** do you want your audience to do?

SAFETY DATA SHEET	
Effective Date: 06/02/2015 Replaces: 06/02/2012	
Ready Mix Concrete	
1. Identification	
Product name: Ready Mix Concrete	
Other names of identification (synonyms/aliases): Freshly Mixed Unhardened Concrete	
Recommended use: Ready Mix Concrete is used as a construction material.	
Recommended restrictions: None known	
Manufacturer/Supplier: Vulcan Materials Company and its subsidiaries and affiliates 1200 Oakman Center Drive Birmingham, AL 35242	
Emergency Phone Number: 1.866.403.5424 Emergency Phone Number: 1.866.403.5424 (24 Hours/Day, 7 Days/Week)	
Website: www.vulcanmaterials.com	
2. Hazard(s) Identification	
Hazard classes: Not Classified	
Signal word: Danger	
Health hazard: Skin corrosion/irritation - Category 1B Serious eye damage/eye irritation - Category 1 Carcinogenicity - Category 1A Specific target organ toxicity, single exposure - Category 3 Specific target organ toxicity, repeated exposure - Category 2	
  	
<p>Hazard Statement: Causes severe skin burns and eye damage Causes serious eye damage May cause cancer (inhalation) May cause respiratory irritation May cause damage to organs (respiratory system) through prolonged or repeated exposure (inhalation)</p> <p>Precautionary Statement: Do not breathe dust, fume, or vapor. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Use personal protective equipment as required. Wear protective gloves, protective clothing, eye protection, and face protection.</p> <p>Response:</p>	
06/02/2015 READY MIX CONCRETE - Page 1 of 8 305-43239-005	



The “Big Four” Questions

- **WHO** is your primary audience?
- **WHAT** do you know about their reading skills?
- **WHAT** do you want your audience to do?
- **WHAT** is your main message statement?



Main message statement



Each year, thousands of workers get sick from heat exhaustion and heat stroke. Some even die. **But you can protect yourself and feel better as you work by dressing for hot conditions and taking frequent breaks for water and shade.**

The “Big Four” Questions

- WHO is your primary audience? *Construction workers who work in hot conditions*
- WHAT do you know about their reading skills? *About 25% of them have limited English-language reading skills*
- WHAT do you want your audience to do? *Protect themselves by dressing for the weather, drinking water, and taking breaks in cool or shaded areas*
- WHAT is your main message statement? *Each year, thousands of workers get sick from heat exhaustion and heat stroke. Some even die. But you can protect yourself and feel better as you work by dressing for hot conditions and taking frequent breaks for water and shade.*

Tip #1: Keep Focused



1. Main Message
2. Call to Action
3. There's no #3

Tip #1: Keep Focused

Heat Stress in Construction Hazard Alert



Heat is a serious hazard in construction. Your body builds up heat when you work and sweats to get rid of extra heat. But sometimes your body may not cool off fast enough. This can happen if you are up on a roof pouring hot asphalt or you are lifting heavy loads.

Too much heat can make you tired, hurt your job performance, and increase your chance of injury. You can get skin rash. You can also get:

- **Dehydration.** When your body loses water, you can't cool off fast enough. You feel thirsty and weak.
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- **Heat exhaustion.** You feel tired, nauseous, headachy, and giddy (dizzy and silly). Your skin is damp and can look muddy or flushed. You may faint.

Am I in danger?

OSHA says that each year, thousands of workers get sick from heat exhaustion or heat stroke. **Some even die.**

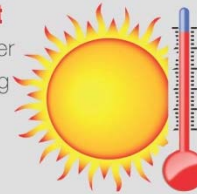
You are at risk if you:

- ▶ Work in hot and humid conditions;
- ▶ Do heavy physical labor; and
- ▶ Don't drink enough water.

This risk is greater for workers who are not used to the heat.

But you can protect yourself

and feel better as you work by dressing for hot conditions and taking frequent breaks for water and shade.



Source: <https://www.osha.gov/SLTC/heatstress/>

Tip #2: Start with a Summary

Heat Stress in Construction Hazard Alert



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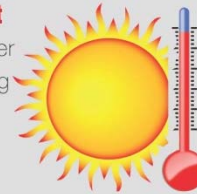
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Tip #3: Use Subheadings

Heat Stress in Construction Hazard Alert



Heat is a serious hazard in construction. Your body builds up heat when you work and sweats to get rid of extra heat. But sometimes your body may not cool off fast enough. This can happen if you are up on a roof pouring hot asphalt or you are lifting heavy loads.

