



IT'S YOUR RIGHT TO KNOW!

**Helping Community Health Workers
Promote Chemical Safety on the Job**

JUNE 22, 2016
1 pm ET (Eastern Time)

WEBINAR FOR **MCN**

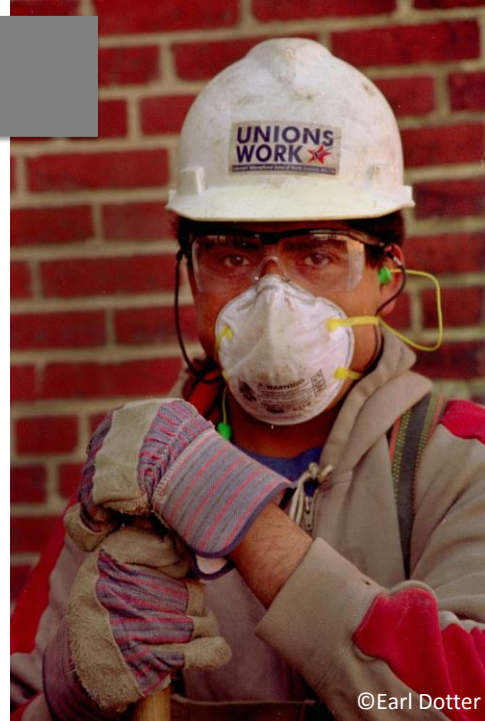
Kerry Brennan
Environmental and Occupational Health Program Manager
Migrant Clinicians Network

This webinar is adapted from the training curriculum *Seguridad en las Lecherías: Immigrant Dairy Worker Health and Safety Training* developed by the National Farm Medicine Center and Migrant Clinicians Network.

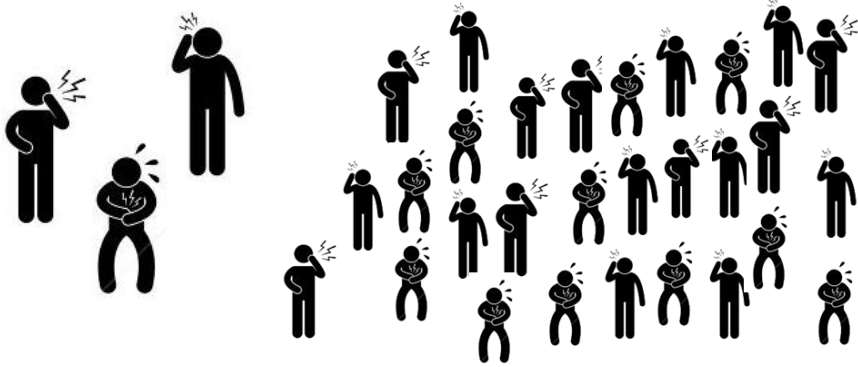


We will learn:

- How workers are exposed to chemicals
- Health effects of chemical exposure
- Basic safety practices
- How community health workers can promote chemical safety at work
- How to train workers about chemical safety



Despite the plant
being sealed, the
forklifts remained in
use



Washington State Department of
Labor & Industries

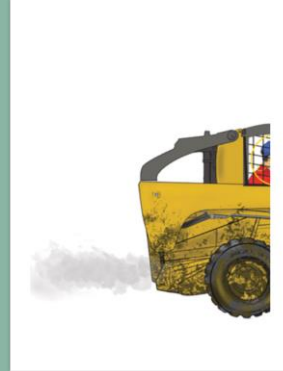
Different Forms of Chemicals



Solid



Liquid



Gas

If a worker is exposed to chemicals at work, what types of health effects might they experience?



Physical Hazard

Health Hazard

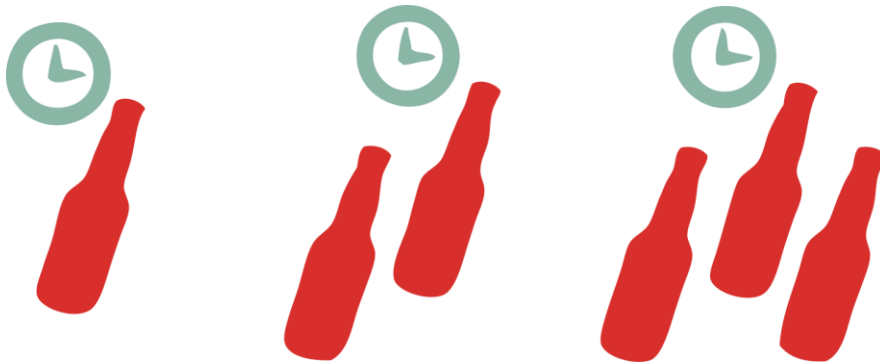




Do you know someone who has been harmed or become ill from working with chemicals?

