

Pesticide Protective Gloves & Respirators

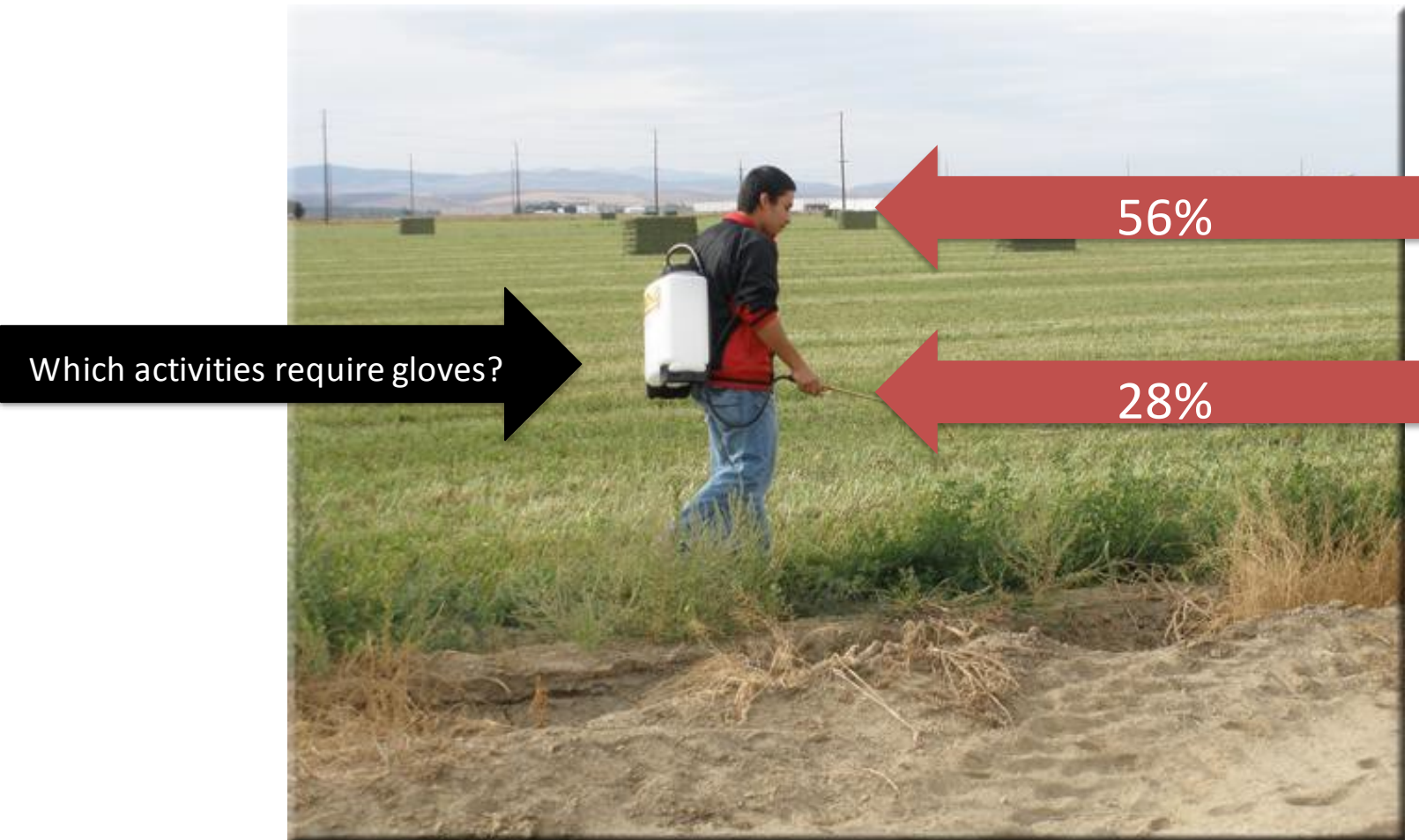
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Pesticide Safety Educators
UC Statewide IPM Program
November 17, 2016

Pesticide Protective Gloves

- Convince you to wear them
- Test your Identification skills
- Explain how to choose the right ones



