Developing a Hazard Communication/Right-to-Know Program
Why Is This Important?

Workers have the right to know what hazardous substances they work with and what physical and health effects can result from their use.
Robert Hudson, 61
+ Worked in Buildings & Grounds/Maintenance
+ Addison CSD, Addison, NY
+ Was given muriatic acid to clean the pool 10-15 times.
+ Never received Hazard Communication training.
+ Was never given the proper Personal Protective Equipment.
+ Developed severe respiratory issues as a result of the exposure.

“The exposure at work has caused permanent disability. My life as it was is ended now. I can never work again.”
What is Hazardous?

- **Hazardous:** causing or potentially causing or contributing to an acute or chronic illness or any other risk to health or life.

- **Hazardous Chemical:** any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.
Regulations in New York State (NYS) that require the employer to communicate to employees the hazards of the chemicals they work with:

+ NYS Right-to-Know (RTK) Law
  (12NYCRR 820)

+ Federal Hazard Communication (HazCom) Standard.
  (29 CFR 1926.59) Construction
NYS RTK communicates chemical hazards to workers through:
- MSDSs and NYS DOH information sheets and
- Training.

HazCom communicates chemical hazards to workers through:
- a written HazCom program,
- container and pipe labeling,
- SDSs and
- employee training and information.
Who is Covered?

- Employee: a worker who may be exposed to hazardous chemicals under normal conditions or in an emergency.

- Hazard Communication does not cover office workers who encounter hazardous chemical ONLY on a non-routine, isolated instance. RTK does not have this exemption.
Exposure

- Routine exposure is exposure expected to occur in the course of employment as part of an employee's job duties or incidental thereto.

- Right to Know goes farther and covers employees subjected to a toxic substance through any actual or potential route of entry, for any period of time.

- Many toxic substances have permissible exposure limits.
Routes of Exposure

- Inhalation
- Absorption
- Ingestion
- Injection
Acute Effects

- Occur immediately, or a short time later.

- Symptoms of exposure.

- Often these effects will go away after exposure is removed.
Chronic Effects

- May take up to 30 years to show up.
- Are often overlooked because there may be no immediate signs of exposure.
- Often a result of low exposure to a hazardous substance over a long time.
- Long lasting and usually irreversible.
To Do List

- Identify Work Areas
- Chemical Product List & Assessment
- Gathering Information and Resources
- (M) SDS
- Creating a Written Program
- Labeling
- Signage
- Training
- Recordkeeping
The Team

- Employer is ultimately responsible.
- Needs to have a designee(s) to create the program.
- Best done in a committee.
- Who will answer questions for employees?
- Who is going to do the training?
- Who is going to maintain the program?
The Workplace

Hazard Communication:

+ Work area: a room or “defined space” in a workplace where hazardous chemicals are produced or used, and where employees are present.

+ An establishment, job site, or project, at one geographical location containing one or more work areas.

Right-To-Know:

+ Any location away from the home where any employee performs any work-related duty in the course of their employment.
Identifying Work Areas

- Make a list of all the locations where your employer has workers.
- List all of the departments at each of those locations.
- Are there similar places?
- Are there areas without hazardous substances?
- What buildings and businesses are nearby?
A hazardous chemical product list must be created.

Items can be found by:
- Walkthroughs
- Talking to Workers
- Purchase Orders
- (M) SDS

Must have the common name on the list match the SDS.

Not a list of quantity or volume;

Should not include every ingredient.

Best practice to include consumer use products.
Products that are used in the workplace in the same quantity and frequency as they are in the home are exempt.
Other Exemptions

- Hazardous Wastes (EPA)
- Hazardous Substances (at hazardous waste sites) (EPA)
- Tobacco products (CPSC)
- Food or alcoholic beverages for sale or employee use (CPSC)
- Cosmetics (for sale or employee use) (CPSC),
- Wood Products (that will not be cut)
- Solid products (that will not be changed)
- Drugs (FDA)
- Biological Hazards (OSHA BBP)
- Ionizing and Non-Ionizing Radiation (OSHA and NRC)
Columns for the chemical product list:

- Product Identifier (common name)
- Manufacturer
- Emergency Phone Number
- Work Area(s) Used
- OSHA Health Hazard Classifications
- OSHA Physical Hazard Classifications
- Primary Hazard
Health Hazards

