

# Computer Apps for the Construction EHS Professional

#### TRAINING DISCLAIMER

These materials were developed by K & A First Aid, LLC, and are intended to assist employers, workers, and others as they strive to improve workplace health and safety. While we attempt to thoroughly address specific topics, it is not possible to include discussion of everything necessary to ensure a healthy and safe working environment in a presentation of this nature. Thus, this information must be understood as a tool for addressing workplace hazards, rather than an exhaustive statement of an employer's legal obligations, which are defined by statute, regulations, and standards. Likewise, to the extent that this information references practices or procedures that may enhance health or safety, but which are not required by a statute, regulation, or standard, it cannot, and does not, create additional legal obligations. Finally, over time, regulators may modify rules and interpretations in light of new technology, information, or circumstances; to keep apprised of such developments, or to review information on a wide range of occupational safety and health topics, you can visit regulatory web sites such as the Department of Transportation at www.dot.gov or OSHA's website at www.osha.gov.



#### Contact information

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#### Agenda/Objectives

- Categories of Apps.
- 2. When should you use them?
- 3. Why should you use them.
- 4. Examples of how to use them.



#### **Categories**

- EmergencyResponse
- Safety Meters
- Safety General
- Audits/ Inspections
- ConstructionSpecific

- Off Site Safety
- Industrial Hygiene
- Environmental
- References
- Training



# **Emergency Response**

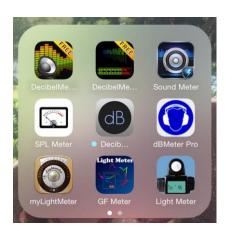


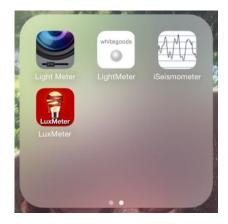




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#### Safety Meters

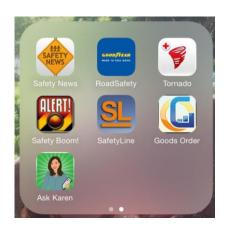






## Safety General







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# **Audit / Inspections**









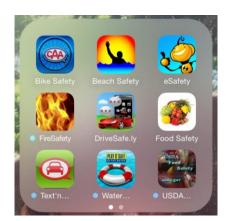
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## **Construction Specific**





#### Off Site Safety







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# Industrial Hygiene







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#### **Environmental**





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# **Reference Apps**





#### **Training**





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## When to use an app.

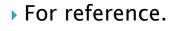
In an emergency?





For training.







For resources.



# When to use an app.

- Family Safety
- Sampling
- Auditing









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#### Why to Use Apps

- Reference Documents
- Emergency Response
- Audits
- Measurements (IH)



#### **Examples**

- Construction
- ► <u>HAZMAT</u>
- ▶ <u>IH</u>
- First Aid
- **Audits**





#### Construction









#### Construction









#### Construction







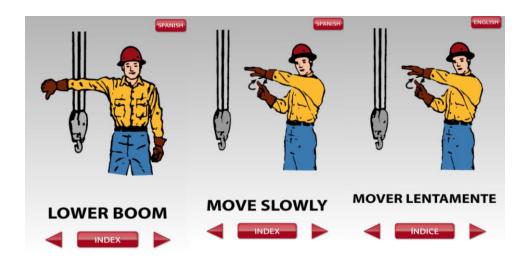




Specialized Carriers & Rigging Association **Select A Signal:** Hoist Lower **Use Main Hoist Use Whipline** Raise Boom **Lower Boom** Move Slowly Swing Raise Boom & Lower Load Lower Boom & Raise Load Stop Copyright K & A First Aid, LLC 2015

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Conditions are hazardous. Extra measures are recommended. Alert everyone of high risk conditions and review protective measures. A designated knowledgeable person should be on site to modify work activities and set work/rest schedules.

Reminders to help keep workers safe (see OSHA's heat illness campaign site for more information and resources):

#### Water and Shade:

- Drinking water must be on site.
- Drink plenty of water, even if you're not thirsty - every 15 minutes (about 4 cups/hour).





- · Drinking water must be on site.
- Drink plenty of water, even if you're not thirsty - every 15 minutes (about 4 cups/hour).
- Set up cool, shaded rest areas.



Heat Inde

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• Make sure medical help (clinic, hospital, emergency services) is nearby - if not, first



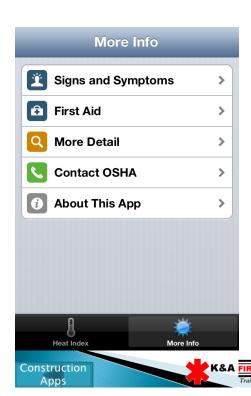
**Precautions** Heat Index 107.9 °F Heat Index Risk Level HIGH Emergency planning and response:

- Make sure medical help (clinic, hospital, emergency services) is nearby - if not, first aid must be on site.
- Call 911 and cool a worker who is unconscious, confused, or uncoordinated. This may be heat stroke, which is a medical emergency.
- Know where you are in case you need to call 911.



