Toxic Paint Removers: Safer Choices Campaign

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California Department of Public Health
Occupational Health Branch
Presenter: David Harrington

“I have no relationships to disclose”
Elements to Campaign

CA FACE/MMWR Fatality Investigations
Toxicology/industrial hygiene/exposure assessment
Regulatory Framework/CA Chemicals of Concern Program
Paint store employees survey

Needs Assessment/Materials Development
Outreach and Dissemination
Post-mailing paint store managers survey
Safer Substitutes Field Testing
Bilingual Worker Education: tailgate trainings, pocket card
Chemical Regulatory Authority - US

Executive Branch

FDA
Food, Drug & Cosmetics Act (1938)

OSHA
Occupational Safety & Health Act (1970)

EPA
Toxic Substance Control Act - TSCA (1976)

CPSC
Consumer Product Safety Act (1972)
Methylene Chloride Toxicity

**ACUTE**
- Narcosis (sleepiness, incoordination)
- Cardiac arrhythmias (can be fatal)
- Chemical asphyxia (can be fatal)

**CHRONIC**
- Liver test abnormalities
- Liver cancer (possible)
Industrial Hygiene Hierarchy for MeCl

• Substitution
  – Benzyl alcohol
  – Soy-based strippers
• Enclosure
• Ventilation
• PPE
  – Limitations of air-purifying respirators
  – Limitations of conventional glove materials
Fatalities in bathtub refinishers: US

• In early 2012, Michigan FACE, Fed/OSHA, and NIOSH collaborated on an MMWR article documenting a total of 13 fatalities among bathtub refinishers in US between 2000 and 2011.

• All were linked to methylene chloride inhalation.
Confined Space Fatality at Paint Co. (Southern California, December 2011)
Fatality at Church.
(Southern California, May 2010)
Methylene Chloride

Methylene chloride most often affects the central nervous system (the brain) causing headaches, nausea, dizziness, disorientation, and other effects like those of drinking alcohol. At very high levels it can cause unconsciousness and death. Methylene chloride causes cancer in animals, and is regulated as a cancer-causing substance in the workplace. Because it forms carbon monoxide in the body, methylene chloride can increase any carbon monoxide problem and can cause other brain symptoms in workers who have heart disease.

Some products that contain methylene chloride
- Paint remover
- Sprayer
- Adhesive
- Cleaner
- Degreaser
- Film remover
- Wax remover
- Varnish remover
- Wood preservatives

Some industries and job tasks where methylene chloride is used
- Construction
- Paint stripping
- Vapor degreasing
- Printing
- Textile manufacturing
- Spike extraction
- Electronics manufacturing
- Chemical manufacturing
- Cleaning

California Department of Public Health - Occupational Health Branch

Worker Fatality Alert
January 2012

Methylene chloride linked to worker death in tank

The California Fatality Assessment and Control Evaluation (CABACE) program tracks and investigates cases of death or injury at work, and makes prevention recommendations for employers and workers. The program recently issued a prevention announcement regarding a worker inside a tank at a Maryland manufacturing company. A second worker was also nearly killed after attempting to rescue him.

What happened? The victim was working by himself using a paint remover to remove paint from the inside of a tank. The product contained methylene chloride (at least 99%), methanol, and methacrylate solvents. The tank was 7 x 7 x 9' with a 7' opening at the top, and was a permissibly-qualified space under California OSHA regulations. The space was not adequately ventilated and the victim was not trained in confined space entry. The company had not conducted an assessment of the tank environment to monitor the victim while he worked in the tank. A co-worker attempted to rescue the victim after seeing the victim unconscious at the bottom of the tank. The co-worker also felt sick and had difficulty breathing, but was not treated on the scene. The local coroner's report states that the victim died of asphyxia due to inhalation of dichloromethane (methylene chloride). The co-worker was hospitalized and treated for methylene chloride poisoning.

What was the cause? Both of the workers were overcome by dangerous levels of solvent vapors inside the paint tank. The paint tank was a permissibly-qualified space, but proper testing, entry, and rescue procedures were not in place to prevent both workers from being overcome by toxic vapors. The victim was wearing a cartridge respirator, but it did not adequately protect against breathing methylene chloride vapor.