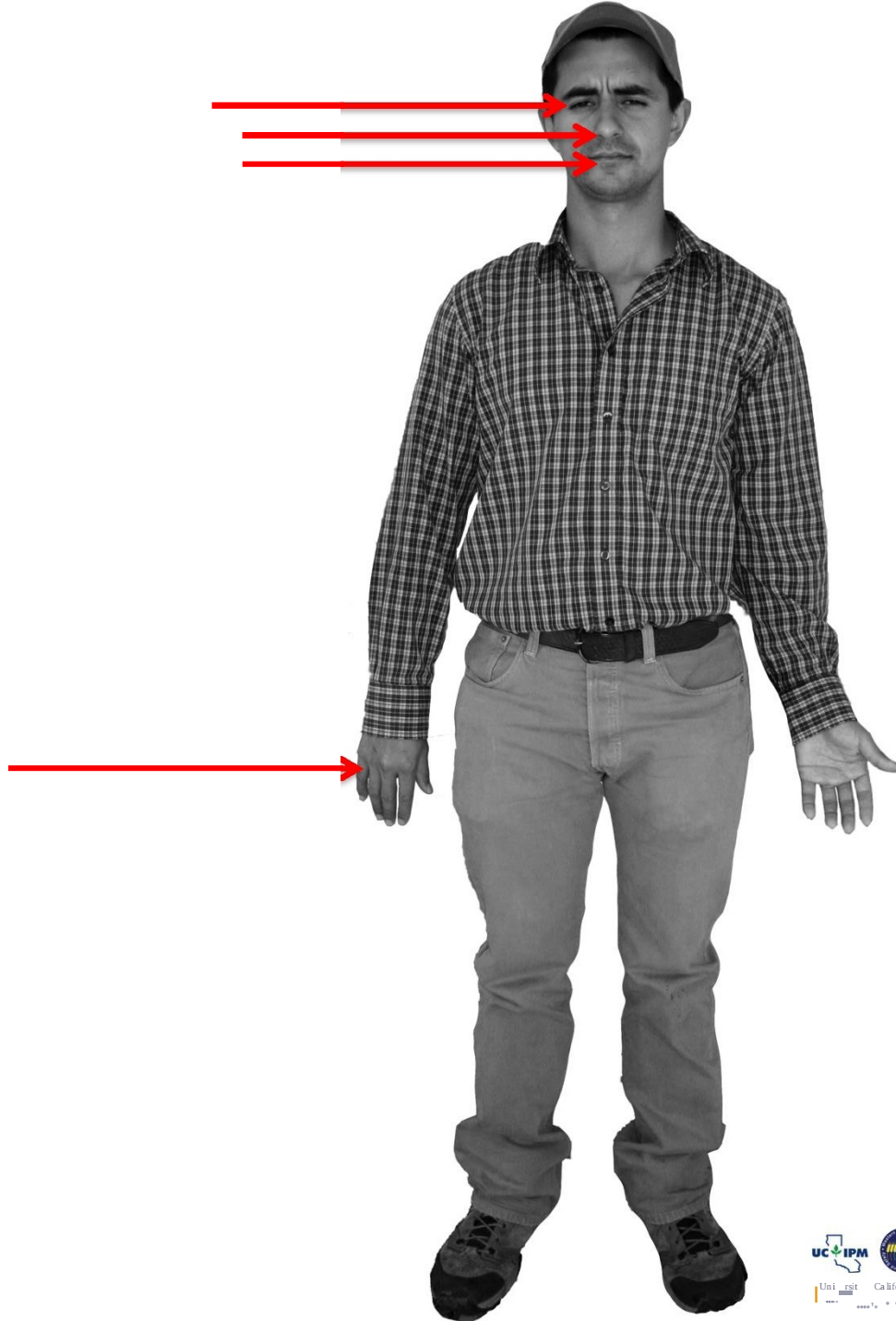
Why **YOU** should wear gloves



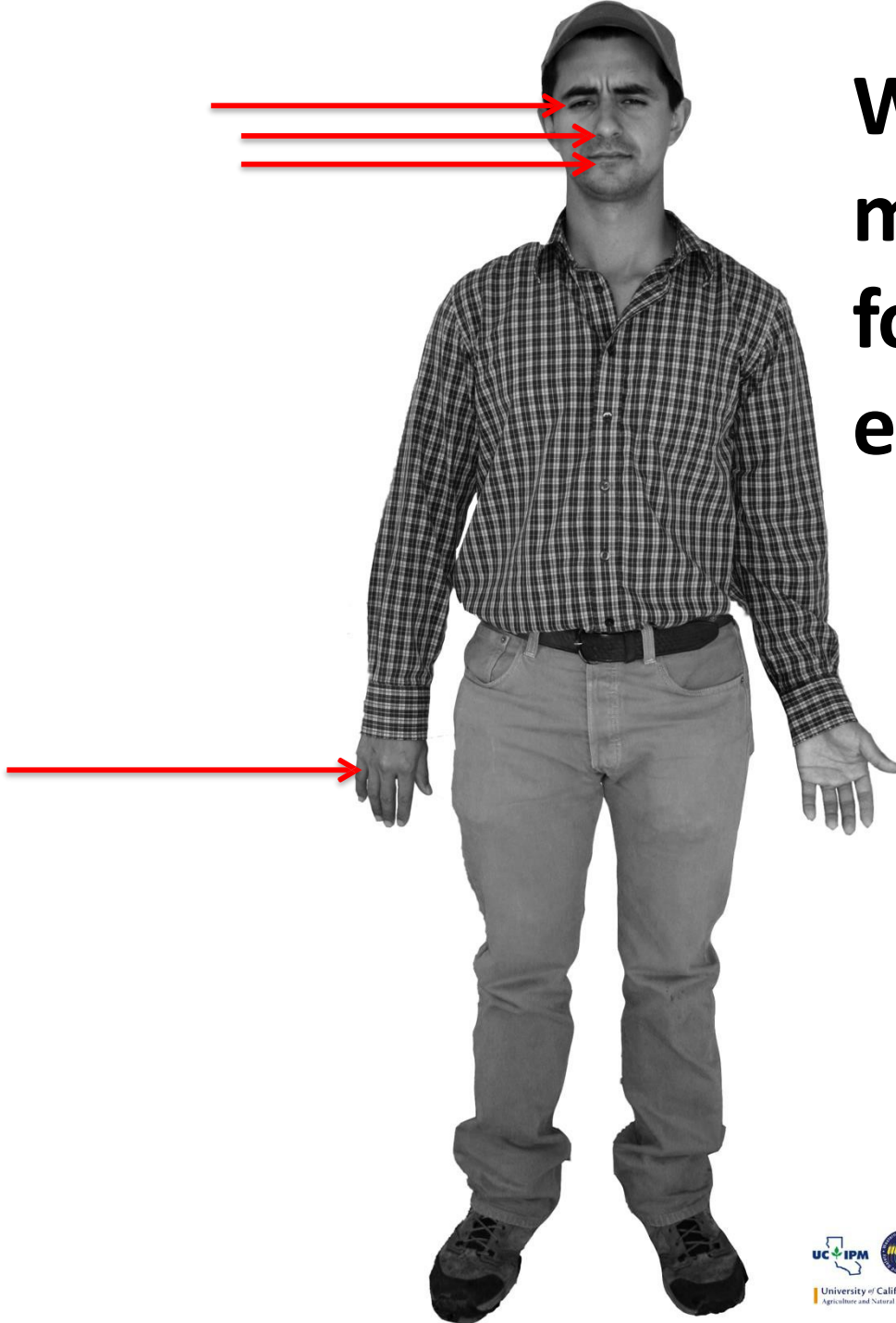
33% of all handler pesticide illnesses were due to failure to wear PPE!



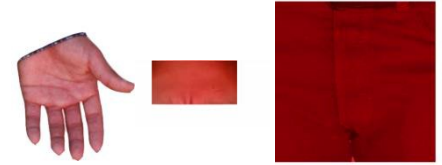
**What parts of
your body do
you think
pesticide can
enter?**



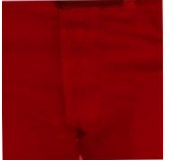
**Which way is it
more common
for pesticides to
enter our body?**



SKIN!