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#### **Drink water** throughout the day.

- Estimate how much water will be needed and decide who will obtain and check on water supplies.
- Guidelines recommend that outdoor workers drink 4 cups (8 cones) of water every hour, even if they're not thirsty.
- It is best to drink a small amount of water often, like 1 cup (2 cones) every 15 minutes.
- Avoid alcohol and drinks with caffeine or sugar.
- Generally, fluid intake should not exceed 6 cups per hour.

Know what to do in an emergency. Have a plan in case a worker experiences heat-related illness. Everyone onsite should know the procedures for responding to possible heat















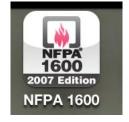
#### Hazardous Materials

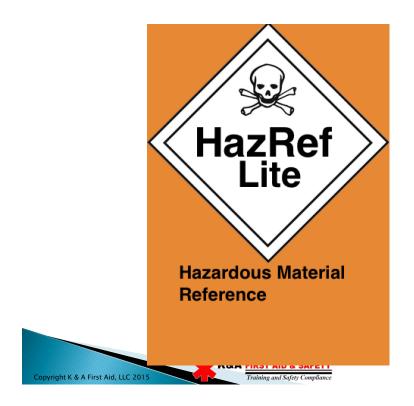






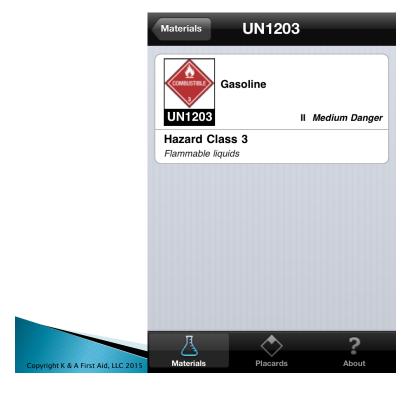






















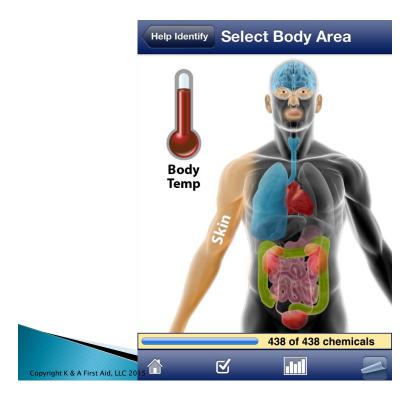






**Help Identify** WISER Select criteria for your search **Properties** 0 > **Symptoms** 0 > Categories 0 > **NFPA** > **Transport** > Results 438 of 438 chemicals 四 Copyright K & A First Aid

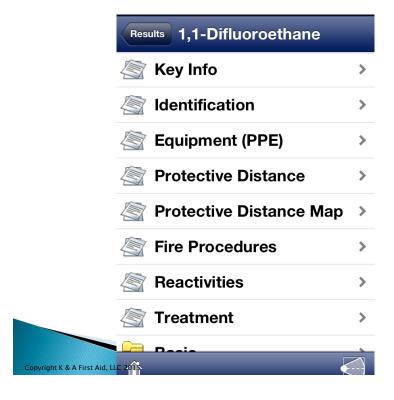
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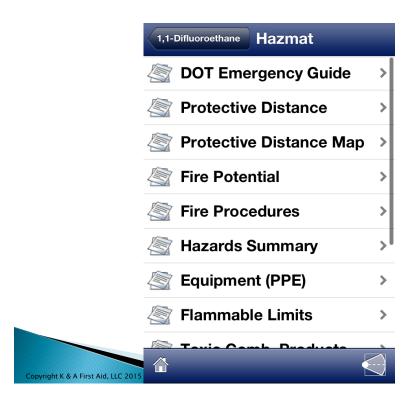


Help Identify Select Property State > Color > Clarity > Odor > **Taste** > рΗ **Specific Gravity Vapor Density** 438 of 438 chemicals Copyright K & A First Aid, LC 20  $\square$ 

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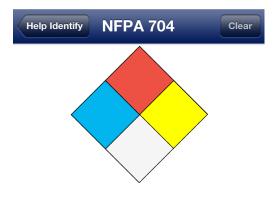




1,1-Difluoroethane
CAS RN: 75-37-6
Explosive Potential
Gas/air mixtures are explosive.

