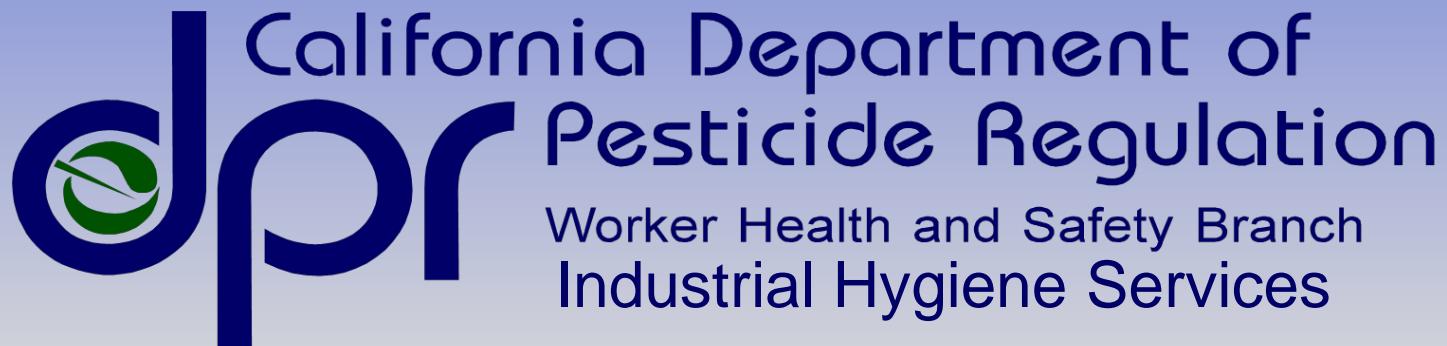


dpri

Changes in Closed System and PPE Regulations

Emma R. Wilson, Environmental Scientist

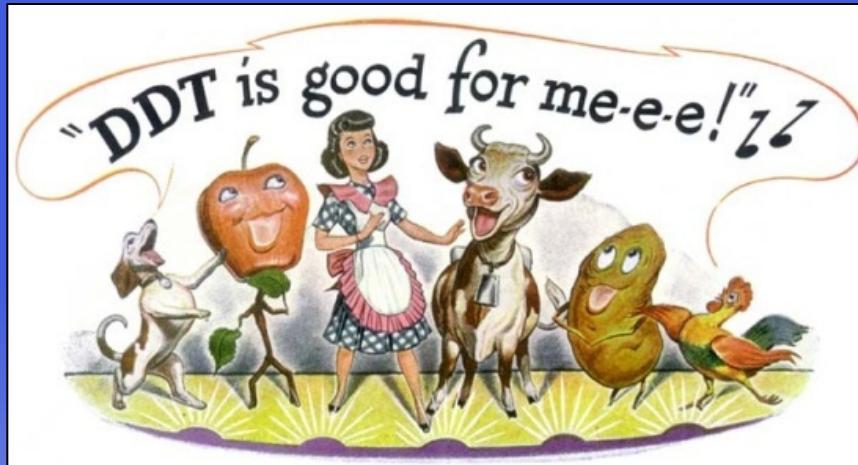
Original Presentation by:
Harvard R. Fong, CIH, Senior Industrial Hygienist



Closed Systems



Background



- Technological changes on closed systems
- OPs and CHCs no longer registered or manufactured in United States
- Less systemic, but corrosive to eyes and skin

Chemical Hazards:

Components of Exposure

Source



Receiver



Closed Systems!



Components of Exposure Routes (Pathways)

Direct Exposure

- Splash ◦ Spray ◦ Spill ◦

Indirect Exposure

- Residue ◦ Drift ◦ Off-gassing

Components of Exposure

Routes (Pathways)

SPLASH



Components of Exposure Routes (Pathways)

SPRAY



Components of Exposure

Routes (Pathways)

SPILL



Components of Exposure Sources

- Undiluted Pesticide
- Application Dilution
- Foliar Residue
- Off Target Residue
- Drift
- Degradation Products