Each day thousands of workers are exposed to chemicals in the workplace



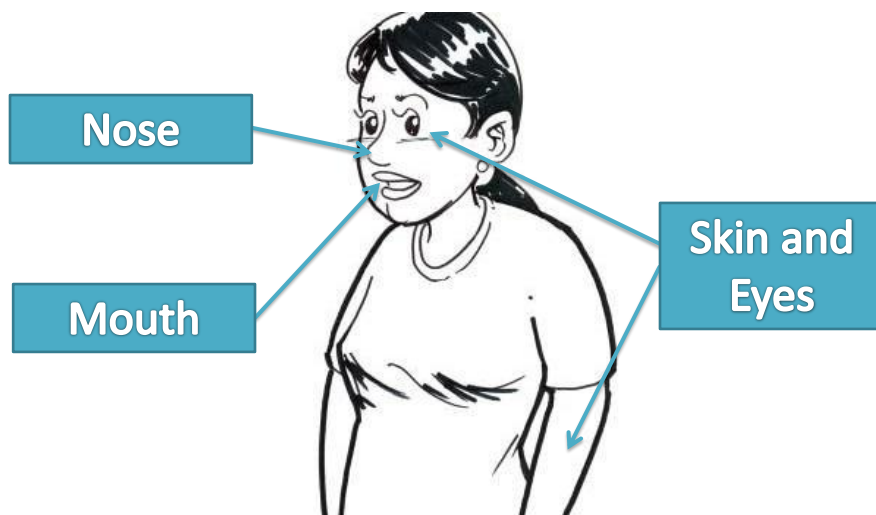


Dose-time relationship



How can chemicals enter the body?
Select all that apply

Routes of Exposure



Which of the following contributes to the way in which chemicals affect an individual?
Select all that apply

Other factors that impact how chemicals harm you

- Type of chemical
- Gender
- Age
- Health condition





Routes of Exposure





How can workers protect themselves from ammonia exposure?



Personal
protective
equipment
for ammonia
(PPE)



Personal protective equipment for **detergents**



Other common exposures

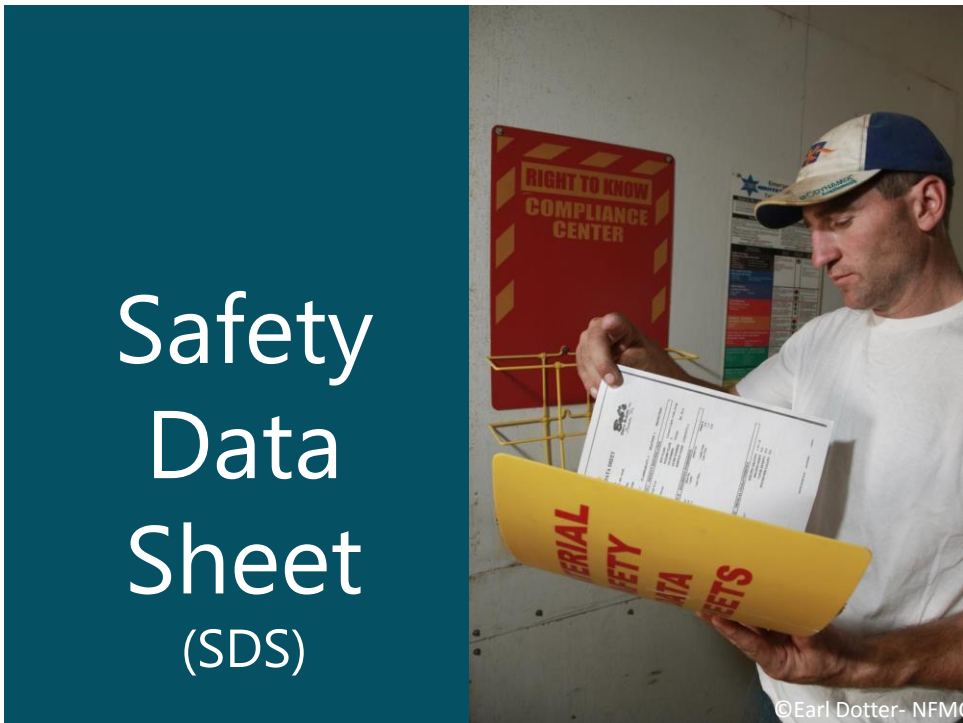


Pesticide application in the field



Workers are required to receive chemical safety training in a language they understand.