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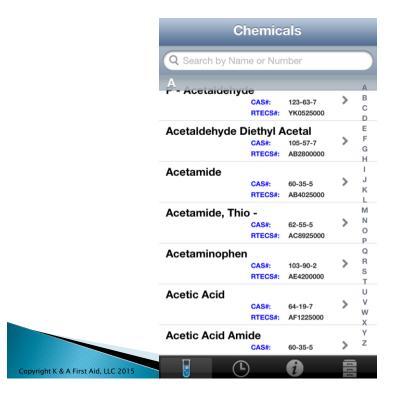
Select a hazard and hazard value from the NFPA 704 diamond above. Match the diamond -- either partial or whole - found at the scene of the incident.

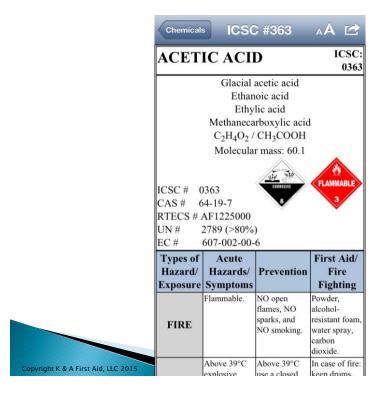


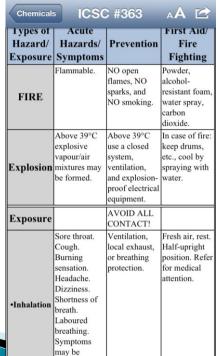




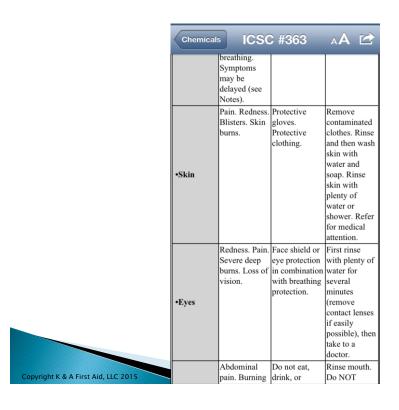








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Chemicals	ICSC	#363	AA	
protection:				
chemical				
protection suit				
including self-				
contained				
breathing				
apparatus.				
ACETIC	ACII	)	10	CSC: 0363
	Importa	ant Data		
Physical State;		Routes of	Exposure:	
Appearance:		The substance can be		
COLOURLESS LIQUID ,		absorbed into the body by		
WITH PUNGEN	T ODOUR.	inhalation	of its vapour	rand
		by ingesti	on.	
Physical Danger	s:			
		Inhalatio	n Risk:	
		A harmfu	l contaminati	on of
Chemical Dangers:		the air can be reached rather		
The substance is a weak		quickly on evaporation of		
acid. Reacts viole	ently with	this substa	ance at 20°C.	
oxidants and base				
many metals forn	ning	Effects of	Short-Tern	1
flammable/explosive gas		Exposure:		
(hydrogen - see ICSC 0001).				
Attacks some forms of		vapour is corrosive to the		
plastic, rubber and coatings.		eyes, the skin and the		
			y tract. Corro	
Occupational Ex	posure		on. Inhalatio	
Limits:		the vapor	may cause lu	ng

Chemicals ICSC #363 Explosive limits, vol% in air: 5.4-16 Octanol/water partition coefficient as log Pow: -0.31 The substance is harmful to Environmental aquatic organisms. Data NOTES The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered. Other UN numbers: UN 2790 acetic acid solution (10-80% acetic acid); UN hazard class 8. Card has been partly updated in October 2005. See sections Occupational Exposure Limits, Emergency Response. Transport Emergency Card: TEC (R)-80GCF1-II NFPA Code: H2; F2; R0; ADDITIONAL INFORMATION ICSC: ACETIC ACID 0363 (C) IPCS, CEC, 1994

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Hazmat



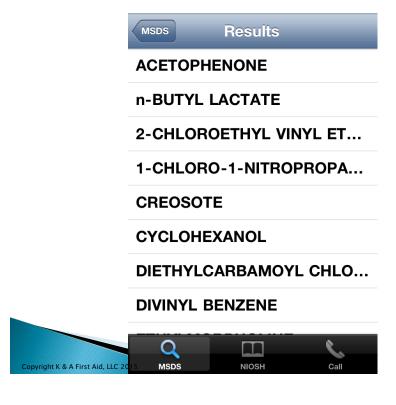
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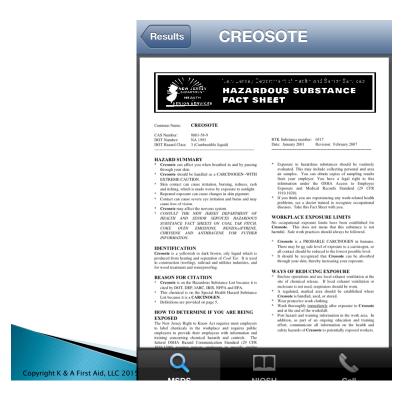












