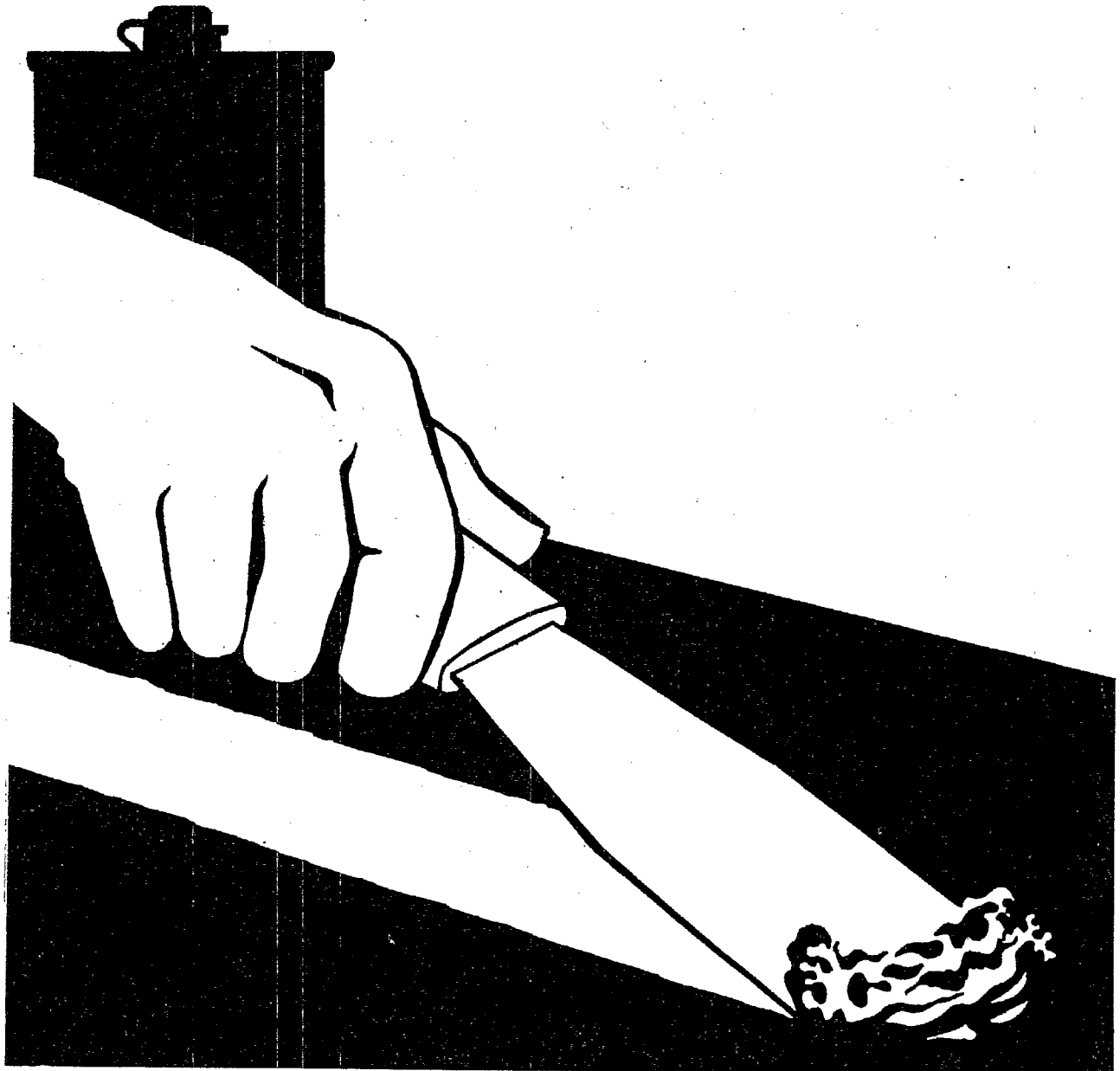


742F95002



# What You Should Know About Using **PAIN STRIPPERS**



---

# What You Should Know About Using Paint Strippers

**If not properly used, paint strippers are hazardous to your health and safety.**

Paint strippers contain chemicals that loosen paint from surfaces. These chemicals can harm you if not used properly. Some paint stripping chemicals can irritate the skin and eyes, or cause headaches, drowsiness, nausea, dizziness, or loss of coordination. Some may cause cancer, reproductive problems, or damage of the liver, kidney, or brain. Others catch fire easily. Proper handling and use of paint strippers will reduce your exposure to these chemicals and lessen your health risk.

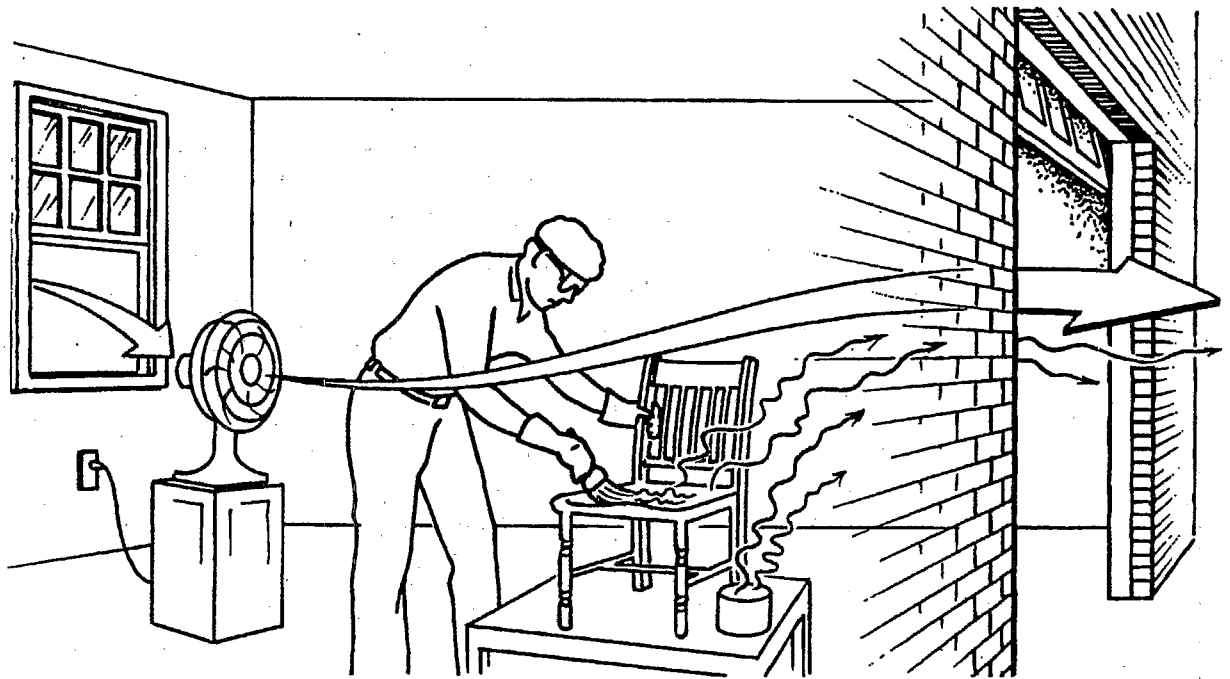
**General Safety Precautions**

Paint strippers contain different chemicals, and the potential hazards are different for various products. Each product has specific safety precautions (see the section on paint stripper types, page 4). However, there are some general safety steps to keep in mind when using any paint stripper. If you use paint strippers frequently, it is particularly important that you follow these steps:

- 1. Always read and follow all the instructions and safety precautions on the label.** Do not assume you already know how to use the product. The hazards may be different from one product to another, and the ingredients in individual products often change over time. The label tells you what actions you should take to reduce hazards and the first aid measures to use.
- 2. Wear chemical-resistant gloves** appropriate to the type of stripper being used (see manufacturer's instructions). Common kitchen latex gloves do not provide enough protection.
- 3. Avoid getting the paint stripper on your skin or in your eyes.** Wear protective clothing and goggles appropriate for the project and type of stripper.