What can be done to prevent such incidents from happening again? Methylene chloride has been linked to over 50 worker deaths nationwide since the mid-1980s, primarily from use in poorly ventilated spaces. Methylene chloride is also considered by many regulatory agencies in the U.S. to cause cancer, and is banned from many uses in Europe.

Employers should establish procedures to clean paint tanks more frequently with water-based materials, before the paint is cured. If it is not possible, the cured paint should be stripped with abrasive removal methods. If toxic chemicals must be used inside a tank, employees must provide worker training in confined space entry and must follow OSHA regulations during entry. This includes providing proper ventilation, supplied air respirator protection, air monitoring, communications, and means of rescue and retrieval.

To read more about safety in confined spaces:

Methylene chloride is dangerous... There are safer alternatives!

METHYLENE CHLORIDE
(DICHLOROMETHANE)

What is the hazard? Methylene chloride (MeCl) is a solvent used in various industries, including paint stripping and bathtub refinishing. Short-term exposure to MeCl can cause headaches, dizziness, eye, nose and throat irritation, chest pain, and trouble breathing. Exposure to very high concentrations (for example, in enclosed spaces) can be fatal. Long-term exposure to MeCl increases the risk of their damage and cancer.

How might I be exposed? MeCl enters the body through the lungs when an individual inhales the vapors, or can be absorbed through the skin. Exposure to MeCl can happen even when there is no odor present.

Who is at risk?
- Since 2000, bathtub refinishers have died nationwide from overexposure to MeCl-based strippers while working in enclosed spaces.
- They were using products that contained a high percentage of MeCl.
- In 2001, a worker in a painting manufacturing plant died — and another became unconscious — when he used a MeCl-containing paint stripper inside a paint mixing tank (a permit-required confined space).
- Furniture strippers who use these products are also at risk of adverse health effects, including eye, nose and throat irritation, headaches, liver damage, and cancer.

To learn more about safety in confined spaces:

The Occupational Health Branch at the California Department of Public Health is devoted to protecting workers' health and safety through preventive activities. See healthcaresafety.state.ca.us/OHS/
Campaign: Three Key Messages

• Target Audience(s): paint stores, selected contractor categories, DIYers

• MeCl causes fatalities in confined spaces but for most users the chronic effects are key

• Provide reasons for not using MeCl and instead selecting safer paint removers

• If using MeCl or other toxic removers then here are the controls and PPE to follow
Materials Development Needs Assessment/Key Informants

Developed three draft materials:

• Display poster for stores
• Product shopping list for stores/contractors
• Personal protective equipment selection guide for stores/contractors
# Paint Stripping Products: Safer, Less Toxic Choices

Paint strippers containing methylene chloride are extremely toxic.

<table>
<thead>
<tr>
<th>Chemical Stripper Type</th>
<th>Hazard</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preferred:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Benzyl alcohol</td>
<td>Eye, nose, throat, &amp; lung irritation Skin irritation</td>
<td>Chemical goggles Gloves Asthmatics should not use these products</td>
</tr>
<tr>
<td>• Soy-based</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Dibasic esters</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Use with Caution:      |        |             |
| • Sodium hydroxide     | Eye injuries Chemical burns | Chemical goggles and face shield Apron Gloves: Caustic-resistant |
| • Magnesium hydroxide  |        |             |
| • Calcium hydroxide    |        |             |

| Extreme Caution:       | Reproductive harm | Chemical goggles Gloves: Ethylene-vinyl alcohol laminate Respirator: Organic vapor cartridge |
| • N-Methyl pyrrolidone (NMP)* |        |             |

| Not recommended:       | Neurological effects Heart attacks Death | Chemical Goggles Gloves: Ethylene-vinyl alcohol laminate Ventilation: Mechanical Respirator: Supplied-air if used indoors |
| • Methylene chloride*  |        |             |
| • Toluene*             |        |             |
| • Methanol*            |        |             |

* These chemicals are known to the State of California to produce cancer or reproductive harm. See safety data sheets for up-to-date formulations.