**What is the MINIMUM Personal
Protective Equipment (PPE)
required in California?**

Identify the material in glove #1

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Identify the material in glove #2

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Identify the material in glove #3

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Identify the material in glove #4

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Identify the material in glove #5

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Identify the material in glove #6

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Identify the material in glove #7

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Identify the material in glove #8

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Identify the material in glove #9

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Identify the material in glove #10

- Barrier laminate
- Butyl rubber
- Natural rubber
- Neoprene (disposable)
- Neoprene (reusable)
- Nitrile (disposable)
- Nitrile (reusable)
- Polyethylene
- Polyvinyl chloride
- Viton



Glove Selection



Glove Category Selection Key

Label Code	Material Recommended by CDPR	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

Glove Selection – Labels

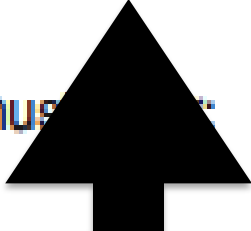
Personal Protective Equipment

Some materials that are chemical-resistant to this product are barrier laminate, nitrile rubber, neoprene rubber or Viton. If you want more options, follow the instructions for category E on a EPA chemical resistance category selection chart.

All mixers, loaders, applicators, and other handlers must wear:

- long-sleeved shirt and long pants,
- shoes and socks,
- chemical resistant gloves
- chemical resistant apron when mixing or applying the product, or otherwise exposed to the product.

See engineering controls for additional recommendations.



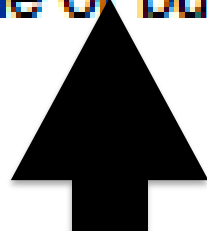
Speedzone:
barrier laminate, nitrile
rubber, neoprene rubber
or viton
Category E

Glove Selection – Labels

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as nitrile or butyl
- Shoes plus socks



Turflon Ester:
nitrile or butyl
No category

Glove Selection – Labels

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and Other Handlers Must Wear: Long-sleeved shirt & long pants; shoes plus socks. When not using a closed system, wear apron and chemical-resistant gloves made of any waterproof material for mixing/loading activities. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.



Acramite 4SC:
No gloves

Glove Selection

- Always follow the pesticide label
- AND!
- Always remember that CA requirements are generally more strict than label requirements



GEMPLER'S Unlined Nitrile Gloves

Combine chemical resistance with excellent dexterity

100% nitrile gloves provide excellent protection for handling most agricultural chemicals, solvents, acids and caustics. Nitrile resists snags, punctures, abrasions and cuts better than other glove polymers. Anon-slip grip makes it easy to slip-slip work easier while an ergonomic shape enhances fit and comfort. Unlined gloves can be washed and reused and are for use with pesticides whose label refers to Category A, C, E or F on the EPA Chemical Resistance Category Selection Chart.

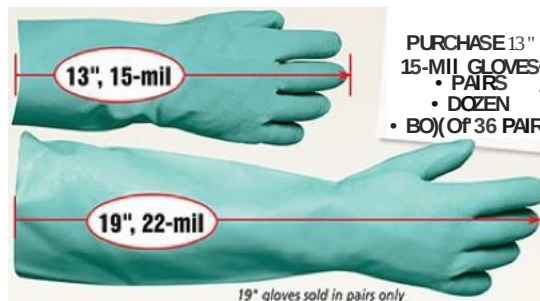
13", 15-mil Nitrile Gloves

The 13", 15-mil gloves offer increased dexterity that simplifies jobs like working with sprayer nozzles or other small parts. Sold by the pair in packs of 12 pair or in a convenient wall mount dispenser box with 36 pair. Imported. See price chart below for available sizes: XS (7), S (8), M (9), L (10) or XL (11).

19", 22-mil Unlined Nitrile Gloves

The 19", 22-mil gloves offer excellent protection to the forearm where chemical splashes may occur. The taped wrist is a comfortable and natural fit. Pairs are individually bagged. Imported. See price chart below for available sizes: XS (7), S (8), M (9), L (10) or XL (11).

Type	Quantity	Size	Item No.	Price
13" 15-mil	1 pair	XS, S, M, L or XL	zm1	\$300/pr.
13" 15-mil	12 pair/pk.	XS, S, M, L or XL	! 2 m	\$90/pr.
13" 15-mil	36 pair/box	S, M, L or XL		\$9130/box
19" 22-mil	1 pair	L or XL	4082K	\$1070/pr.