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PROTECT YOURSELF!

1 Dress for hot conditions

Wear clothes that are:

- ▶ Light-colored (white, etc.)
- ▶ Loose-fitting
- ▶ Lightweight

Wearing heavy protective clothing or personal protective equipment may increase your risk—you may need more frequent breaks for rest and water.



2 Drink Water

Drink water every 15 minutes when working in hot conditions.

DO NOT wait until you are thirsty to drink water.

DO NOT drink alcohol and **AVOID** caffeine.



PHOTO COURTESY OF CAL-OSHA

3 Take Breaks

Take frequent rest breaks in shaded, cooled or air-conditioned areas.

If you see a co-worker with symptoms of **Heat Exhaustion**, speak up.


If you see a co-worker with symptoms of **Heat Stroke**, seek medical attention immediately!



PHOTO COURTESY OF NEIL LIPPY

Tip #3: Use Subheadings

**Heat Stress in Construction
Hazard Alert**

 **CPWR**

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PHOTO COURTESY OF CAL OSHA

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PHOTO COURTESY OF CAL OSHA

Workers who received the new card were....

- **3x as likely** to mention taking breaks in the shade on hot days
- **3x as likely** to mention drinking water frequently
- **4x as likely** to mention wearing light, breathable clothes in hot weather

Resources to Improve Your OSH Training Materials

- Readability Calculators (here's one: <https://www.online-utility.org>)
- The CDC Clear Communication Index (<https://www.cdc.gov/ccindex/index.html>)
- Everyday Words for Public Health Communication (<https://www.cdc.gov/ccindex/index.html>)
- Clear Writing for a Construction Audience (<https://www.cpwr.com/sites/default/files/publications/Clear-Writing-for-a-Construction-Worker-Audience.pdf>)
- **YOUR INTENDED AUDIENCE!**

Clear Writing for a Construction Audience

When creating materials for a construction audience, it's not enough to be technically correct – you must also make sure your message is compelling and accessible to your target audience. Keep in mind that contractors, trainers, and workers may not have time to read a complex document, and the construction labor force includes workers who may have limited English language reading proficiency. Health communications researchers have identified a number of practices you can use to develop materials your audience can understand, remember, and act on.

Before You Begin Writing, Answer Four Key Questions...

You should be able to identify your primary audience in just a few words.

1 WHO is your primary audience?

Examples of a primary audience:

- OSHA outreach instructors
- Construction contractors
- Construction workers
- Ironworkers
- Immigrant workers
- Foremen

2 WHAT do you know about their reading skills?

The average worker or contractor is not a safety and health specialist. Many terms you use every day may be unfamiliar to some or all of your audience. While many construction workers have strong reading abilities and higher education credentials, approximately 21% lack a high school diploma (2015 Census) and 27% speak a language other than English at home (CPWR Chart Book).

Your main message is what you want your audience to know after they read your material. It should be short, one to three sentences.

3 WHAT is your main message for your audience?

Examples of a main message:

- Falls kill more construction workers than any other type of injury.
- If you work in hot conditions, you are at risk of heat exhaustion and heat stroke. You can protect yourself by taking regular breaks for water, rest and shade.
- You can protect yourself from harmful dusts, fumes, and gases with the right respirator.

Your call to action is what you want your audience to do after reading the material. In occupational health and safety, your main message and call to action may overlap.

4 WHAT is your call to action for your audience?

Examples of a call to action:

- Use fall protection when working at heights higher than six feet.
- Take regular breaks for water when working in hot weather.
- Don't breathe in construction dust. Use water or vacuum systems to prevent the dust from getting into the air and into your lungs.

Your content should be tailored to your primary audience, support your main message, and promote your call to action. If you have more than one primary audience, consider making two separate materials.

In Conclusion...

1. **Readability and Suitability**
2. **4 Big Questions** before you start writing
3. **3 Major Tips** to use **when** you are writing
4. **Tools and resources** that can help YOU prepare safety training materials your audience will understand

Clayton Sinyai

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