- Acutely Toxic
- Skin Irritants/Corrosive
- Eye Irritant/Damage
- Respiratory/Skin Sensitizer
- Causes Cell Mutation
- Carcinogen
- Reproductive Hazard
- Single Exposure Target Organ Hazard
- Repeated Exposure Target Organ Hazard
- Aspiration Hazard
Physical Hazards

- Explosive
- Flammable Gas
- Flammable Aerosol
- Oxidizing Gas
- Pressurized Gas
- Flammable Liquid
- Flammable Solid
- Self Reactive
- Air Reactive Liquid
- Air Reactive Solid
- Self Heating
- React with Water to Make Flammable Gas
- Oxidizing Liquid
- Oxidizing Solid
- Organic Peroxide
- Corrosive to Metal
Neither HazCom or RTK require a hazardous chemical approval system.

When using the Hierarchy of Controls to address workplace hazards, the top two hazard controls are:

- Hazard Elimination
- Hazard Substitution

A chemical product approval system is one way to proactively implement the two best hazard control methods for workplace chemical hazards.
## Hierarchy of controls

<table>
<thead>
<tr>
<th>Step</th>
<th>Control Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eliminate the hazard</td>
<td>remove it completely from your workplace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If this isn't practical, then...</td>
</tr>
<tr>
<td>2</td>
<td>Substitute the hazard</td>
<td>with a safer alternative.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If this isn't practical, then...</td>
</tr>
<tr>
<td>3</td>
<td>Isolate the hazard</td>
<td>as much as possible away from workers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If this isn't practical, then...</td>
</tr>
<tr>
<td>4</td>
<td>Use engineering controls</td>
<td>adapt tools or equipment to reduce the risk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If this isn't practical, then...</td>
</tr>
<tr>
<td>5</td>
<td>Use administrative controls</td>
<td>change work practices and organisation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If this isn't practical, then...</td>
</tr>
<tr>
<td>6</td>
<td>Use personal protective equipment (PPE)</td>
<td>this should be the last option after you have considered all the other options for your workplace.</td>
</tr>
</tbody>
</table>
Gathering Info. & Resources

- Gather the SDSs
- Assess the work area for control measures already in place.
  - Chemical Alarm Systems
  - Warning Devices
  - Ventilation Units
  - Flammable and Chemical Storage Cabinets
- Review and evaluate other policies and programs that may be incorporated.
Safety Data Sheets (SDS)

- The SDSs must be readily available in each work area on each work shift.

- Formerly Material Safety Data Sheets (MSDSs), these are the information sheets that must be provided by the chemical manufacturer or distributor to the employers that use their chemical products.

- Now have a required 16 section format under HazCom.

  Complete sets for the workplace should be kept where they are available to:

- occupational safety and health staff
- medical personnel, and
- emergency responders.
Safety Data Sheets (SDS)

1) Identification.
2) Hazard(s) Identification.
3) Composition/Information on Ingredients.
4) First-Aid Measures.
5) Fire-Fighting Measures.
6) Accidental Release Measures.
7) Handling and Storage.
8) Exposure Controls/Personal Protection.
9) Physical and Chemical Properties.
10) Stability and Reactivity.
11) Toxological Information.
12) Ecological Information.
13) Disposal Considerations.
14) Transport Information.
15) Regulatory Information.
16) Other Information

Regulated by Other Agencies
Emergency Procedures

- Make sure there is access to emergency services with timely response.
- If using 911 and a cell phone, make sure the call will go to the appropriate call center.
- If a cell phone is used make sure there is service.
- Ensure that eyewash stations, fire extinguishers etc. are all working and accessible.
The Written Program

- Chemical Product List(s)
- SDSs
- Container Labels
- Pipe Labels
- Non-Routine Task Information
- Outside Employer Hazard Information
- Employee Information and Training
Manufacturer’s Labels

The Basic Parts of A GHS-Compliant Label

1. **n-Propyl Alcohol**
   UN No. 1274
   CAS No. 71-23-8

2. **DANGER**
   Highly flammable liquid and vapor. Causes serious eye damage. May cause drowsiness and dizziness.