PURCHASE 13" 15-MIL GLOVES
 • PAIRS
 • DOZEN
 • BOX (OF 36 PAIR)

custof favorite.

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 o h < r which l w : ** a
 N tional r k vol < l t t r o n l n s i v e p < l n t s . I c o n s i d r
 r h e l e g l o v e s e m n t H l p e r s o n a l p r o t e c t i o n .
 - O l d t < d ; l l < h f i r l < l , C H

DDDDD



19", 22-mil nitrile gloves



SAVE WITH
 OUR BOX OF
 36 PAIR

DISPOSABLE GLOVE LINERS

Fingerless, Disposable Cotton Glove Liners

100% natural, hypo-allergenic cotton ribbed knit material allows air to circulate between your hand and the glove, keeping perspiration off your palm with all-day comfort. Unique, fingerless design retains tactile dexterity and reduces bulk inside the outer glove. Acceptable for food processing applications when used as a liner under an approved outer glove. 8 1/2" ambidextrous glove liner to meet 100% of your needs. One size fits all. Imported.



8 1/2" liners

Item No.	1-4	S-11	12+
2482S	\$19.95/box	\$19.00/box	\$18.11/box

Full-finger Disposable Cotton Glove Liners

The EIA allows you to wear separable glove liners beneath chemical gloves for up to 10 hours or until contaminated

Wear inside rubber/chemical gloves to absorb perspiration. Cotton liners help to protect hands from dermatitis and other skin irritations. These liners are also excellent as a barrier from the cold when working in cold-weather applications. Sold in dozen pair packs. Available in Men's and Women's size. Imported.

NO MORE
 SWEATY
 HANDS



7 1/2-8" liners

Size	16702	16702	16702	16702
16702	16702	16702	16702	16702

UNLINED CHEMICAL GLOVES

UNLINED CHEMICAL GLOVES

C : - Value Master" 12" Rubber Latex Gloves

•For diluted, low-toxicity pesticides

•Used by canneries and food processors

Low cost, heavy duty, unlined nitrile gloves offer excellent dexterity and elasticity. USDA accepted. 18 mil thickness and 12" L for work with pesticides having labels that refer to Category A on the EPA's Chemical Resistance Category Selection Chart. Light yellow color. Dozen pair. Imported. Specify Women's size: S (7), M (8), L (9) or XL (10).

18 MIL 12" gloves



Ansell 12" Economical Neoprene Gloves

These unlined neoprene gloves offer excellent resistance to a wide range of chemicals, including oils, acids, caustics and solvents. Gloves are also textured to increase chemical and abrasion resistance and feature a textured finish to improve grip on slippery surfaces. Curled fingers and contoured palm for long wearing comfort. For use with pesticides that have labels referring to Category A, C and E on the EPA's Chemical Resistance Category Selection Chart. Imported. Specify size: S (7), M (8), L (9) or XL (10) or 2XL (11).

17-MIL 12" gloves



\$ - Chloro-Flex" • 118¹¹ Neoprene Gloves

Thick rolled cuff for easy on/off

30-mil heavy weight unlined neoprene gloves offer excellent protection against agricultural chemicals, oils, acids, resins, alcohols, caustics and other petroleum-based materials. Ideal for applications involving oil spill cleanup and gear assembly. For use with pesticides having labels that refer to Category A, C and E on the EPA's Chemical Resistance Category Selection Chart. Imported. Specify size: L (9) or XL (10) or 2XL (11).

30-MIL 18" gloves



Heavy Natural Rubber Gloves

Unlined natural rubber gloves feature a smooth grip and a rolled cuff to catch drips. Extra-large sizing fits both hands. 100 open cuffs allow for easy on/off. For use with pesticides that have labels referring to Category A on the EPA's Chemical Resistance Category Selection Chart. Imported. Specify size: L (9) or XL (10) or 2XL (11).

35-MIL 24" gloves 6024



ELBOW LENGTH IDEAL FOR CLEANING TANKS

Length	Item No.	1-11	12"
18"		\$152/pr.	\$141/pr.
24"		\$280/pr.	\$2300/pr.