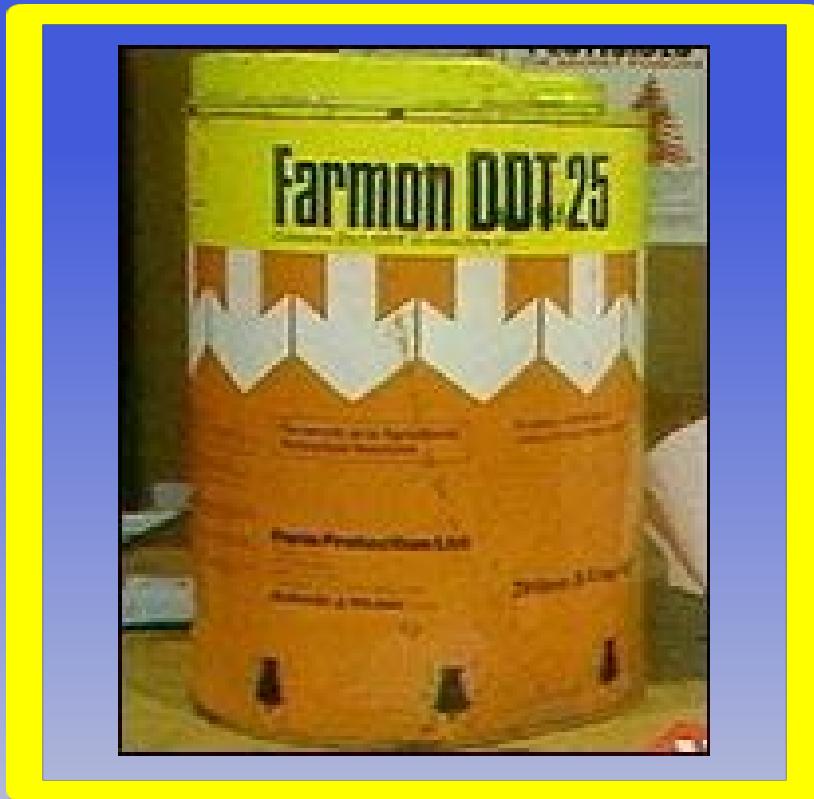
Engineering Control of Exposure

- Closed systems = *Engineering control*
- Isolate and limit exposure
 - Built into the design
- Reduce risk to personnel
 - Less PPE
- Best way to control *if maintained properly*

Engineering Control of Exposure



Receiver



Source

Hazard Recognition

Label Information: Signal Words

Category I: DANGER /

Category II: WARNING

Category III: Caution

Hazard Recognition

Label Information: Signal Words

- Signal words were used to determine if a closed system was required.
- Any liquid or liquefiable Category I material had to be mix/loaded through a closed system.

Hazard Recognition

Label Information: Precautionary Statement

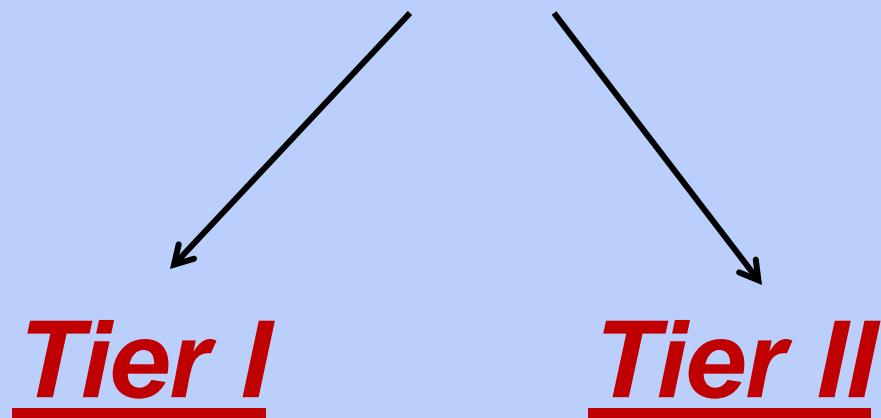
January 2016						
Su	Mo	Tu	We	Th	Fr	Sa
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

- Now (as of January 1, 2016), under Section 6746, use the **Precautionary Statements** section of the label.

Closed Mixing System Requirements

Tier Identifiers

Precautionary Statement



Closed Mixing System Requirements

Section 6746 (b)(c)

How do you determine its “**Tier**” designation?!



Don't “tier” up!

Closed Systems

Tier I

“Fatal if absorbed through skin” or comparable language

Tier II

“May be fatal if absorbed through skin” or “Corrosive, causes skin damage**” or comparable language

NOTE: if corrosive to skin, very likely corrosive to eyes!

Closed Systems

- Corrosive: Substance that has power to cause *irreversible damage* or destroy another substance by *contact*.



Warning! Somewhat Graphic Image!

Closed Systems

Tier I

- Classically poisonous materials
 - Skin or eye damaging properties.
- Systemic poisoning can occur from skin contact/inhalation.

Tier II

- Corrosive to skin and/or eyes
- *Possible* irreversible damage
- May also have systemic toxicity

Tier I or Tier II?

Labeling

Tier I

RESTRICTED USE PESTICIDE
DUE TO ACUTE ORAL, DERMAL, AND INHALATION TOXICITY
For retail sale to and use only by Certified Applicators or persons under the direct supervision of a Certified Applicator, and only for those uses covered by the Certified Applicator's certification.

mocap

PRECAUTIONARY STATEMENTS

Hazards To Humans And Domestic Animals

DANGER

Fatal if swallowed, inhaled or absorbed through skin. Rapidly absorbed through skin. Corrosive. Causes irreversible eye damage. Do not get into eyes, on skin, or on clothing. Do not breathe spray mist. Do not contaminate feed or food.