**Note:** Pre-1978 buildings and some furnishings may contain lead paint. For information on safe removal of lead-containing paint, see: [http://www2.epa.gov/lead](http://www2.epa.gov/lead)

For more information on paint stripper product selection, go to: [www.cdph.ca.gov/StripPaintSafely](http://www.cdph.ca.gov/StripPaintSafely)

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[CDPH Public Health]
California Department of Public Health, Occupational Health Branch
850 Marina Bay Parkway, Building P, 3rd Floor, Richmond, CA 94804

May 2013
GUIDE TO CHOOSING PAINT STRIPPING PRODUCTS: SAFETY CONSIDERATIONS

The following table is designed for use by contractors and tradespeople in choosing between alternate paint strippers. Prior to selecting a product, it is important to know what hazards the chemical ingredients might involve. This handbook is designed to assist you in that task.

Key to Recommendations:

<table>
<thead>
<tr>
<th>Preferred</th>
<th>Use with Caution</th>
<th>Extreme Caution</th>
<th>Not Recommended</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Paint Remover</th>
<th>Manufacturer</th>
<th>Methylene Chloride</th>
<th>Methanol</th>
<th>Toluene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piranha 4</td>
<td>Fiberlock Technologies</td>
<td>45-50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-Strip Professional Paint Remover</td>
<td>Sunnyside Corp</td>
<td>15-35%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ready Strip Pro</td>
<td>Sunnyside Corp</td>
<td>5-15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ready-Strip Spray</td>
<td>Sunnyside Corp</td>
<td>30-35%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strip-Tox</td>
<td>Sunnyside Corp</td>
<td>20-40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strypeeze Biodegradable</td>
<td>Savogran Company</td>
<td>40-45%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOT RECOMMENDED**

These products contain chemicals known to the State of California to cause cancer or reproductive harm. Methylene chloride use has resulted in death when used in enclosed spaces. It can penetrate respirator cartridges and most gloves.

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>MANUFACTURER</th>
<th>Methylene Chloride</th>
<th>Methanol</th>
<th>Toluene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formby's Paint &amp; Poly Remover</td>
<td>Formby's</td>
<td>81%</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Dad's Easy Spray Paint &amp; Varnish Remover</td>
<td>Sansher Corp</td>
<td>73-78%</td>
<td>&lt;13%</td>
<td></td>
</tr>
<tr>
<td>Green's Liquid - 96 Paint Remover</td>
<td>Green Products, Co</td>
<td>69-79%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green's Liquid Paint, Varnish &amp; Lacquer Remover</td>
<td>Green Products, Co</td>
<td>10-30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green's Semi-Paste Paint Remover</td>
<td>Green Products, Co</td>
<td>69-79%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jasco/Bix Varnish &amp; Stain Remover</td>
<td>W.M. Barr</td>
<td>25-40%</td>
<td>30-50%</td>
<td>10-20%</td>
</tr>
<tr>
<td>Jasco Brushable Semi-Paste Paint &amp; Epoxy Remover</td>
<td>W.M. Barr</td>
<td>60-100%</td>
<td>7-13%</td>
<td></td>
</tr>
<tr>
<td>Jasco Premium Remover</td>
<td>W.M. Barr</td>
<td>70-95%</td>
<td>1-5%</td>
<td></td>
</tr>
<tr>
<td>Jasco Semi-Paste Varnish &amp; Stain Remover</td>
<td>W.M. Barr</td>
<td>25-40%</td>
<td>30-50%</td>
<td>10-20%</td>
</tr>
<tr>
<td>Jasco Spray On Stripper</td>
<td>W.M. Barr</td>
<td>30-60%</td>
<td>15-40%</td>
<td>10-30%</td>
</tr>
<tr>
<td>Klean Strip Adhesive Remover</td>
<td>W.M. Barr</td>
<td>60-100%</td>
<td>10-30%</td>
<td></td>
</tr>
<tr>
<td>Klean-Strip Premium Sprayable Stripper</td>
<td>W.M. Barr</td>
<td>60-100%</td>
<td>10-30%</td>
<td></td>
</tr>
<tr>
<td>Klean-Strip Strip X Stripper</td>
<td>W.M. Barr</td>
<td>30-50%</td>
<td>10-30%</td>
<td>1-10%</td>
</tr>
<tr>
<td>Premium Stripper</td>
<td>W.M. Barr</td>
<td>70-95%</td>
<td>1-5%</td>
<td></td>
</tr>
<tr>
<td>Sprayable Strypeeze</td>
<td>Savogran Company</td>
<td>85-90%</td>
<td>5-10%</td>
<td>0-5%</td>
</tr>
<tr>
<td>Strypeeze Original</td>
<td>Savogran Company</td>
<td>25-30%</td>
<td>25-30%</td>
<td>15-20%</td>
</tr>
<tr>
<td>Zar Paint &amp; Varnish Remover</td>
<td>United Gisorsite Labs</td>
<td>90%</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>ZipStrip Contractors Plus Paint &amp; Varnish Remover</td>
<td>Absolute Coatings</td>
<td>16%</td>
<td>31%</td>
<td>18%</td>
</tr>
<tr>
<td>ZipStrip Premium Paint &amp; Finish Remover</td>
<td>Absolute Coatings</td>
<td>75-85%</td>
<td>7-15%</td>
<td></td>
</tr>
<tr>
<td>ZipStrip Trigger Spray Paint &amp; Varnish Remover</td>
<td>Absolute Coatings</td>
<td>&lt;80%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>ZipStrip Water-Rinsable Industrial Strength Paint &amp; Finish Remover</td>
<td>&quot;</td>
<td>80%</td>
<td>10-15%</td>
<td></td>
</tr>
</tbody>
</table>