40-MIL 18" gloves 6028

Honeywell 11" Butyl Gloves

For certain high-toxicity pesticides, fumigants and anhydrous ammonia

Gloves offer good dexterity and a neoprene-like chemical protection. 11" L; unlined; rough finish. For use with pesticides having labels that refer to Category A, B, C, D or E on the EPA's Chemical Resistance Category Selection Chart. USA made. Specify size: S (8), M (9), L (10) or XL (11).

USA* MADE

16-MIL 11" gloves

Item No.	1-11	12"
M111	\$2730/pr.	\$2495/pr.



Ansell Barrier-M16" Chemical-resistant Multi-hazard Gloves

Five-layer laminated Barrier-M unlined gloves resist permeation and breakthrough to the broadest range of chemicals when the chemical hazard is not clearly identified. Often used as a liner inside leather gloves where mechanical damage is suspected.

2.5 MIL 16" glove



USA* MADE

Resistant to a Selection Chart. USA made. Size Large only.

Item No.	Price
182013	\$UO/pr.

Honeywell 13" unlined nitrile gloves offer improved touch sensitivity

Nitrile offers stronger wear resistance to cuts, lacerations and abrasions than other elastomers, resulting in dependable, long-lasting protection. These gloves also resist common solvents, oils and acids. Its flexible nitrile hand design improves dexterity and provides a natural fit. Suggested uses include food processing, chemical processing, parts cleaning, and automotive assembly. USDA accepted for food handling. 13" L with 10-mil thickness. Imported. Specify size: 9, 10 or 11.

10-MIL 13" gloves



Item No.	19	10+
11115	\$210/pr.	\$195/pr.

Glove Selection – Nitrile



Glove Category Selection Key

Label Code	Material Recommended by CDPR	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

Glove Selection

Nitrile Gloves		Price	Brand	Qty	Color	Dispos/Reusable	Sizes Available	Ambidextrous	Powdered Y/N	Thickness	Length	Lined Y/N	Lining Type	FDA Approved	Medical Grade Y/N
☐  14" 11-mil Knit Nitrile Food Handling Gloves (1 pr.) 10483		\$10.40	Mapa	Pair	Blue/Green	Reusable	XS, S, M, L, XL	N	N	11 mil	14"	Y	Cotton	N	N
☒  10-mil Nitrile Glove - 13"L 11966		\$2.10	North Safety	Pair	Blue/Green	Reusable	8, 9, 10, 11	No	No	10 mil	13"	N	NA	Y	N
☐  Showa-Best® Nitril-Solve® Chemical-resistant 30 Mil Nitrile Gloves 122040		\$6.95	Showa Best Gloves	Pair	Blue	Reusable	M, L, XL	No	No	30 mil	14"	Y	Knit	No	No
☐  Ansell 12" AlphaTec™-lined Chemical Resistant Nitrile Gloves (1 pr.) 138328		\$7.30	Ansell	Pair	Black/Red	Reusable	M, L, XL	No	No	NA	12"	Y	Knit	N	N
☐  GEMPLER'S® Nitrile 15-mil Flock-lined Gloves - Dozen Pair 151397		\$23.60	GEMPLER'S	12 Pair	Blue/Green	Reusable	S, M, L, XL	N	N	15 mil	13"	Y	Flock	N	N
☐  Mapa 13" Flock-lined Nitrile Gloves 214421		\$3.50	Mapa	Pair	Blue/Green	Reusable	XS, S, M, L, XL	No	No	18 mil	13"	Y	Flock	N	N
☐  Flock-lined Nitrile Gloves 1 Pair 13" 18-mil 4020K		\$3.50	Mapa	Pair	Blue/Green	Reusable	S, M, L, XL	N	N	18 mil	13"	Y	Flock	N	N
☒  GEMPLER'S® Nitrile Gloves 22-mil, Unlined, 1 Pair 4082K		\$10.70	GEMPLER'S	Pair	Blue/Green	Reusable	L, XL	N	N	22 mil	19"	N	NA	N	N
☒  GEMPLER'S® Nitrile Gloves, 15-mil, Unlined WEB727G		\$3.00 \$91.30	GEMPLER'S	Pair	Blue/Green	Reusable	XS, S, M, L, XL	N	N	15 mil	13"	N	NA	N	N
☐  Ansell Touch n' Tuff™ Disposable Nitrile Exam Gloves (100/box) WEBAE555		\$17.40 \$19.70	Ansell	100	Blue	Disposable	S, M, L, XL	Y	Lightly	5 mil	9 1/2"	N	NA	Y	N
☐  5-mil Nitrile Exam Gloves with Aloe 86686		\$19.90	Hi Five	100	Green	Disposable	S, M, L, XL	Yes	Y	5 mil	9 1/2"	N	NA	N	Y
☐  12"L Extended Cuff 6-Mil Nitrile Gloves 86687		\$13.40	Hi Five	50	Blue/Green	Disposable	S, M, L, XL	Y	Y	6 mil	12"	N	NA	N	Y
☐  N-DEX Nitrile Gloves, 4-mil, 100/box B7005		\$16.95	Showa Best Gloves	100	Blue	Disposable	S, M, L, XL	Y	Y	4 mil	9 1/2"	N	NA	N	N