Prev Contents Index Next

#### NIOSH POCKET GUIDE TO CHEMICAL HAZARDS

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

September 2007

DHHS (NIOSH) Publication No. 2005-149

First Printing - September 2005
Second Printing - August 2006, with minor technical changes
Third Printing - September 2007, with minor technical changes

Copyright K & A First Aid, LLC 2
MSDS
NIOSH
Call

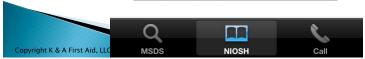
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Table 2
Personal Protection and Sanitation Codes

Code		Definition		
Skin:	Prevent skin contact	Wear appropriate personal protective clothing to prevent skin contact.		
	Frostbite	Compressed gases may create low temperatures when they expand rapidly. Leaks and uses that allow rapid expansion may cause a frostbite hazard. Wear appropriate personal protective clothing to prevent the skin from bec		
	N.R	No recommendation is made specifying the need for personal protective equipment for the body.		
eyes: conta	Prevent eye contact	Wear appropriate eye protection to prevent eye contact.		
	Frostbite	Wear appropriate eye protection to prevent eye contact with the liquid that could result in burns or tissue damage from frostbite.		
	N.R.	No recommendation is made specifying the need for eye protection.		
Wash skin:	When contam	The worker should immediately wash the skin when it becomes contaminated.		
	Daily	The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc.		
	N.R.	No recommendation is made specifying the need for washing the substance from the skin (either immediately or at the end of the work shift).		
Remove:	When wet or contam	Work clothing that becomes wet or significantly contaminated should be removed and replaced.		
	When wet (flamm)	Work clothing that becomes wet should be immediately removed due to its flammability hazard (i.e., for liquids with a flash point <100°F).		
	N.R.	No recommendation is made specifying the need for removing clothing that becomes wet or contaminated.		



Contents Prev Next Symbols, Code Components, and Codes Used for Respirator Selection Description

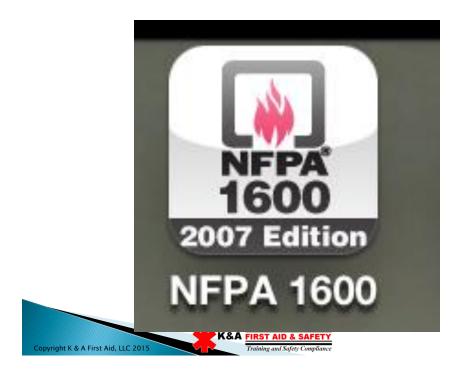
At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration Symbol Emergency or planned entry into unknown concentrations or IDLH conditions Substance reported to cause eye irritation or damage; may require eye protection Substance causes eye irritation or damage; eye protection needed Only nonoxidizable sorbents allowed (not charcoal) End of service life indicator (ESLI) required APF Assigned protection factor Code Component Description Particulate respirator or filter that is 95% efficient. See Table 4 (page xxv) to select N95, R95, or P95. 99 Particulate respirator or filter that is 99% efficient. See Table 4 (page xxv) to select N99, R99, or P99. Particulate respirator or filter that is 99.97% efficient. See **Table 4** (page xxv) to select N100, R100, or P100. 100 Chemical cartridge respirator Full facepiece Air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister Papr Powered, air-purifying respirator Supplied-air respirator Scba Self-contained breathing apparatus Ag Acid gas cartridge or canister uous flow mode Hie Ov High-efficiency particulate filter Organic vapor cartridge or canister Pressure-demand or other positive-pressure mode Qm S Chemical cartridge or canister providing protection against the compound of concern Tight-fitting facepiece

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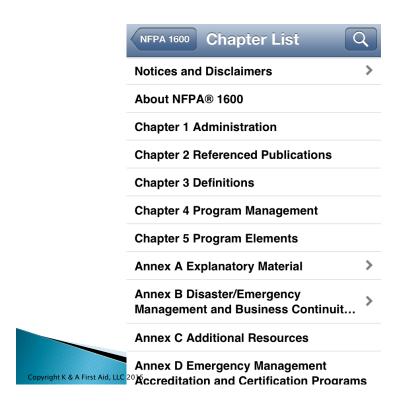
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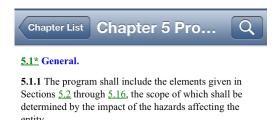
MSDS

Hazmat



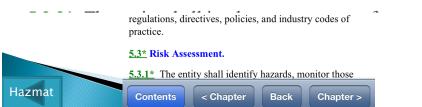






#### 5.2 Laws and Authorities.

<u>5.2.1\*</u> The program shall comply with applicable legislation, policies, regulatory requirements, and directives.