**DISCLAIMER:** THIS TABLE MAY NOT BE COMPLETE, AND FORMULATIONS MAY CHANGE OVER TIME. REVIEW A CURRENT SAFETY DATA SHEET BEFORE SELECTING A PRODUCT.

California Department of Public Health, Hazard Evaluation System and Information Service - California Department of Industrial Relations - Rev. May 2013

http://www.cdph.ca.gov/programs/ohb/Pages/methylenechloride.aspx
# GUIDE TO CHOOSING PAINT STRIPPING PRODUCTS: SAFETY CONSIDERATIONS

The following table is designed for use by contractors and tradespeople in choosing between alternate paint strippers. Prior to selecting a product, it is important to know what hazards the chemical ingredients might involve. This handout is designed to assist you in that task.

### Key to Recommendations:

- **Preferred**: These products contain chemicals that can irritate the skin, eyes, nose, and throat. Gloves and chemical safety goggles and/or face shield should be worn. People with asthma should avoid using these products.
- **Use with Caution**: These products can produce serious skin and eye injuries if not used safely. They should be used only while wearing chemical safety goggles and face shield to protect against splash, and gloves recommended for caustics.
- **Extreme Caution**: These products contain NMP (N-Methylpyrrolidone), which is known to the State of California to cause reproductive harm. NMP can also irritate the skin, eyes, nose and throat. NMP-resistant gloves and chemical safety goggles and/or face shield should be worn.
- **Not Recommended**

### Preferred Products

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Manufacturer</th>
<th>Benzylic Alcohol</th>
<th>Dimethyl Glutarate</th>
<th>Dimethyl Adipate</th>
<th>Formic Acid</th>
<th>Acetone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crown Paint Strip Next</td>
<td>Packaging Service Co.</td>
<td>45-55%</td>
<td>5-15%</td>
<td></td>
<td>60-100%</td>
<td></td>
</tr>
<tr>
<td>Goof Off Cleaner VOC Compliant</td>
<td>W.M. Barr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hi-Speed Ready-Strip</td>
<td>Sunnyside Corp</td>
<td>25-35%</td>
<td>6-10%</td>
<td>2-6%</td>
<td>1-3%</td>
<td></td>
</tr>
<tr>
<td>Mötsenböcker’s Lift Off Paint and Varnish Remover</td>
<td>Mötsenböcker’s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oops! Painters Choice Liquid</td>
<td>Honomax Products</td>
<td>1-10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peel Away Smart Strip</td>
<td>Dumond Chemicals</td>
<td>30-50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safest Striper™ Paint and Varnish Remover</td>
<td>3M</td>
<td>1.5%</td>
<td>20-30%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZipStrip Premium Green Paint &amp; Finish Remover</td>
<td>Absolute Coatings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Use with Caution Products

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Manufacturer</th>
<th>Sodium Hydroxide</th>
<th>Magnesium Hydroxide</th>
<th>Calcium Hydroxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piranha 8</td>
<td>Fiberlock Technologies</td>
<td>Unknown %</td>
<td>Unknown %</td>
<td>Unknown %</td>
</tr>
<tr>
<td>Peel Away 1</td>
<td>Dumond Chemicals</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Extreme Caution Products