SYMPTOMS OF POISONING: Nausea, vomiting, abdominal cramps, diarrhea, excessive salivation, headache, dizziness, weakness, blurring or dimness of vision, excessive tearing, loss of muscular coordination, slurring of speech, twitching of muscles (especially of tongue and eyelids), mental confusion, disorientation, drowsiness, difficulty in breathing (chest tightness), runny nose.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:
Transportation: CHEMTECH.....1-800-424-9300
Other: AMVAC.....1-223-264-3910

NOTE TO PHYSICIAN: This product is a cholinesterase inhibitor. Severe symptoms and signs include diarrhea, pinpoint and non-reactive pupils, respiratory difficulty, pulmonary edema, cyanosis, loss of sphincter control, convulsions, and coma. Support respiration as needed. Measures should include removal of source of exposure, a patent airway, oxygen, and mechanical ventilation. If cyanosis is absent, give ATROPHINE 2-4 mg intravenously (0.05 mg/kg for children). Repeat atropine at 5-10 minute intervals until atropinization occurs (dry, flushed skin, tachycardia, pupillary dilation), and maintain for 48 hours. If cyanotic, give initial atropine intramuscularly and start measures to improve ventilation.

EPA Reg. No. 5481-9041 EPA Est. No. 264-MO-003

AMVAC
4100 E. Washington Blvd.
Los Angeles, CA 90023, USA
1-323-264-3910

selection chart.
Mixers, loaders, applicators, and other handlers using engineering controls must wear:
• long-sleeve shirt and long pants, and
plus socks.
In addition, mixers and loaders must wear chemical-resistant gloves and a chemical-resistant apron.
See engineering controls for additional requirements.
Handlers engaged in those activities for which use of an engineering control is not possible, such as cleaning up a spill or leak and cleaning or repairing contaminated equipment, must wear:
• a respirator with an organic-vapor removing cartridge with a prefilter (MSHA/NIOSH approved number prefix TC 230), or a canister approved by MSHA/NIOSH (approved number prefix TC 230), or NIOSH-approved respirator with an organic-vapor (CV) cartridge, or respirator with N.R.P. or HE-filter.
Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

12999-1

Tier I or Tier II?

Labeling

Tier II

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER!

Corrosive: Causes irreversible eye damage. May be fatal if swallowed or absorbed through the skin. DO NOT get in eyes, on skin, or on clothing.

Personal Protective Equipment (PPE):

Applicators and other handlers must wear:

- coveralls over short-sleeved shirt and short pants
- waterproof gloves
- shoes plus socks
- protective eyewear
- dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

If necessary, remove victim to fresh air. If not breathing, give artificial respiration preferably mouth-to-mouth. Get medical attention.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

In case of an emergency endangering life or property involving this product, call collect, day or night, Area Code 201-835-3100.

Inconsistent with its labeling. DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

DO NOT apply this product through any type of irrigation system.

This label must be in the possession of the user at the time of pesticide application.

Closed Mixing System Requirements

Section 6746 (b)(c)

What is the big difference between
Tier I and **Tier II** systems?

Closed Systems

Tier I

- Remove pesticide from container
- Rinse container and extract rinsate without removal from the extraction system
- Classic closed system

Tier II

- Remove pesticide from container
- Container rinsing and subsequent rinsate removal may be done otherwise
- Can do hand pour

Closed Systems

Suction Extraction

- Extract material from original container
- Rinse container interior and itself
- Sealing is not necessarily tight.



Chemeasure (no longer manufactured)

* *Closed system examples are not to be construed as either an actual or implied endorsement.*

Closed Systems

Suction Extraction



Goatthroat

* *Closed system examples are not to be construed as either an actual or implied endorsement.*

Closed Systems

Container Breach

Punctures or slices container, releasing contents into secondary container that is plumbed to mix-tank. Internal spray cleans container.



Goodwin Box*

*not built by Goodwin anymore

* *Closed system examples are not to be construed as either an actual or implied endorsement.*

Closed Systems

Container Breach



Homemade



PBM Sprayers

* *Closed system examples are not to be construed as either an actual or implied endorsement.*

Closed Systems



Primarily works on F-style containers.

Direct Drop/Gravity Feed

- Coupler locks onto both container and mix tank
- Integrated internal sprayer cleans container
- Can do partials
- Banjo/PBM and other companies have developed replacements

* Closed system examples are not to be construed as either an actual or implied endorsement.

Closed Systems

Direct Drop/Gravity Feed



Micro Matic



Banjo/PBM hybrid



EasyFlow

* *Closed system examples are not to be construed as either an actual or implied endorsement.*

Closed Systems

Isolated Hand Pour



Combines ability to hand-pour with isolation of the hazardous pesticide.

* Closed system examples are not to be construed as either an actual or implied endorsement.

Closed Systems

Isolated Hand Pour



Hypro Closed System Cleanload

* *Closed system examples are not to be construed as either an actual or implied endorsement.*

Closed Mixing System Requirements

Section 6746 (a)(b)

- Use of “appropriate closed system”
- Capable “of enclosing the pesticide while removing the contents from its original container, preventing the pesticide from contacting handlers or bystanders”



Closed Mixing System Requirements

Section 6746 (d)(e)

- Users must be trained in the specific use of the closed system and in the requirements of ***Title 3 CCR Section 6724: Handler Training***
- All PPE required by label, restricted material permit or regulation **must be at the worksite**.
- PPE required to be worn will be dependent on closed system exemptions provided in ***Title 3 CCR Section 6738: Personal Protective Equipment***

Closed Mixing System Requirements

Section 6746 (e)

Protective eyewear must always be worn when using a closed system.