4. Fill Weight: 18.65 lbs. Lot Number: 56754434
   Gross Weight: 20 lbs. Fill Date: 6/21/2013
   Expiration Date: 6/21/2020

5. Acme Chemical Company • 711 Roadrunner St. • Chicago, IL 60601 USA • www.acmechem.com • 123-444-5567

6. ![Pictogram]

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1. **Product Identifier** - Should match the product identifier on the Safety Data Sheet.
2. **Signal Word** - Either use “Danger” (severe) or “Warning” (less severe)
3. **Hazard Statements** - A phrase assigned to a hazard class that describes the nature of the product’s hazards
4. **Precautionary Statements** - Describes recommended measures to minimize or prevent adverse effects resulting from exposure.
5. **Supplier Identification** - The name, address and telephone number of the manufacturer or supplier.
6. **Pictograms** - Graphical symbols intended to convey specific hazard information visually.

Sample label courtesy of Weber Packaging Solutions • www.weberpackaging.com
Pictograms
Pictograms
Pictograms
Pictograms
Pictograms
Pictograms
Pictograms
Pictograms
# Pictograms

## HCS Pictograms & Hazards

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Flame</th>
<th>Exclamation Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Carcinogen</td>
<td>- Flammables</td>
<td>- Irritant (skin and eye)</td>
</tr>
<tr>
<td>- Mutagenicity</td>
<td>- Pyrophorics</td>
<td>- Skin Sensitizer</td>
</tr>
<tr>
<td>- Reproductive Toxicity</td>
<td>- Self-Heating</td>
<td>- Acute Toxicity (harmful)</td>
</tr>
<tr>
<td>- Respiratory Sensitizer</td>
<td>- Emits Flammable Gas</td>
<td>- Narcotic Effects</td>
</tr>
<tr>
<td>- Target Organ Toxicity</td>
<td>- Self-Reactives</td>
<td>- Respiratory Tract Irritant</td>
</tr>
<tr>
<td>- Aspiration Toxicity</td>
<td>- Organic Peroxides</td>
<td>- Hazardous to Ozone Layer (Non Mandatory)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gas Cylinder</th>
<th>Corrosion</th>
<th>Exploding Bomb</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Gases under pressure</td>
<td>- Skin Corrosion/ burns</td>
<td>- Explosives</td>
</tr>
<tr>
<td></td>
<td>- Eye Damage</td>
<td>- Self-Reactives</td>
</tr>
<tr>
<td></td>
<td>- Corrosive to Metals</td>
<td>- Organic Peroxides</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flame over Circle</th>
<th>Environment (Non-mandatory)</th>
<th>Skull &amp; Crossbones</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Oxidizers</td>
<td>- Aquatic Toxicity</td>
<td>- Acute Toxicity (fatal or toxic)</td>
</tr>
</tbody>
</table>
Each hazardous chemical product container labeled in the workplace must be marked with either the:

+ manufacturer’s shipping label information, or
+ product identifier as given on the SDS and
+ physical and health hazard warnings.
+ Employers must create a process to handle missing or defaced labels.
The DOT Hazard Classes:
- Class 1 - Explosives
- Class 2 - Gases
- Class 3 - Flammable Liquids
- Class 4 - Flammable Solids
- Class 5 - Oxidizers
- Class 6 - Poisons
- Class 7 - Radioactive
- Class 8 - Corrosives
- Class 9 - Misc. Hazardous Materials
Labels
Labels

National Fire Protection Association - NFPA

- **RED** - Flammability Hazard
- **BLUE** - Health Hazard
- **YELLOW** - Reactivity Hazard
- **WHITE** - Special Hazards

In the colored sections numbers indicate the severity of the hazard from 0 – 4.
Special Hazard Symbols:
Oxidizer - OXY
Acid - ACID
Alkaline - ALK
Corrosive - COR
Radiation Hazard – 🔄
National Fire Protection Association - NFPA

2-PROPANOL
isopropyl alcohol

FLAMMABLE!

chemical name
specific hazards (if any)
chemical synonym(s)
hazard rating
Labels

Hazardous Materials Information System - HMIS

Ammonium Hydroxide

Health: 2
Flammability: 0
Reactivity: 0
Personal Protection: J
Labels

Hazardous Materials Information System - HMIS

Ammonium Hydroxide

Health: 2
Flammability: 0
Reactivity: 0

Hazard Index:
4. Severe Hazard
3. Serious Hazard
2. Moderate Hazard
1. Slight Hazard
0. Minimal Hazard