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Manufacturer</th>
<th>NMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citristrip Safer Paint and Varnish Stripper Aerosol</td>
<td>W.M. Barr</td>
<td>30-60%</td>
</tr>
<tr>
<td>Citrim Strip Stripping Gel</td>
<td>W.M. Barr</td>
<td>30-60%</td>
</tr>
<tr>
<td>Klean Strip Green Safer Paint &amp; Varnish Remover</td>
<td>W.M. Barr</td>
<td>30-50%</td>
</tr>
<tr>
<td>Peel Away 7</td>
<td>Dumond Chemicals</td>
<td>10-20%</td>
</tr>
</tbody>
</table>
Minimum Personal Protective Equipment Required for Paint Stripping
Refer to the Safety Data Sheet (or SDS) for information on composition of the chemical stripper and protective equipment needed

In enclosed areas, use of volatile solvents such as methylene chloride produces very high exposures, which may result in death. The California Department of Public Health, Occupational Health Branch, recommends minimizing exposures to chemicals that cause cancer and reproductive effects.
See: www.cdph.ca.gov/StripPaintSafely for a description of paint stripping products and their potential health hazards.

<table>
<thead>
<tr>
<th>Paint Stripper Type</th>
<th>Gloves*</th>
<th>Eye Protection</th>
<th>Respirator*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl Alcohol</td>
<td>Laminate of EVOH/PE (i.e. Silvershield®/4H by North) or Nitrile</td>
<td>Indirectly vented or unvented chemical goggles and face shield</td>
<td>NIOSH-certified respirator with organic vapor (OV) cartridges. If spray-applied, use OV cartridge with dust/mist pre-filter.</td>
</tr>
<tr>
<td>Caustics</td>
<td>Laminate of EVOH and PE (i.e. Silvershield®/4H by North) or Neoprene, or Nitrile</td>
<td>Indirectly vented or unvented chemical goggles and face shield</td>
<td>If spray-applied, use full face NIOSH-certified respirator with dust filters or half mask with eye protection.</td>
</tr>
<tr>
<td>N-Methyl-2-Pyrrolidone (NMP)</td>
<td>Laminate of EVOH and PE (i.e. Silvershield®/4H by North) or Butyl Rubber</td>
<td>Indirectly vented chemical goggles</td>
<td>Supplied-air (airline) respirator</td>
</tr>
<tr>
<td>Methylene Chloride-based</td>
<td>Laminate of EVOH and PE (i.e. Silvershield®/4H by North) or Polyvinyl Alcohol (PVA)</td>
<td>Indirectly vented chemical goggles unless full-face respirator worn.</td>
<td></td>
</tr>
</tbody>
</table>

* See notes on reverse side.

http://www.cdph.ca.gov/programs/ohb/Pages/methylenechloride.aspx

Occupational Health Branch, California Department of Public Health
May 2013
Key Informant Interviews

- 5 paint store managers, 3 painting contractors
- Developed a set of open ended questions
- Lengthy initial interviews and initial reaction to materials
- Left drafts of materials and cover letter to review
- F/U visit to gain feedback 1 week later
What did we hear?

Paint store managers:

• Volume of MeCl use by contractors/DIYers has dropped off: (pallets before and now cases)
• Less wholesale paint removal done: more spot removal (time, materials, lead paint issues)
• All think they sell safer removers but don’t really know how they are safer
• Confident that contractors know how to handle MeCl but not DIYers
What did we hear?

Paint store managers:

• All under misconception that PPE sold was adequate
• Rely on supplier sales reps and trade shows for information that they pass on
• Liked larger poster/ PPE list for better customer service
• Suggestions for resizing, displaying like other product spec sheets, keep it simple
• Some objected to product list as they carry all them
• Managers of chain stores have no authority to post
What did we hear?