Closed Mixing System Requirements

Section 6746 (f)

- Removes pesticide from its original container.
- Same applies to rinsate and finished mix, all the way into the application device/vehicle.
- System to withstand chemical exposures and pressure.
- ***Equipment must be maintained.***

Closed Mixing System Requirements

Section 6746 (f)

Tier I

- Rinsing the original container and transferring the rinsate while still attached to the closed system.
- Provide adequate rinsing, as defined in **Title 3 CCR Section 6684: Rinse and Drain Procedures.**
 - It cannot over-pressurize the original container and cause it to rupture.

Closed Mixing System Requirements

Section 6746 (f)

Don't over pressurize!



Closed Mixing System Requirements

Section 6746 (f)

Tier I: Must incorporate pre-disconnection rinsing of the container.



** Closed system examples are not to be construed as either an actual or implied endorsement.*

Closed Mixing System Requirements

Section 6746 (f)

Tier II: can have a separate rinsing system or may also incorporate pre-disconnection rinsing of the container.

Hand pouring



Bottle Washer



* Closed system examples are not to be construed as either an actual or implied endorsement.

Closed Mixing System Requirements

Section 6746 (g)

Written, LEGIBLE, operating instruction must accompany the system.



Closed Mixing System Requirements

Section 6746 (g)

- Instructions must include:
 - Operating procedures
 - Maintenance cleaning and repair instructions
 - Restrictions/limitations of the equipment
 - Procedures for handling partials (if applicable)
- System must be maintained as specified in the written operating instructions.
- DPR website for reference

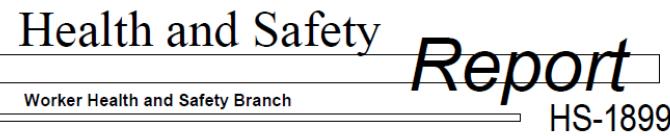
Closed Mixing System Requirements

Section 6746 (h)

Exemptions:

- Label mandated method or device
- Foil seal removal/reseal is not a violation
- Regulatory sampling
- Returnable containers not required to rinse
- 1 gallon or less of Tier II material

Closed Systems



Guidelines for Developing and Manufacturing a Closed System Compliant with the Requirements of Title 3 California Code of Regulations
Section 6746

By

Harvard R. Fong, CIH, Senior Industrial Hygienist

November 16, 2015

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF PESTICIDE REGULATION
1001 I STREET, SACRAMENTO, CA 95814

For guidance on developing a closed system, WH&S has created HS Report 1899.

This is available at www.cdpr.ca.gov

Personal Protective Equipment (PPE)



PPE Functions

- Body Coverage
- Eye Protection
- Extremities Protection



Background

- 2008 DPR amended (PPE) regulations
- Clarified employer responsibility
- Updated protocols and technology of respiratory protective equipment
- Other PPE also updated



PPE (Care)

DPR Regulation, 3 CCR 6738

- EMPLOYERS shall provide all necessary PPE, as required by label, permit condition and regulation, keeping it clean and in good repair
- Equipment must be inspected daily
- Heavily contaminated PPE shall be replaced
- Store clean PPE in a specifically designated, pesticide-free area
- Leather gloves used with phosphides shall be aerated for a *minimum of 12 hours* for cleaning

PPE (Care)

DPR Regulation, 3 CCR 6738

- Make sure PPE is used *properly*
- Store and wash used PPE separate from other laundry; dry PPE properly.
- Make sure the personnel maintaining/cleaning PPE know what they're doing
- Never allow contaminated PPE to be taken into worker homes.
- If worker does not return to headquarters, provide sealable container for worker to store contaminated equipment outside of home.

Sealable containers



PPE (Use)

DPR Regulation, 3 CCR 6738.1

- **EMPLOYERS** shall assure that employees wear:
- [a] **Eye protection** (Section 6738.2) when mixing/loading or applying pesticides by hand or ground rig, or otherwise exposed to contaminated equipment
- [b] **Chemical-resistant gloves** (Section 6738.3) when mixing/loading or applying pesticides by hand or ground rig, or otherwise exposed to contaminated equipment

PPE (Use)

DPR Regulation, 3 CCR 6738.1

EMPLOYERS shall assure that employees wear:

[c] Chemical-resistant footwear (boots, shoes or coverings) when required.







PPE (Use)

DPR Regulation, 3 CCR 6738.1

- **EMPLOYERS** shall assure that employees wear:
- [d] Chemical-resistant hood or wide-brim hat when chemical-resistant head protection is required.



Sou'wester



BumpCap





PPE (Use)

DPR Regulation, 3 CCR 6738.1

- **EMPLOYERS** shall assure that employees wear:
- [e] Coveralls when handling Category I (**Danger**) or Category II (**Warning**) pesticides. This does **NOT** apply to fumigants unless otherwise required by label.