<http://www.gemplers.com/compare/nitrile-gloves>

Glove Selection

Nitrile Gloves		Price	Brand	Qty	Color	Dispos/Reusable	Sizes Available	Ambidextrous	Powdered Y/N	Thickness	Length	Lined Y/N	Lining Type	FDA Approved	Medical Grade Y/N
Compare Selected Narrow Items by Selecting & Clicking Compare															
☐	 10-mil Nitrile Glove - 13"L 11966	\$2.10	North Safety	Pair	Blue/Green	Reusable	8, 9, 10, 11	No	No	10 mil	13"	N	NA	Y	N
☐	 GEMPLER'S® Nitrile Gloves 22-mil, Unlined, 1 Pair 4082K	\$10.70	GEMPLER'S	Pair	Blue/Green	Reusable	L, XL	N	N	22 mil	19"	N	NA	N	N
☐	 GEMPLER'S® Nitrile Gloves, 15-mil, Unlined WEB727G	\$3.00 - \$91.30	GEMPLER'S	Pair	Blue/Green	Reusable	XS, S, M, L, XL	N	N	15 mil	13"	N	NA	N	N

Glove Liners



Christopher McDonald

Take-Home Messages

- Wear chemical resistant gloves for all handling activities
- Consult the label and CA requirements for the appropriate glove material
- Check manufacturers' specifications for thickness, uses, lining type, etc.



Let's Talk About Respirators



We Need YOU!!

Volunteers needed for a short group activity



Discussion Question:

When do you have to wear a respirator?

Answer:

When required by:

Label

Permit conditions

Regulations

Employer

Discussion Questions:

How do you know what type of respirator to use?

How do you know what type of cartridge to use?

When do cartridges and filters have to be changed?

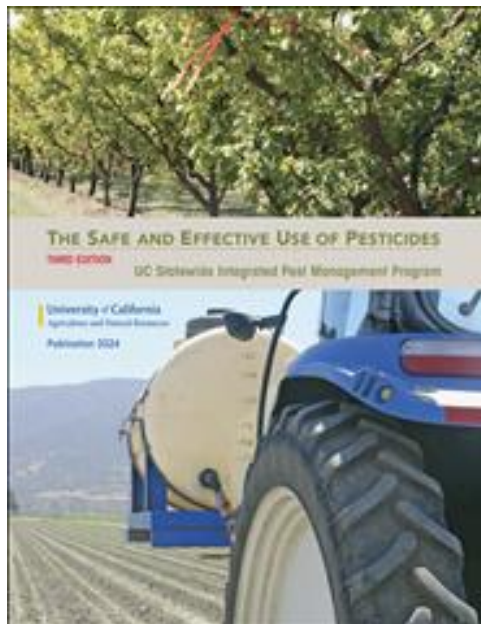
Cartridge Change-out Schedule

1. Odor or irritation, or
2. End of Service Life Indicator (ESLI), or
3. Label instructions, or
4. Manufacturer instructions, or
- 5. The end of the day's work period!**





UC IPM New Publication



The Safe and Effective Use of Pesticides, 3rd Edition

The first update to this key reference guide in over 15 years!

<http://anrcatalog.ucanr.edu/>

Questions?

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