# Job Safety Analysis

**Safety Information for The University of North Carolina at Chapel Hill**

**Polychlorinated Biphenyls (PCBs) Window Caulk Removal**

**All UNC Shops**

**The term “caulk” will be used to describe caulking, sealants, or paints.**

<table>
<thead>
<tr>
<th>Title</th>
<th>Work Task</th>
<th>Hazards</th>
<th>Controls</th>
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</thead>
</table>
| Pre-Operation and Preparing for the Job | 1. Assess the window, door, expansion joint or similar building component.  
2. If a caulk or sealant product is present and the building was constructed between 1950-1970 or underwent a renovation involving any of the building components within that time period, contact EHS to determine the presence PCBs.  
3. Check whether the caulk is hard and brittle (aged and weather-exposed caulks frequently seen in exterior areas) or elastic and soft (primarily in areas protected from sunlight and weather, and located indoors).  
4. No heating or dry removal of the caulk will be allowed.  
5. Review the laboratory results/report with EHS.  
6. Based upon the condition of the caulk, tools may include utility knife, chisel, hammer, crowbar, putty knife, scraper, electrical joint cutter with oscillating blade, and HEPA vacuum.  
7. Items required include Rags, PIPE-X-METAL-X (solvent for the removal of oily, dirty metal surfaces) or Less-Than-Ten (for porous | 1. Not having correct tools and training to complete abatement.  
2. Injury or possible death.  
3. Assess for any electrical hazards, overhead issues.  
4. Inhalation hazard associated with PCBs.  
5. Skin, eye, ingestion and inhalation hazards.  
6. High winds can spread contamination beyond the work area.  
7. Heat or dry removal will increase the inhalation risk and contamination. | 1. Understand the building/structure that work will be performed.  
2. Assess foliage or other obstacles that might impede access.  
3. Ladders or scaffolding to assist with heights. Read the JSAs for ladders, scaffolds, man lifts and fall protection.  
4. Refer to the inspection report prepared by EHS prior to performing disturbance of PCB components.  
5. Wet methods and HEPA vacuum are essential dust control requirements.  
6. Review all SDS for the solvent and new caulk application. |
surfaces such as wood) or a similar product.
8. Containment items required include polyethylene sheeting (minimum of a 4 mil thickness), tape, water, disposal bag and waste drum (provided by EHS HMF location)
9. Ask the Supervisor to alert building occupants of the work request, the hazard and work procedures including PPE requirements.
10. Do not perform any abatement activities in high winds.

<table>
<thead>
<tr>
<th>Selection of Personal Protective Equipment (PPE)</th>
<th>Site Preparation</th>
<th>Performing Removal of the Caulking/Cleanup</th>
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</thead>
<tbody>
<tr>
<td>1. Ensure that the employee understands and don’s all proper PPE that is adequate for this job description.</td>
<td>1. Assess and connect to power source for HEPA vacuum and other electrical tools.</td>
<td>1. Based upon the condition of the caulk, utilize the necessary tools to begin removing the caulk. Use a HEPA vacuum in conjunction with the removal process if dust is generated.</td>
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<td>2. Install a trough beneath the window using the polyethylene sheeting to capture all solid and liquid waste from the removal activities.</td>
<td>1. PCB hazard</td>
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<td>3. Install a poly seal on the interior of the window.</td>
<td>2. Slips, trips and fall hazard when working on a ladder/scaffold/man lift.</td>
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<td>4. Install a layer of 6 mil polyethylene sheeting beneath the work area and extend 10 from the building. Demarcate the area with Red Danger barrier tape.</td>
<td>3. Solvents – eye, skin, ingestion or inhalation hazard.</td>
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<td>5. Don necessary PPE.</td>
<td>1. Dust control measures</td>
</tr>
<tr>
<td>1. Not having adequate PPE can cause injury or death.</td>
<td>2. Review JSA for ladder, man lift and/or scaffolding safety and fall protection.</td>
<td>2. Containment procedure in place.</td>
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<td>3. Prepare to install temporary lighting if required.</td>
<td>3. Prompt cleanup</td>
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<td>5. Isolate and restrict access to any building egress locations within the work zone.</td>
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</table>
2. Thoroughly clean all surfaces of loose debris using a HEPA vacuum.
3. Pour or dispense an acceptable cleaning-grade solvent onto the cloth. A plastic (solvent-resistant) squeeze bottle works best. Do not dip the cloth into the container of solvent, as this will contaminate the cleaning agent.
4. Wipe vigorously to remove contaminants. Check the cloth to see if it has picked up contaminants. Rotate the cloth to a clean area and re-wipe until no additional dirt is picked up.
5. Immediately wipe the cleaned area with a separate clean, dry cloth.
6. Allow time for the solvent to completely dry.
7. Collect and place the polyethylene sheeting and all waste into a waste container.
8. Rags, mops, gloves, disposable suits and similar materials resulting from cleanup activities, must be disposed of properly. The caulking and contaminated polyethylene sheeting must be discarded as hazardous waste. Contact EHS for disposal.
9. Thoroughly wash hands prior to installing the new caulk.
10. Install new caulk such as Master Seal MP-1.
Employees must receive training on this JSA, PPE, ladder safety, scaffolding, and man lifts. EHS website at http://ehs.unc.edu/training/self-study/.

Supervisor is responsible for ensuring the employee reviews the JSA and the EHS website guidelines.

Created: Janet Phillips, August 28, 2017
Revised: March 26, 2024

Referenced Material
EHS PCBs website; EPA website: https://www.epa.gov/pcbs/steps-safe-pcb-abatement-activities.

Contact Info
For more information about this JSA and other JSAs, contact: Department of Environment, Health and Safety
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