PPE (Use)

DPR Regulation, 3 CCR 6738.1

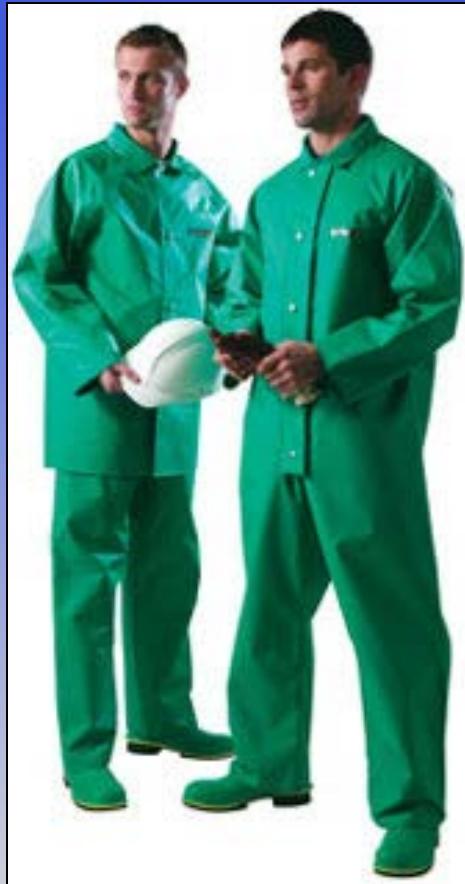
- **EMPLOYERS** shall assure that employees wear:
 - [f] Chemical resistant apron when required
 - [g] Chemical resistant coveralls when required
 - [1] Note that 80°/85° heat stress regulation (separate from Cal/OSHA Heat Illness Standard*) applies when wearing chemical-resistant coveralls. Exemption for closed systems, enclosed cabs or other engineering thermal controls or cooled PPE.

*Title 8 CCR 3395 also applies.

Aprons



Chemical resistant coveralls/suits



No chemical resistant coveralls/suits

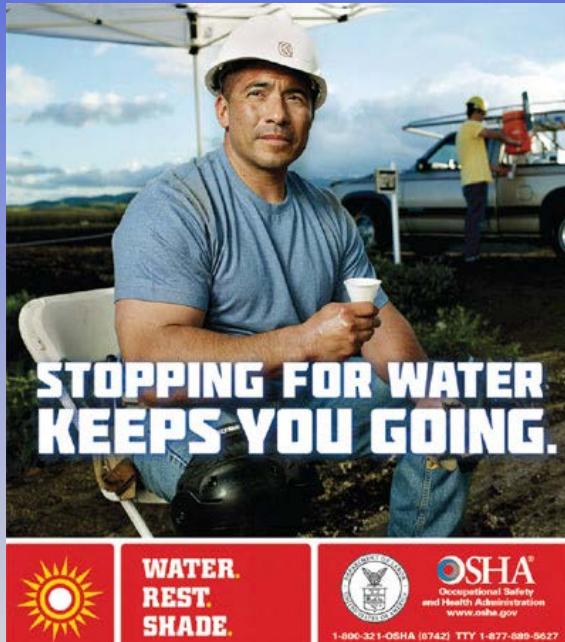


He has eye “protection”



A LITTLE BIT OF SHADE GOES A LONG WAY.

Note: Compliance with Cal/OSHA Heat Illness Regulations now required in DPR training requirements for handlers, field workers and early reentry field workers.



OSHA **QUICK CARD**TM

Protect Yourself Heat Stress



When the body is unable to cool itself by sweating, several heat-induced illnesses such as heat stress or heat exhaustion and the more severe heat stroke can occur, and can result in death.

Factors Leading to Heat Stress

High temperature and humidity; direct sun or heat; limited air movement; physical exertion; poor physical condition; some medicines; and inadequate tolerance for hot workplaces.

Symptoms of Heat Exhaustion

- Headaches, dizziness, lightheadedness or fainting.
- Weakness and moist skin.
- Mood changes such as irritability or confusion.
- Upset stomach or vomiting.

Symptoms of Heat Stroke

- Dry, hot skin with no sweating.
- Mental confusion or losing consciousness.
- Seizures or convulsions.

Preventing Heat Stress

- Know signs/symptoms of heat-related illnesses; monitor yourself and coworkers.
- Block out direct sun or other heat sources.
- Use cooling fans/air-conditioning; rest regularly.
- Drink lots of water; about 1 cup every 15 minutes.
- Wear lightweight, light colored, loose-fitting clothes.
- Avoid alcohol, caffeinated drinks, or heavy meals.

What to Do for Heat-Related Illness

- Call 911 (or local emergency number) at once.

While waiting for help to arrive:

- Move the worker to a cool, shaded area.
- Loosen or remove heavy clothing.
- Provide cool drinking water.
- Fan and mist the person with water.

For more complete information:

OSHA
Occupational
Safety and Health
Administration
U.S. Department of Labor
www.osha.gov (800) 321-OSHA

NOT what Cal/OSHA means when it talks about providing shade.