Personal Protection: J

Consult your supervisor or S.O.P. for special handling directions
Labels

Hazardous Materials Information System - HMIS

[Image of a toluene label with health, flammability, reactivity, and personal protection information]
Labels

Consumer Product Labels

300 TILE CLEANER
PRECAUTIONARY STATEMENTS
KEEP OUT OF REACH OF CHILDREN
CAUTION - CORROSIVE

AVOID CONTAMINATION OF FOOD. USE IN A WELL VENTILATED AND STORE IN A SAFE PLACE, STORE WITH BOTTLE OPAQUE CAP CLOSED AND AWAY FROM CHILDREN.

Do not get in eyes or on skin or clothing. Do not take internally. Do not mix with other chemicals. Use only as directed.

CORROSIVE, CAN CAUSE SEVERE CHEMICAL BURNS TO EYES & SKIN, DO NOT BREATHE VAPOR OR FUMES, WEAR EYE GOGGLES AND RUBBER GLOVES AT ALL TIMES.

FIRST AID

In case of eye contact, immediately flush eyes with lots of running water for 30 minutes, lifting upper and lower eyelids occasionally. Prolonged contact may cause permanent eye injury. Get immediate medical attention. Until medical help arrives, apply one or two drops of 0.5% Pontocaine Hydrochloride followed by a second irritation for 15 minutes. Do not use oils or oily ointments unless directed by a physician. (Pontocaine Hydrochloride is a trademark of Winthrop Laboratories for Tetracaine Hydrochloride.)

In case of skin contact, immediately flush skin with cold water for at least 15 minutes. Remove contaminated clothing. Immerse and soak skin area in 0.1% Iodine. In case of contact with eyes, wash with water for 15 minutes. Use saturated compresses if area cannot be immersed. Change every 2 minutes.

Get medical attention regardless of how minor burns may appear. Wash contaminated clothing but destroy contaminated clothing. (Zephiran Chloride is a trade-name of Zephiran Chloride for Benzalkonium Chloride.) If swallowed, do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person.

300 TILE CLEANER
CONCENTRATED THICKER FORMULA
Removes Calcium Deposits, Dissolves Oils, Grease and Most Soils. Fast Acting!

CAUTION

KEEP OUT OF REACH OF CHILDREN • MAY BE FATAL IF SWALLOWED • CAN CAUSE SEVERE BURNS TO EYES AND SKIN

See and Read Important Safety Precautions and First Aid On Slide Panel

BIO-DEX LABORATORIES
Phoenix, Arizona

NET CONTENTS: 1 QT. (32 FL. OZ.) (946 LITERS)

BIO-DEX
© 2004

300 TILE CLEANER
Note: This Product contains Hydrochloric Acid, Phosphoric Acid and Hydrofluoric (HF) Acid. Always strictly follow all directions for use.

IMPORTANT

TEST THIS PRODUCT FIRST BY APPLYING DIRECTLY TO CALCIUM DEPOSITS ON TILES IN AN INCONSPICUOUS AREA. APPLY TO A MANAGEABLE LENGTH OF THREE TO FOUR FEET. SCRUB AND RINSE THOROUGHLY AFTER DESIRED RESULTS BEFORE MOVING ON TO THE NEXT AREA. DO NOT SPONGE LOOSENED CALCIUM OVER CLEAN TILE OR TILE MAY HAZE. KEEP WATER LEVEL ABOVE PLASTER BUT BELOW CALCIUM AREA WHEN USING THIS PRODUCT. (DO NOT DRIP DIRECTLY ON PLASTER OR IT MAY DISCOLOR IT.)

DIRECTIONS FOR USE
1. Wear PROTECTIVE EYE GOGGLES and RUBBER GLOVES before handling and using this product.
2. Use in a WELl VENTILATED area.
3. Keep squat top cap in CLOSED POSITION and the BOTTLE UPRIGHT in a SAFE PLACE when not in use.
4. See and read ADDITIONAL SAFETY PRECAUTIONS on label panel.