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#### ΙH















#### **AIHA Calculator**

**Noise** 

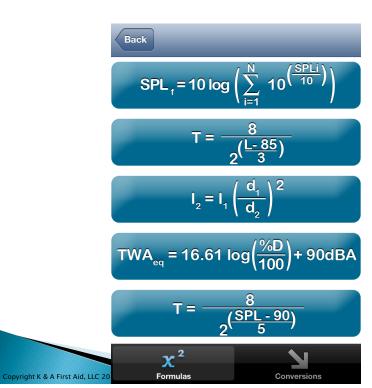
**Heat Stress** 

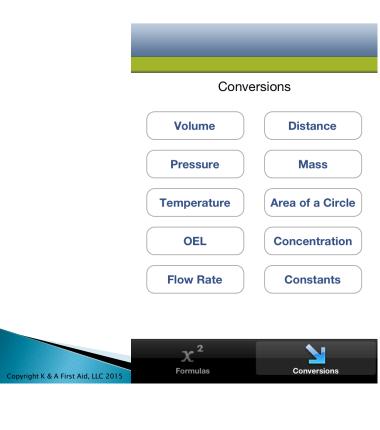
**Ventilation** 

**Exposure Assessment** 



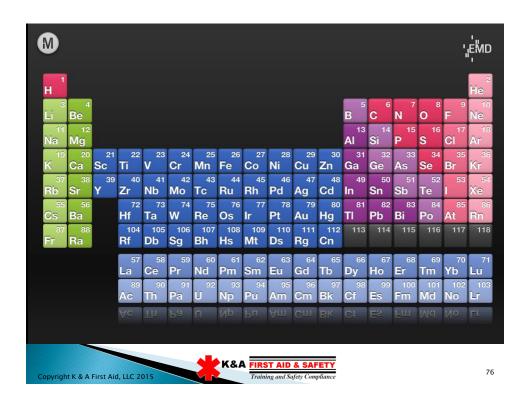
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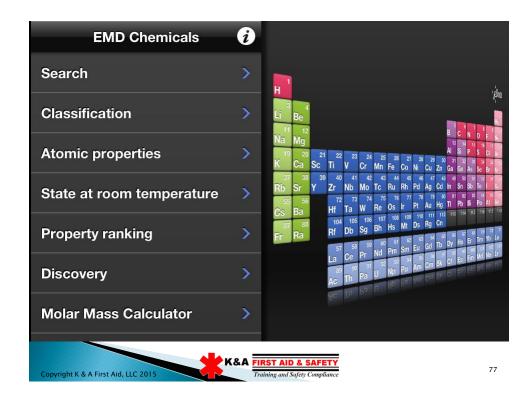


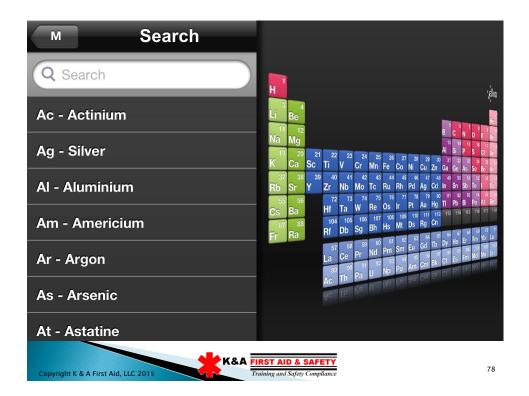


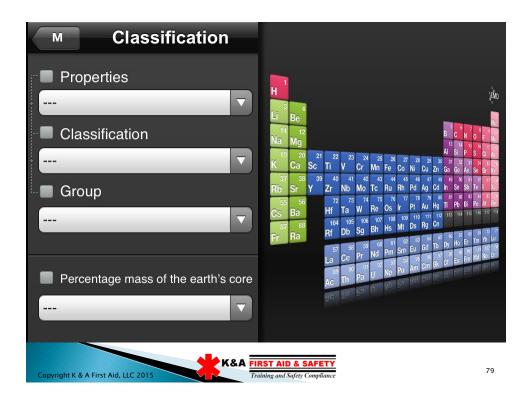
73 Back atm psi mm Hg inches water Calculate Clear **≪IH** Formulas st Aid, LLC 2015