PPE (Eye Protection)

DPR Regulation, 3 CCR 6738.2

EMPLOYERS shall assure that employees wear protective eyewear that provides brow and temple protection, conforming to the curvature of the face.

[a] Must be ANSI Z87.1-2010 compliant.

American National Standard for Occupational and Educational Personal Eye and Face Protection Devices



1. **Safety Glasses**
2. **Goggles**
3. **Face Shield**



Not exactly what we had in mind...

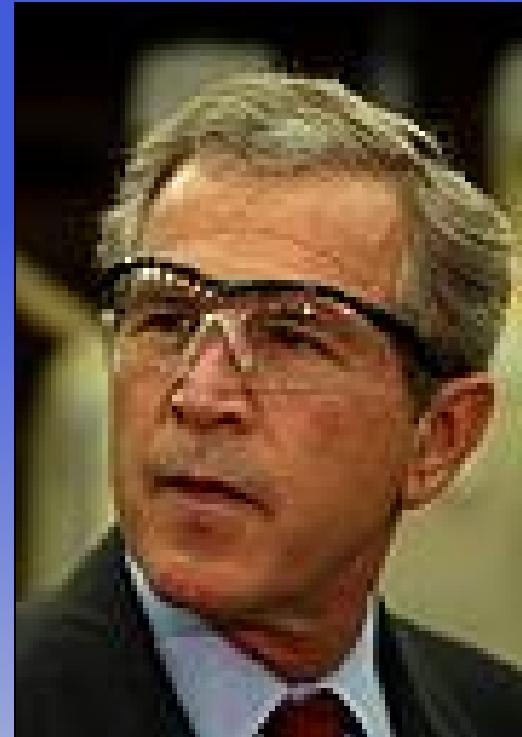
No.





This is more like it!

No matter your politics, eye protection is always correct.



PPE (Eye Protection)

DPR Regulation, 3 CCR 6738.2

The American Academy of Ophthalmology:

1. 300,000 emergency room visits for occupational eye injuries in 2012
2. 20,300 occupational eye injuries resulted in lost work time
3. An estimated **90%** of these eye injuries were preventable with protective eyewear.

THESE LOOK! BETTER ON YOU

THE SIMPSONS

Than
This



REDUCE

THE CHANCE OF EYE
INJURY!



Not Z87

PPE (Eye Protection)

DPR Regulation, 3 CCR 6738.2

EMPLOYERS shall assure that employees wear protective eyewear that provides brow and temple protection, conforming to the curvature of the face.

[b] If the label identifies specific protective eyewear, that eyewear or more protective must be worn.



© Pleated Jeans

PPE (Eye Protection)

DPR Regulation, 3 CCR 6738.2

EMPLOYERS shall assure that

employees wear protective eyewear that provides brow and temple protection, conforming to the curvature of the face.

- [c] NIOSH-approved fullface respirator satisfies eye protection requirement
- [d] Prescription eyewear may not interfere with fit/function of protective eyewear



PPE (Hand Protection)

DPR Regulation, 3 CCR 6738.3

EMPLOYERS shall assure that employees wear appropriate chemical-resistant gloves when required

[a] If the barrier material is specified by a glove category, that material must be used.



The image shows a 'Glove Category Selection Key' card from the DPR. The card has a green border and a green leaf graphic on the right. At the top left is the 'dpr' logo. The title 'Glove Category Selection Key' is centered above a table. The table has two columns: 'Label Code' and 'Materials Required by Law'. To the right of the table is a 'Material Code' column with a list of eight materials, each associated with a number from 1 to 8. At the bottom of the card is a note: 'All but Laminate and Polyethylene must be 14 mils or thicker'.

Label Code	Materials Required by Law	Material Code
A	1,2,3,4,5,6,7,8	1: Laminate
B	1,2	2: Butyl
C	1,2,3,4,7,8	3: Nitrile
D	1,2	4: Neoprene
E	1,3,4,8	5: Natural
F	1,2,3,8	6: Polyethylene
G	1,8	7: PVC
H	1,8	8: Viton

All but Laminate and Polyethylene must be 14 mils or thicker

The DPR Glove Category Selection Key card or the USEPA website on PPE may be consulted for appropriate glove material

PPE (Hand Protection)

DPR Regulation, 3 CCR 6738.3

EMPLOYERS shall assure that employees wear appropriate chemical-resistant gloves when required

[b] If there is no specific glove material specified on the label ("use chemical-resistant gloves") then any of the gloves listed in the DPR Glove Category Selection Key card may be used

dpr Glove Category Selection Key

Label Code	Materials Required by Law	Material Code
A	1,2,3,4,5,6,7,8	1: Laminate
B	1,2	2: Butyl
C	1,2,3,4,7,8	3: Nitrile
D	1,2	4: Neoprene
E	1,3,4,8	5: Natural
F	1,2,3,8	6: Polyethylene
G	1,8	7: PVC
H	1,8	8: Viton

All but Laminate and Polyethylene must be 14 mils or thicker

PPE

Glove Category Selection Key Based on USEPA Label Codes

dpr **Glove Category Selection Key**

Label Code	Materials Required by Law	Material Code
A	1,2,3,4,5,6,7,8	1: Laminate
B	1,2	2: Butyl
C	1,2,3,4,7,8	3: Nitrile
D	1,2	4: Neoprene
E	1,3,4,8	5: Natural
F	1,2,3,8	6: Polyethylene
G	1,8	7: PVC
H	1,8	8: Viton

All but Laminate and Polyethylene must be 14 mils or thicker

Chemical Resistant



Chemical-Resistant Gloves

Chemical-resistant gloves facts

Chemical-resistant gloves are not totally "chemical-proof"

Solvents will eventually penetrate the gloves over time.