HOW TO APPLY
1. Heavy calcium build-up: Apply direct to bottle to calcium deposits. Allow to dwell for five minutes, then scrub area and rinse. Repeat if necessary.
2. Light calcium build-up: Apply as above and allow to dwell for three minutes, then scrub area and rinse. Repeat if necessary.
3. Tile Maintenance: Clean pool tile weekly using Bio-Dex Quick ‘n Thick Tile Cleaner. To reduce water hardness and calcium build-up, use Bio-Dex Protect-All Supreme.
4. Do not use 300 Tile Cleaner on granite, marble or new or clean tile area. Use on calcified area only.

NOTICE

The manufacturer or the seller makes no warranty, guarantee or representation, expressed or implied, concerning this material. Manufacturers only obligation shall be to replace such quantity of the product proved to be defective. Neither manufacturer nor the seller shall be held responsible in connection therewith. If the product proves to be defective, the buyer or consumer shall determine the suitability of the product for his intended use and assume all risk and liability in connection therewith.
Combined Product Labels
Labeling Exemptions

- Pesticides (EPA)
- Alcoholic Beverages (for nonindustrial use) (CPSC)
- Consumer Products (CPSC)
- Seeds (treated with pesticides) (USDA)
- Food, Food Additives, Color Additives, Cosmetics and Medical or Veterinary Devices (FDA)
Immediate Use

- There is a labeling exemption for containers with substances that will be used immediately.
- NOT recommended.

It is better for containers to look like the containers above.
HazCom – Requires that employees be informed of the hazards of chemical products in unlabeled pipes and RTK has no requirement.

All pipes carrying hazardous chemicals should be labeled.

The pipe labeling system used should be described in the written program. ANSI has a recommended pipe labeling system.
Trade Secrets

Any confidential formula, pattern or process, device information or compilation of information that is used in an employer’s business that gives the employer an opportunity to obtain an advantage over competitor’s who do not know or use it.
Chemicals Brought In

This includes chemical products brought in by employees, contractors, the public and nature/natural disasters. Once they are in the workplace, they become the employer’s responsibility unless the consumer use or other exemptions apply.
Outside Employers

- HazCom has a requirement for employers to share information when an outside employer comes in, RTK has no requirement.

When and outside employer comes to another employers workplace they must:

- Exchange SDSs for the chemicals the other employers employees could contact.

- Provide an explanation of their labeling system, unless only supplier labels are used.

- Inform the visiting employer of protection needed during normal working conditions and foreseeable emergencies.
Training

+ RTK requires training include an oral explanation of written materials provided and be done in a way that is understandable to the employee, and HazCom requires the training to be “effective.”

+ HazCom allows training based upon chemical class and RTK does not have a requirement for how the information is organized.

+ HazCom and RTK require employee training and information be provided upon hire, before a chemical product is used, and when a new chemical product is introduced to the work area. RTK also requires annual training.

+ HazCom and RTK both have a list of topics that must be presented in the training program.
Non-Routine Task Training

+ HazCom – Requires that employees be informed of the hazards of non-routine tasks and RTK has no requirement.

+ A non-routine task is performed infrequently and exposes employees to chemicals not normally present in the work area (for example cleaning a boiler or storage tank).
The NYS RTK program requires public employers to display this poster to notify their employees who to contact if they have questions.

Information must be filled in and correct.
Employee Rights

- Both RTK and Hazcom have employee rights.

- HazCom employee rights are access to the:
  - written program, and
  - SDSs.

- OSHA has whistleblower protection through the requirements of the OSH Act.
Employee Rights

RTK Rights:

+ Can refuse to use a chemical if MSDS not available within 72 hours.

+ Can request a copy of the training program information.

+ Cannot be disciplined for filing a complaint under the RTK law or regulation.

+ Employees can file a complaint with the NYS DOL or the NYS AGs office within 30 days if they have been disciplined for exercising their rights.

+ Employees cannot be asked or required to waive their rights under the RTK law and regulation.
RTK has a specific recordkeeping requirement and HazCom does not, within the regulation.

RTK records require the name, address and social security number of every employee who handles or uses a substance included in OSHA 29 CFR 1910 Subpart Z with the substances they handled. These records must be maintained for 40 years.

OSHA has a separate recordkeeping rule (29 CFR 1910.1020) where employers are required to maintain their chemical product lists as a record of exposure for 30 years.