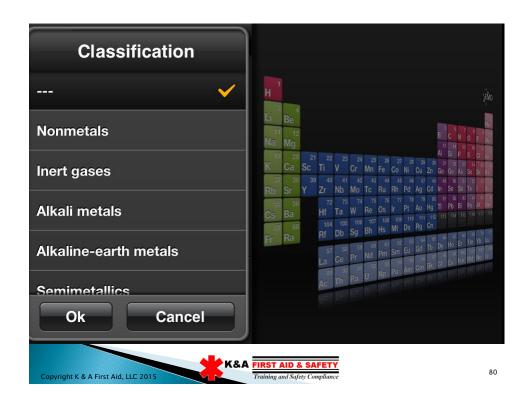


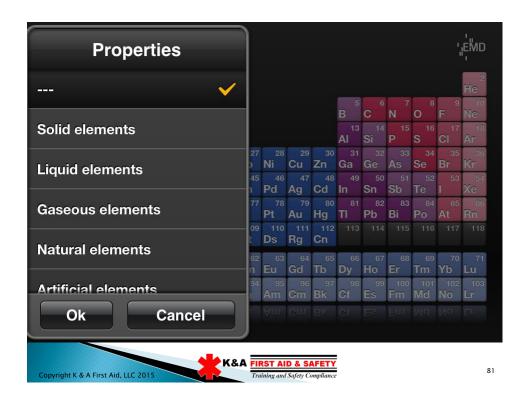


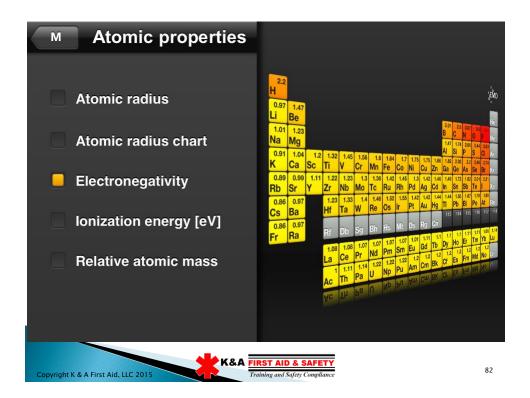


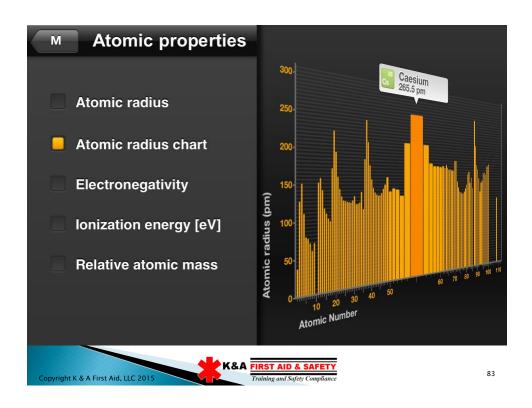




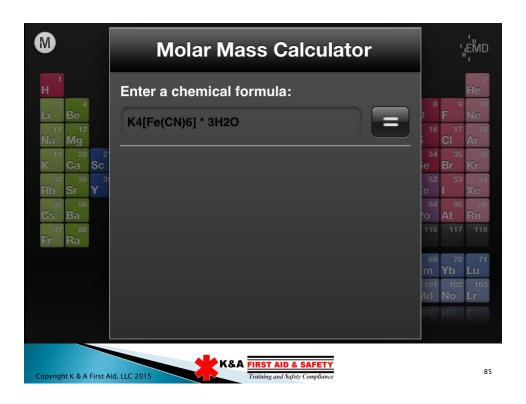


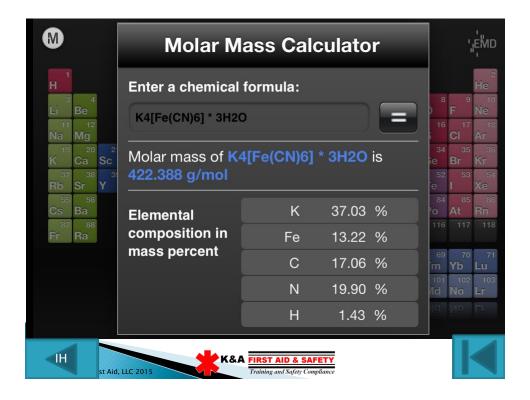






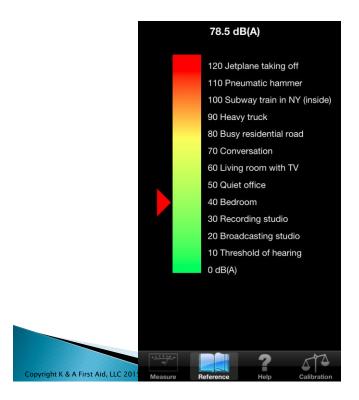
Symbol	No.	Designation	Relative atomic mass	Density (68°F)
Н	1	Hydrogen	1.00794	0.084 g/l
He	2	Helium	4.0026	0.17 g/l
Li	3	Lithium	6.941	0.53 g/cm³
Be	4	Beryllium	9.01218	1.85 g/cm³
В	5	Boron	10.811	2.46 g/cm³
С	6	Carbon	12.0107	3.51 g/cm³
N	7	Nitrogen	14.0067	1.17 g/l
0	8	Oxygen	15.9994	1.33 g/l
F	9	Fluorine	18.9984	1.58 g/l
<b>M</b> e	10	Neon	20.1797	0.84 g/l
K&A FIRST AID & SAFETY				