Which of the following information is provided in the Safety Data Sheet?

SAFETY DATA SHEET

Section 1. Identification

Product Name:	Ammonia, Anhydrous
Synonyms:	Ammonia
CAS REGISTRY NO:	7664-41-7
Supplier:	Tanner Industries, Inc. 735 Davisville Road, Third Floor Southampton, PA 18966
Website:	www.tannerind.com
Telephone (General):	215-322-1238
Corporate Emergency Telephone Number:	215-322-1236
Emergency Telephone Number:	Chemtree: 800-424-9300
Recommended Use:	Various Industrial / Agricultural

Section 2. Hazard(s) Identification

Hazard:	Acute Toxicity, Corrosive, Gases Under Pressure, Flammable Gas, Acute Aquatic Toxicity	
Classification:	Acute Toxicity, Inhalation (Category 4)	Note: (1 - Most Severe / 4 - Least Severe)
	Corrosion / Irritation (Category 1B)	
Severely Irritating:	Gases Under Pressure (Liquefied gas)	
	Flammable Gases (Category 2)	
	Acute Aquatic Toxicity (Category 1)	

Pictogram:

Signal word: **Danger**

Hazard statements: Harmful if inhaled.
Causes severe skin burns and serious eye damage.
Flammable gas.
Contains gas under pressure; may explode if heated.
Very toxic to aquatic life.

Precautionary statements: Avoid breathing gas/vapors.
Use only outdoors or in well-ventilated area.
Wear protective gloves, protective clothing, eye protection, face protection.
Keep away from heat, sparks, open flames and other ignition sources. No smoking.

applicable. See section 13 (Disposal Considerations).

NFPA Rating:



NFPA Numbering System:
0 = Least Hazardous / 4 = Most Hazardous

HMIS Classification:

ANHYDROUS AMMONIA	
HEALTH	3
FLAMMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	H

HMIS Hazard Index:
0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe

Section 3. Composition / Information on Ingredients

CHEMICAL NAME: Ammonia, Anhydrous

CAS REGISTRY NO.: 7664-41-7

EC NUMBERS: Ammonia

CHEMICAL FAMILY: Ammonia

COMPOSITION: 100% Ammonia

Section 4. First Aid Measures

IF INHALED: Immediately remove person to fresh air and keep comfortable for breathing. In case of severe exposure or if irritation or breathing difficulties or respiratory symptoms arise, seek medical attention. If not breathing, administer artificial respiration. If trained to do so, provide supplemental oxygen, if required.

IF ON SKIN: Immediately rinse skin with copious amounts of tepid water for a minimum of 20 minutes, removing clothing. Clothing that has been contacted by liquid ammonia may freeze to the skin. Thaw frozen clothing from skin before removing. Flush skin with copious amounts of tepid water for a minimum of 20 minutes. Do not rub or apply topical, occlusive compounds, such as ointments, certain creams, etc., on affected area. For liquid ammonia contact, seek immediate medical attention. For severe vapor contact or if irritation persists, seek medical attention.

IF IN EYES: Immediately rinse continuously with copious amounts of tepid water for a minimum of 20 minutes. Eyelids should be held apart and away from eyeball for thorough rinsing. Do not rub or apply topical, occlusive compounds, such as ointments, certain creams, etc., on affected area. Seek medical attention.

IF SWALLOWED: Rinse mouth. Do not induce vomiting. If conscious, give large amounts of water to drink. May drink orange juice, citrus juice or diluted vinegar (1:4) to counteract ammonia. If unconscious, do not give anything by mouth. Seek medical attention.

NOTE TO PHYSICIAN: Respiratory injury may appear as a delayed phenomenon. Pulmonary edema may follow chemical bronchitis. Supportive treatment with necessary ventilation actions, including oxygen, may warrant consideration.

Revision: May 1, 2015

Anhydrous Ammonia

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Section 8. Exposure Controls / Personal Protection

EXPOSURE LIMITS FOR AMMONIA: (Vapor)

OSHA	50 ppm,	35 mg / m ³ PEL	8 hour TWA
NIOSH	35 ppm,	27 mg / m ³ REL	15 minutes
	25 ppm,	18 mg / m ³ REL	10 hour TWA
	300 ppm,	IDLH	
ACGIH	25 ppm,	18 mg / m ³ TLV	8 hour TWA
	35 ppm,	27 mg / m ³ STEL	15 minutes

PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: Chemical splash goggles should be worn when handling anhydrous ammonia. A face shield can be worn over chemical splash goggles as additional protection. Do not wear contact lenses when handling anhydrous ammonia. Refer to 29 CFR 1910.133 for OSHA eye protection requirements.