The thicker the glove, the more resistant it is to solvents.

Solvents will also break down (swell, crack or weaken) the glove material over time.

Thick is better than Thin

© Bar Y Safety Consultants Alberta Canada



PPE (Hand Protection)

DPR Regulation, 3 CCR 6738.3

EMPLOYERS shall assure that employees wear appropriate chemical-resistant gloves when required

[c] Other than laminate and polyethylene, all gloves must be 14 mils or thicker

Exception: For tasks requiring fine motor skills and dexterity, thinner gloves of the same material may be substituted for a maximum of 15 minutes to accomplish the task, then discarded.



PPE (Hand Protection)

DPR Regulation, 3 CCR 6738.3

EMPLOYERS shall assure that employees wear appropriate chemical-resistant gloves when required

[d] Separable **glove liners** are **allowed** unless expressly forbidden by the label.

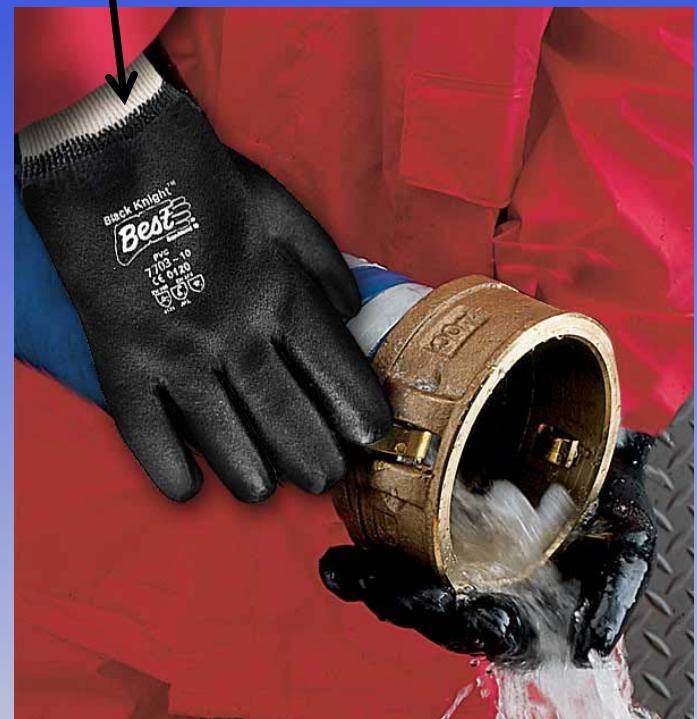
Liners must not extend beyond cuff of glove.

Contaminated liners must be removed immediately and all liners must be disposed of at the end of the day.

[1] ***No flocked gloves***



**Flocked gloves
not allowed!**



PPE (Hand Protection)

DPR Regulation, 3 CCR 6738.3

EMPLOYERS shall assure that employees wear appropriate chemical-resistant gloves when required

[e] Leather gloves may be worn over chemical-resistant gloves if required by work environment*.

After such use, those leather gloves must always be worn over chemical-resistant gloves.

*Such as dealing with roses



PPE (Exemptions)

DPR Regulation, 3 CCR 6738.4

EMPLOYERS shall assure that all necessary/required PPE is present and available at the worksite and stored to prevent contamination.

[a] Glove and eye protection exemptions:

- [1] Enclosed cab
- [2] Vehicle-mounted nozzles below employee and spraying downward
- [3] Long handled vertebrate pest control baiting devices
- [4] No contact with liquid fumigants
- [5] Application system, as determined by DPR, that provides equal or superior exposure protection as PPE
- [6] Operating aircraft



PPE (Exemptions)

DPR Regulation, 3 CCR 6738.4

EMPLOYERS shall assure that all necessary/required PPE is present and available at the worksite and stored to prevent contamination.

[b] Eye protection exemptions:

[1] Applying non-insecticidal lures or baiting monitoring traps



[2] Applying solid fumigants to vertebrate burrows



[3] Applying vertebrate baits that are NOT propelled

PPE (Exemptions)

DPR Regulation, 3 CCR 6738.4

EMPLOYERS shall assure that all necessary/required PPE is present and available at the worksite and stored to prevent contamination.