# First Aid







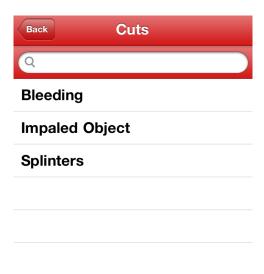




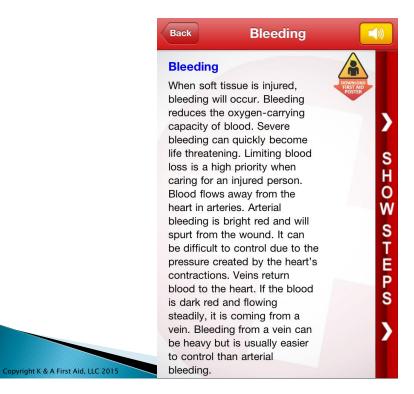














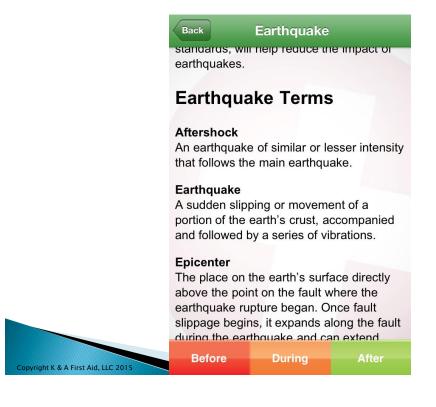
### **Tips & Warnings TIPS** Always activate EMS for serious external bleeding or if you are in doubt about its severity. When barriers are not available, the injured person can provide self-care or a provider can use improvised barriers. Tourniquets work effectively under certain circumstances, such as in combat situations where soldiers are trained to use commercially produced versions. Tourniquets can cause permanent crushing injury to muscles and nerves, the amputation of limbs, shock, and death. As a result, the routine use of tourniquets for bleeding control is indicated only if direct pressure does not work or is not possible. **WARNINGS** Be safe! Make sure repeated injury does not **Back to Steps** Copyright K & A First Aid, LLC 2015



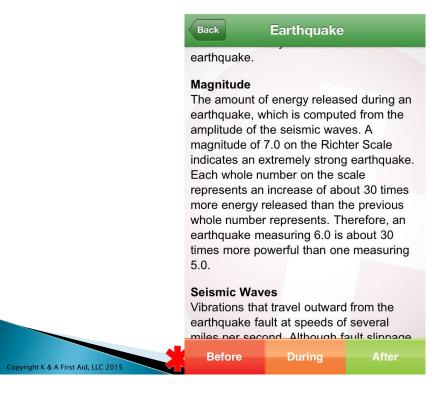
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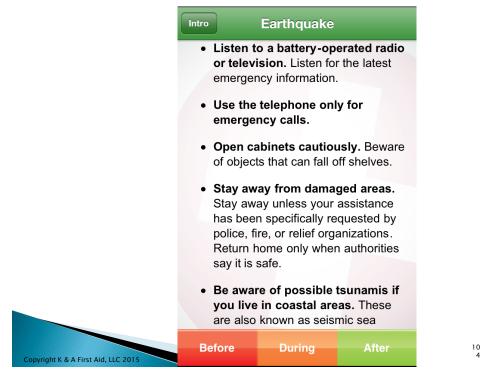
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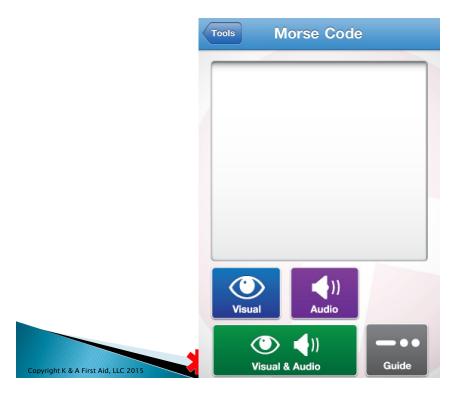