SKIN PROTECTION: Ammonia impervious gloves and clothing (such as neoprene, butyl and Teflon) should be worn to prevent contact during normal operations, such as loading/unloading and transfers. Chemical boots can be worn as additional protection.

RESPIRATORY PROTECTION: Respiratory protection approved by NIOSH for ammonia must be used when applicable safety and health exposure limits are exceeded. For escape in emergencies, NIOSH approved respiratory protection should be used, such as a full-face gas mask and canisters/cartridges approved for ammonia or SCBA. A positive pressure SCBA is required for entry into ammonia atmospheres at or above 300 ppm (IDLH). Refer to 29 CFR 1910.134 and ANSI Z88.2 for OSHA respiratory protection requirements. Also refer to 29 CFR 1910.111 for respiratory protection requirements at bulk installations.

VENTILATION: Local exhaust should be sufficient to keep ammonia vapor below applicable exposure standards.

FOR A HAZARDOUS MATERIAL RELEASE RESPONSE: Level A and/or Level B ensemble including positive-pressure SCBA should be used. A positive pressure SCBA is required for entry into ammonia atmospheres at or above 300 ppm (IDLH).

gases o vapores inflamables. Deben usarse detectores de gas cuando existe la posibilidad de que se produzcan escapes de gases tóxicos. En los sitios próximos a cualquier posible exposición debe haber regaderas y estaciones de emergencia para lavarse los ojos. Use equipo de protección personal con todos los reglamentos nacionales y locales.

equipo de protección personal: Anteojos de protección. Guantes de protección. Ventilación insuficiente: use protección para respirar. Careta de escape para protección del rostro.



Emergencies



Call 911

- Address of the work place
- Condition of sick or injured worker
- Name of the chemical or explanation of the accident



The role of CHWs in promoting chemical safety at work.



How to train workers about chemical safety

- Trainer guide
- Activities
 - ✓ *Hand lotion*
 - ✓ *Games with prizes for the winner*
- Demonstrations
 - ✓ *Use Personal Protective Equipment*
 - ✓ *How to put on and take off gloves*
 - ✓ *How to wash hands*
 - ✓ *Bring copies of labels and Safety Data Sheets*



You can do it!

Learn:

- ▶ Policies and procedures.
- ▶ Risks.
- ▶ How to protect yourself.
- ▶ What to do in an emergency.
- ▶ Attend trainings.

Use:

- ▶ Personal Protective Equipment
- ▶ Appropriate clothes and shoes.

Practice:

- ▶ Stop, look, and think safely before doing.
- ▶ Report any dangers or injuries.



Post test polling questions

Which of the following can contribute to the way in which chemicals affect an individual?
Select all that apply.

- a) Body size
- b) Body temperature
- c) Age
- d) Duration of exposure

Workers are required to receive chemical safety training in a language they understand.

- True
- False

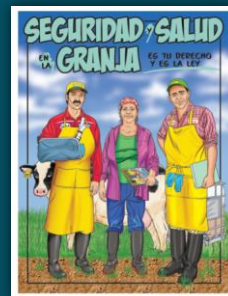
Which of the following information is provided in the Safety Data Sheets?

- a) First Aid measures
- b) Handling and storage
- c) Symptoms of exposure
- d) Instructions for disposal
- e) All of the above

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Resources

- *Safety and Health on the Farm- It's your right and It's the Law*
- OSHA webpage- Hazard Communication Standard



Thank you for your participation

Contact Information:

Kerry Brennan
512.579.4536
kbrennan@migrantclinician.org



References

- U.S. Department of Labor. Occupational Safety and Health Administration. Hazard Communication. Retrieved March 30, 2016.
<https://www.osha.gov/dsg/hazcom/>
- U.S. Department of Labor. Occupational Safety and Health Administration. OSHA Occupational Chemical Database. Retrieved March 30, 2016.
<https://www.osha.gov/chemicaldata/>
- U.S. Department of Labor. Occupational Safety and Health Administration. Chemical Hazards and Toxic Substances. Retrieved March 30, 2016.
<https://www.osha.gov/SLTC/hazardoustoxicsubstances/>

This presentation is adapted from Lesson 5: **Working Safely with Chemicals**, an educational module from *Seguridad en las Lecherías: Immigrant Dairy Worker Health and Safety Training Curriculum*.
<http://www.migrantclinician.org/seguridad>

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