**4. Use paint strippers outdoors if possible.** If you must use them indoors, cross-ventilate by opening all doors and windows. Make sure there is fresh air movement throughout the room. Ventilate the area before, during, and after applying and stripping. Never use any paint stripper in a poorly ventilated area. If work must be done indoors under low ventilation conditions, consider having the work done professionally instead of attempting it yourself.

**5. If you must work indoors, always work so the stripper fumes are blowing away from you and to the outside** (see illustration below). A fan can be used to improve cross-ventilation and to ensure fresh air movement. A fan is particularly important for *nonflammable* products that evaporate quickly, such as methylene chloride. Electrical sparks from fans may increase the chance of *flammable* paint strippers fumes to catch fire.



---

**6. Do not use flammable paint strippers near any source of sparks, flame, or high heat.** Do not work near gas stoves, kerosene heaters, gas or electric water heaters, gas or electric clothes dryers, gas or electric furnaces, gas or electric space heaters, sanders, buffers, or other electric hand tools. Open flames, cigarettes, matches, lighters, pilot lights, or electric sparks can cause the chemicals in the paint strippers to suddenly catch fire.

**7. Only strip paint with chemicals that are marketed as paint strippers.** Never use gasoline, lighter fluid, or kerosene to strip paint.

**8. Dispose of paint strippers according to the instructions on the label.** If you have any questions, ask your local environmental sanitation department about proper disposal.

## Types of Paint Strippers

### **Solvent-Based Strippers**

Most paint strippers are solvent-based. Solvents dissolve the bond between wood and paint. Solvents also can dissolve other materials, including the latex or rubber of common household or dish washing gloves. Some solvents will irritate or burn the skin. Some solvents may cause serious health effects even if contact does not immediately cause pain. In addition, many solvents evaporate quickly and you can easily inhale them. Inhalation of these solvents can produce health effects immediately or years after exposure.

It is especially important to use paint strippers containing solvents that evaporate quickly either outdoors or in an indoor area with strong fresh air movement. Some paint strippers contain solvents that do not evaporate quickly. When using these strippers indoors, be sure to open windows and doors to provide fresh air movement in and out of the work site. You should always follow the manufacturer's instructions and safety precautions.

---

Use the amount of stripper recommended by the manufacturer to avoid buildup of harmful fumes.

The different types of solvent-based paint strippers and their potential hazards and safety precautions are:

**Methylene chloride (also called dichloromethane, or DCM) —**

Methylene chloride is the most commonly used chemical in paint strippers. Methylene chloride products come in two varieties. One type is nonflammable, while the other type is flammable. The flammable paint strippers have less methylene chloride but have other flammable chemicals, including acetone, toluene, or methanol.

Methylene chloride causes cancer in laboratory animals. The U.S. Environmental Protection Agency (EPA) and the U.S. Consumer Product Safety Commission (CPSC) consider the chemical to be a potential cause of cancer in humans. Methylene chloride evaporates quickly, and you can inhale it easily. Breathing high levels of methylene chloride over short periods can irritate the eyes, skin, nose, and lungs. It can also cause dizziness, headache, and lack of coordination. Your body changes some inhaled methylene chloride to carbon monoxide. Carbon monoxide lowers the blood's ability to carry oxygen. This can cause problems for people with heart, lung, or blood diseases who use methylene chloride paint strippers indoors without fresh air cross-ventilation. High exposures to methylene chloride for long periods can also cause liver and kidney damage.

- It is very important to reduce your exposure to methylene chloride vapors.
- It is very important to have a lot of fresh air when using methylene chloride products.
- Use methylene chloride paint strippers outdoors if possible. If you must use them indoors, open all doors and windows to ensure that the fresh air is moving in and out of the room.
- For indoor use of *nonflammable* methylene chloride strippers, also use a fan to keep fresh air moving

---

throughout the work area. Electrical sparks from fans may increase the chance of *flammable* paint strippers fumes to catch fire.