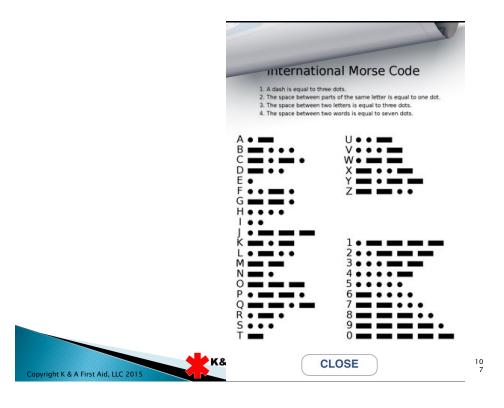
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# ZOLL® PocketCPR®





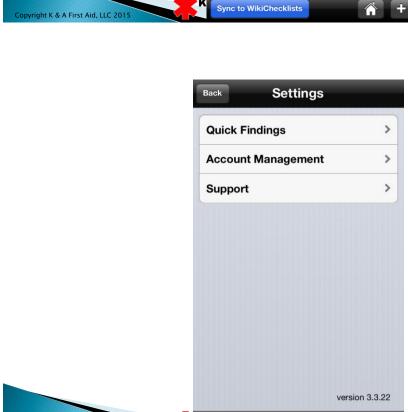


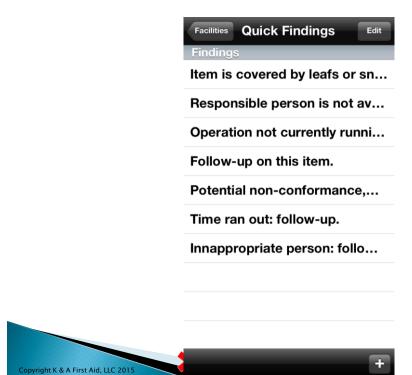


# **Audits**







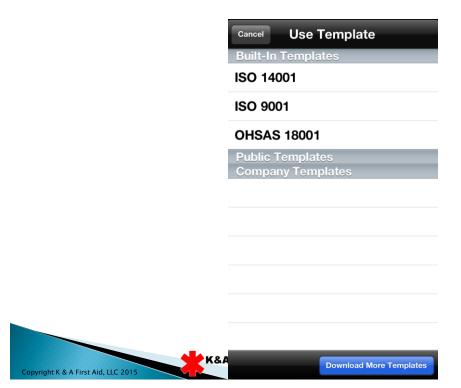




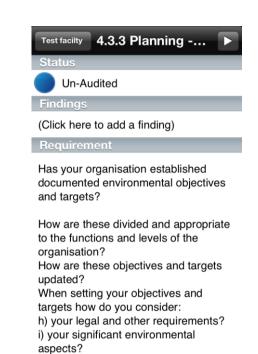
Potential non-conformance, verify.



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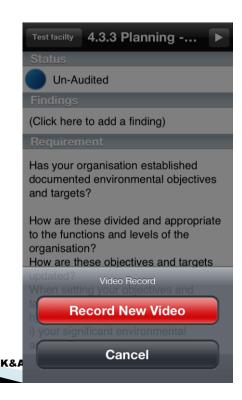




Picture

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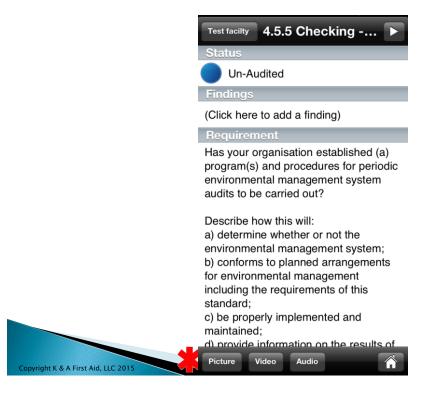
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Audio

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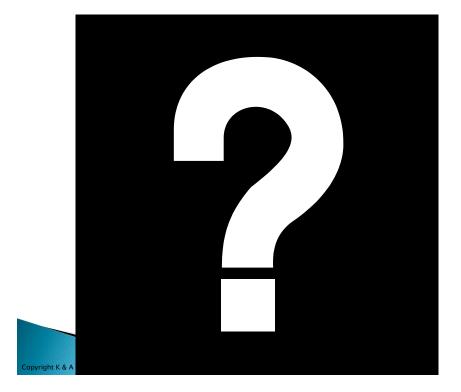


How does your organisation ensure that all persons working for them, or under their control (e.g. staff, contractors, shift workers, casual staff, labour hire etc), are competent to undertake the tasks that can impact on OH&S?

Note: Assessment of competence can be on the basis of appropriate education, training and/or experience.

Has your organisation retained





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## **Contact information**

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