Contractors

• Materials very useful but too many messages can make it hard to understand
• Liked product selection guide
• MeCl is toxic but they still need to use it due to excellent performance/site specific demands
• Warned that while they desired safer products would oppose banning MeCl
• Surprised to see that greener products, e.g. (Citristrip) are not as safe as they were told
Outreach/Dissemination

• Initial hazard alert mailed to 700 furniture and bathtub refinishers

• Developed topic page for website included in O/R

• Mailing of packet to 2,400 paint/hardware stores in CA including order form for laminated poster

• Based on needs assessment decided not to mail to chain paint stores/big box stores

• e-OHW email with links sent to 6,400 stakeholders: trade organizations, unions, agencies, others
Outreach/Dissemination

• Article in CSLB newsletter available to all licensed contractors

• Single page letter with links mailed to 14,640 painting and 1,863 abatement contractors

• Spoke at 5 contractor meetings around CA

• Developed draft scope of work for Occupational Health Internship Program (OHIP) summer students

• Conducted outreach with contractor organizations and unions to undertake OHIP project
Products most commonly found in paint stores
OHIP Project Objectives
Erika Meza & Jeremy Sosman
(students join team)

1. Assess value of poster at sample of paint stores
2. Learn about current paint remover product use and health & safety experiences
3. Provide and evaluate 2 safer substitute products
4. Develop worker bilingual training tool and conduct tailgate trainings
5. Develop worker educational material
Methods

• Visit paint stores
  – 7 ACE Hardware (solely owned)
  – 6 Independent
• Interview store managers
• Provide additional educational materials
• Paint Store Results:
  – Managers were receptive
  – Poster on display but still lack of knowledge
Field work methods

• First: key informant interviews / pilot survey
• Visit 10 worksites to conduct worker & supervisor interviews
  – 38 workers
  – 12 supervisors
• Baseline interviews
• Distribute samples of 2 safer alternatives at each site
• Follow-up interviews
• Tailgate training
Demographics

• **Workers** (n=38)
  • 3 Females; 35 Males
  • 98% Hispanic/Latino
  • 92% Spanish-speaking
  • Average Age: 41
  • Average years as painter: 12
  • Union member: Yes 12 (32%); No 26 (68%)

• **Supervisors/Managers** (n=12)
  • 12 Males
  • 66% Hispanic/Latino; 33% Caucasian
  • Average Age: 50
Residential job in SF

Small cabinet refinishing site (women)

Commercial lead abatement union SF site
Baseline Interviews

Products currently used for paint stripping:

- Methylene Chloride: 80%
- Other chemical paint removers: 16%
- Non-chemical paint removers (i.e. heat guns): 4%
Health symptoms associated with different paint stripping products

Number of workers that reported experiencing the following symptoms:

- Chemical Burns
- Skin Irritation
- Eye, nose or throat irritation
- Headaches
- Dizziness
- Fatigue
- Drowsiness

Compared to previous chemical paint strippers, safer alternative products showed a significant reduction in the number of symptoms reported.
### Safer Alternative Ratings

5 = Excellent  
4 = Very Good  
3 = Good  
2 = Fair  
1 = Poor

<table>
<thead>
<tr>
<th>How would you rate the...</th>
<th>Smart Strip n=34 responses</th>
<th>Safest Stripper n=24 responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Performance</td>
<td>3.10</td>
<td>1.88</td>
</tr>
<tr>
<td>Removal</td>
<td>3.23</td>
<td>1.92</td>
</tr>
<tr>
<td>Speed</td>
<td>2.69</td>
<td>1.55</td>
</tr>
<tr>
<td>Ease</td>
<td>3.98</td>
<td>3.42</td>
</tr>
</tbody>
</table>
Workers: Would you use this product again?

"Would you use this product again?"

[Bar chart showing responses for Smart Strip and Safest Stripper]
Worker Quotes and Anecdotes:

SmartStrip
• “It’s a good product for removing single coatings”
• “Jasco (MeCl product) works with a single application, SmartStrip needs 3”
• “It doesn’t burn your skin like Jasco does”
• “It works in removing the paint, it’s not very dangerous & doesn’t burn the skin”
• “It's safe so I like that but it takes kind of long”

Safest Stripper
• “Did half the work of SmartStrip”
• “Terrible”
• “Doesn’t work”
• “Did not remove the paint”
• “The problem is that sometimes homes have 5-6 layers of paint and this product only removes one layer at a time. But it is safer.”
<table>
<thead>
<tr>
<th>Preferred/PREFERIDO</th>
<th>Use with CAUTION/Usar con CUIDADO</th>
<th>Extreme CAUTION/CUIDADO extremo</th>
<th>NOT Recommended/No es recomendado</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poster game for tailgate training</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Erika & Jeremy conducting tailgate training using board game
Prior to using a product, it is important to know what hazards the chemical ingredients might involve.