[c] & [d] Closed system exemption*:

[1] **DANGER** and **WARNING** signal word materials can use protective eyewear, coveralls, chemical-resistant gloves and chemical-resistant apron in lieu of label requirements

[2] **CAUTION** signal word materials can use protective eyewear, and work clothing in lieu of label requirements

*Includes water-soluble bags

PPE (Exemptions)

DPR Regulation, 3 CCR 6738.4

EMPLOYERS shall assure that all necessary/required PPE is present and available at the worksite and stored to prevent contamination.

[e] Work clothing may be worn in lieu of dermal PPE (including label required) when applying from an enclosed cab, as defined in 3 CCR Section 6000.

Respiratory protection is NOT exempted unless the cab is rated for such by ASABE

(i.e., S525 or S613 compliant for respiratory protection).

PPE (Exemptions)

DPR Regulation, 3 CCR 6738.4

EMPLOYERS shall assure that all necessary/required PPE is present and available at the worksite and stored to prevent contamination.

[g] & [h] Pilot exemption:

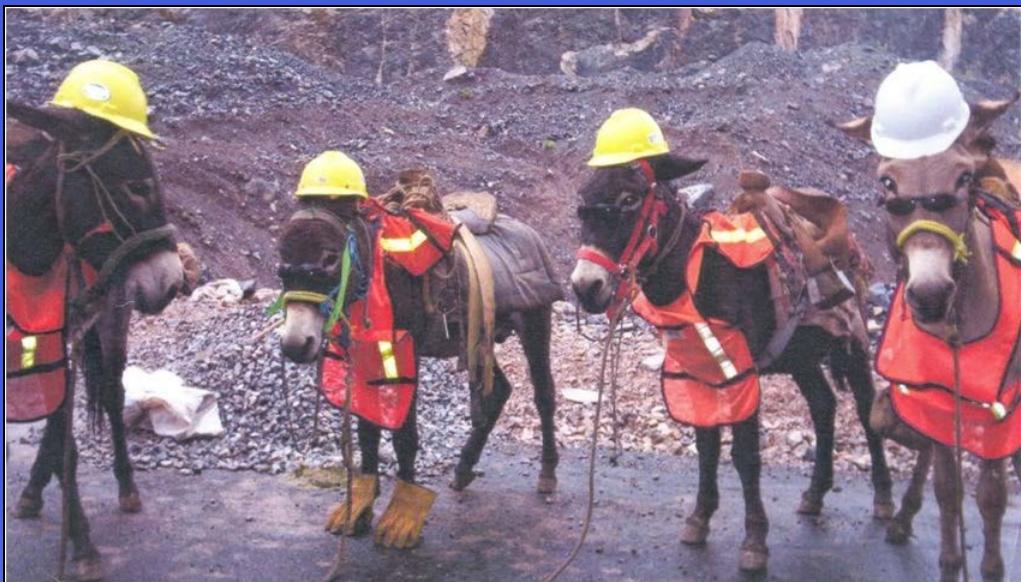
[g] Respiratory protection and protective footwear **NOT** required while occupying aircraft

[h] Helmet and visor substitutes for head and eye protection.



That's it for PPE!





CDPR Website: <http://www.cdpr.ca.gov/>

California Department of
Pesticide Regulation

HOME PROGRAMS DATABASES NEWS/PUBLICATIONS QUICK LINKS

Health & Safety
Report an Illness | Food Safety | Mitigating Exposure | Risk | Physicians | Workers | Fact Sheets

Licensing
Exam Schedule | Valid Licenses | Continuing Ed | Study Materials | Fees | Forms | Index

Monitoring
Surface Water | Ground Water | Air | Special Projects

Enforcement
Complaints | County Oversight | Actions | Compliance | Restricted Materials | Endangered Species

Pest Management
Pesticide Use Report | Pest Problems | Grants | Innovator Awards | Schools | Child Care | Projects

Pesticides and Human Health Information

INJURED OR ILL FROM A PESTICIDE?

HEALTH & SAFETY RESOURCES

- Farmworker Safety and Outreach
- Worker Protection Program
- Worker Safety Regulations
- U.S. EPA Worker Protection Standard

COMMUNITY RESOURCES

- Community Guide to Recognizing and Reporting Pesticide Problems
- Consumer Fact Sheets
- Pesticide Residues on Food
- FAQ
- Household Products Database
- School IPM
- National Pesticide Information Center

MEDICAL RESOURCES

- Information for Physicians
- Pesticide-Related Illnesses
- California Pesticide Illness Query (CalPIQ)

WORKPLACE RESOURCES

- County Agricultural Commissioners
- Pesticide Safety Information Series Handouts
- Compliance Assistance for Employers
- **UPDATED** Workplace Safety/Industrial Hygiene
- Safety Data Sheets

EVALUATING AND REDUCING EXPOSURE

- **UPDATED** Reducing Exposure
- **UPDATED** Personal Protective Equipment (PPE)
- **UPDATED** Engineering Controls
- Assessing Health Risk
- Exposure Assessment
- U.S. EPA Pesticides: Health and Safety Quick Finder

HEALTH AND SAFETY PROGRAMS

- Worker Health and Safety Branch
- Publications
- Enforcement Branch
- Human Health Assessment Branch
- Publications

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