- The safest place to use *flammable* methylene chloride strippers is outdoors away from any source of sparks, flame, or high heat.

#### **Acetone, toluene, and methanol —**

These chemicals are commonly used together. All three chemicals evaporate quickly and are very flammable. Breathing high levels of these chemicals can cause a variety of effects, including drowsiness, dizziness, and headache. Breathing high levels of toluene may harm unborn children. Breathing very high levels for a long period may cause brain damage. Toluene and methanol are poisonous if swallowed.

- To avoid fire and health problems, it is very important to use products containing these chemicals only in areas with plenty of fresh air.
- Do not work near an open flame, pilot lights, or electrical sparks when using flammable paint strippers. Do not use strippers near gas stoves, kerosene heaters, gas or electric water heaters, gas or electric clothes dryers, gas or electric furnaces, gas or electric space heaters, sanders, buffers, or other electric hand tools.

#### **N-methylpyrrolidone (NMP) —**

Excessive contact with NMP may cause skin swelling, blistering, and burns. These skin reactions may not appear until some time after exposure. N-methylpyrrolidone can readily get into the body through the skin and may cause health problems. NMP may cause reproductive problems and harm to unborn children.

- It is very important to wear chemical-resistant gloves and avoid skin contact when using this solvent.
- Wash hands immediately after use, even when wearing gloves.
- Gloves should fit properly and be chemical-resistant. Common kitchen latex gloves do not provide enough protection.

- 
- Avoid using this product for extended periods in an enclosed area without open doors or windows to the outside for cross-ventilation.

**Dibasic esters (DBE), including dimethyl adipate ester, dimethyl succinate ester, and dimethyl glutarate ester—**

Much less is known about the possible health effects of these chemicals than about most of the other paint stripping chemicals. Some people using DBE products without fresh air have reported temporary blurred vision. Repeatedly breathing DBE damages the cells lining the nose of laboratory animals. Some strippers include a mixture of DBE products and NMP.

- Avoid using this product for extended periods in an enclosed area without open doors or windows to the outside for cross-ventilation.
- Use appropriate protective clothing and provide fresh air to the work site when using these products.

**Caustic-Based Strippers (not flammable)**

Caustic alkalis react with the paint coating and loosen it from the surface. One of the chemicals in this type of stripper is sodium hydroxide (lye). Some people do not use caustic alkalis because caustic products can darken wood and raise the grain. Caustics can cause severe burns to skin and eyes even on short contact. Therefore, be very careful to keep caustic chemicals away from skin and eyes and wear protective clothing. If contact occurs, wash off immediately with cold water. Caustics are also highly toxic if swallowed.

- It is very important to avoid skin and eye contact when using caustic alkalis.
- Use gloves that fit properly and are appropriate for caustic alkalis.
- Wear appropriate protective clothing and goggles when using caustic alkalis.

---

## **Other Types of Paint Strippers**

Some paint strippers have a citrus smell or make "environmentally friendly" claims. However, these paint strippers may be hazardous despite the smell and environmental claims.

- It is important to use appropriate protective clothing and fresh air for cross-ventilation when using these products.

For more information on indoor air quality, contact:

U.S. Environmental Protection Agency  
Washington, DC 20460  
800-438-4318

or

U.S. Consumer Product Safety Commission  
Washington, DC 20207  
800-638-2772

TTY for individuals who are deaf or hard of hearing or people with speech impairments:  
800-638-8270.

Consumers can get recall information via Internet gopher services at [cpsc.gov](http://cpsc.gov) or report product hazards to [info@cpsc.gov](mailto:info@cpsc.gov).

This document may be reproduced without charge, in whole or in part, without permission, except for uses that imply that EPA or CPSC considers one type of paint stripper to be better or worse than another.