This pamphlet is designed to assist you in understanding the hazards, the required personal protective equipment, and how to identify the safety ranking of each product.

If you are experiencing any symptoms please contact a medical professional immediately.

For more information on paint stripper product selection, go to: www.cdph.ca.gov/StripPaintSafety

For more information on Personal Protective Equipment requirements, go to: www.cdph.ca.gov/programs/whs/pdfs/ methylenechloride.pdf

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### Preferred / preferidos

<table>
<thead>
<tr>
<th>Preferred / preferidos</th>
<th>Use with caution / use con cuidado</th>
<th>Extreme caution / cuidado extremo</th>
<th>Not recommended / no se recomienda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl Alcohol Product</td>
<td>Caustics</td>
<td>N-Methyl Pyrrolidone (NMP)</td>
<td>Methylen Chloride based</td>
</tr>
<tr>
<td>Hazards / peligros:</td>
<td>Eye injuries / lesiones en los ojos</td>
<td>Reproductive system harm / daño al sistema reproductivo</td>
<td>Neurological Effects / efectos neurologicos</td>
</tr>
<tr>
<td>Eye irritation / irritación de los ojos</td>
<td>chemical burns / quemaduras quimicas</td>
<td>Heart Attacks / ataques al corazón</td>
<td>Death / muerte</td>
</tr>
<tr>
<td>Lung irritation / irritación de los pulmones</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin irritation / irritación de la piel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Asthmatics should NOT use these products / Asma síntomas no deben usar estos productos

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### Preferred / Preferidos

Look for these active chemical ingredients on the label when selecting a product / Busque estos ingredientes en la etiqueta al seleccionar un producto

<table>
<thead>
<tr>
<th>Preferred / Preferidos</th>
<th>Use with caution / Use con cuidado</th>
<th>Extreme caution / Cuidado Extremo</th>
<th>Not recommended / No recomendado</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl Alcohol Soy-Based Dibasic Esters</td>
<td>Hydroxide Magnesium Hydroxide Calcium Hydroxide</td>
<td>N-Methyl Pyrrolidone (NMP)</td>
<td>Methylen Chloride Toluene Methanol</td>
</tr>
<tr>
<td>Chemical goggles / Gloves: Nitrile</td>
<td>Chemical goggles and face shield / Apron / Gloves: Caustic-resistant, neoprene</td>
<td>Chemical goggles / Gloves: Butyl rubber / Respirator: Organic Vapor cartridge</td>
<td>Chemical Goggles / Gloves: Polyvinyl Alcohol (PVA) / Respirator: Supplied air respirator</td>
</tr>
</tbody>
</table>

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"Worker Pocket Guide"
In closing...

- Difficult to assess impact of general outreach on its own as there are many variables (#layers of paint, time, materials etc.)

- Raised awareness for safer alternative products with key audiences: paint store managers, contractors, unions, workers

- Provided workers and supervisors with a hands on experience using safer products

- Obtained performance data: safer substitutes show mixed results & do not perform as well as MeCl but...
In closing...

• Many contractors are no longer heavy users of MeCl and use only in difficult areas as hazards are too high and too difficult to manage.

• Preference for caustics or citrus type removers over Me Cl but with their own hazards and waste issues there are openings for truly safer products...

• Consumption/demand will not shift unless policy & regulations change and R&D rushes in to meet new demand.

and
In closing...

The Four P’s are met:

**Product:** is it a solution? (does it perform well?)

**Price:** MeCl hazards are high & difficult to manage but... actual price is too high MeCl $28 vs. SmartStrip $48.

**Place:** Is it available? On the shelves? Can I buy it easily?

**Promotion:** messaging that is memorable and persuasive
For more information

You can also find more information on the HESIS/OHB/CDPH website:

http://www.cdph.ca.gov/programs/ohb/Pages/methylenechloride.aspx

or

Email: Jennifer.McNary@cdph.ca.gov