

# Workshop Safety 101



**How to not hurt yourself and become a  
burden to your family.**

**And finish your boat on time.**

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## You should be able to...

1. Leave with the same number of fingers
2. Leave with the same number of eyes.
3. Leave with roughly the same number of brain cells.  
Within  $\sim 10\%$  +/-

Otherwise known as;

Things I wish I would have done when I was younger.





# **Most Injuries Are Not Caused by a Lack of Knowledge.**

**We injure ourselves by;**

- 1. Rushing**
- 2. Fatigue**
- 3. Routine and endless repetitions**
- 4. One shortcut**





Table saw



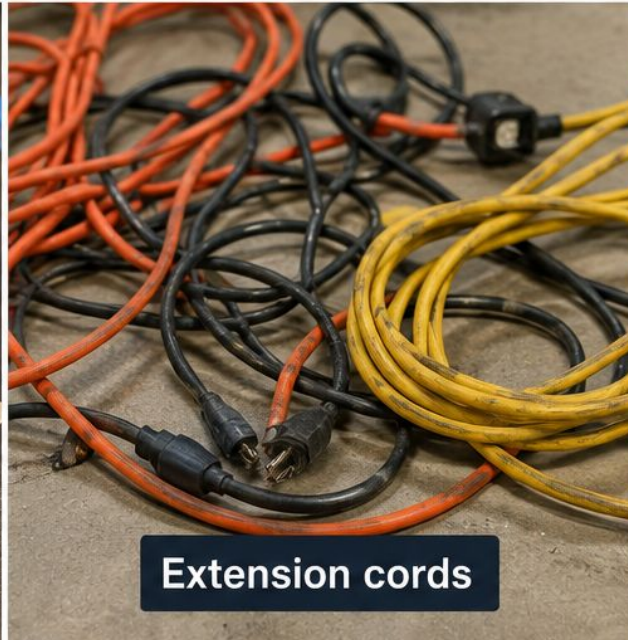
Random orbital sander



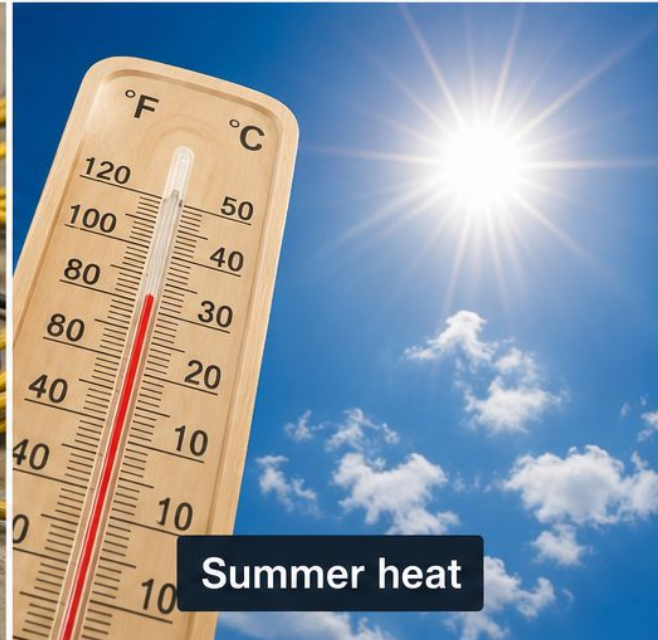
Spray gun



Epoxy mixing

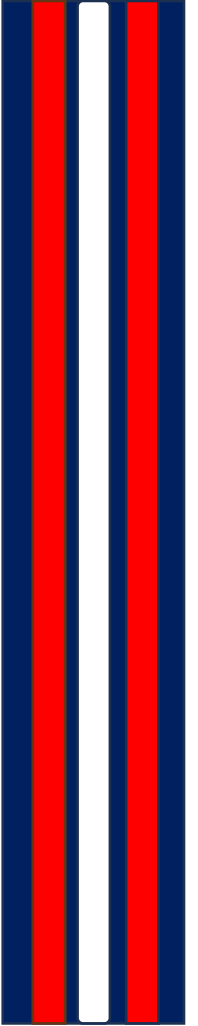


Extension cords



Summer heat





# Respirators Matter

**Hazard**

**Recommended Filter**

**Sawdust**

**N95 or P100 particulate**

**Hardwood dust**

**P100 preferred**

**Epoxy sanding**

**P100**

**Spray enamel**

**Organic Vapor cartridge + P100 prefilter**

**Varnish**

**Organic Vapor cartridge**

**Lacquer**

**Organic Vapor cartridge**

**Shellac (alcohol based)**

**Organic Vapor cartridge**

**Solvents**

**Organic Vapor cartridge**

**Unknown**

**Ventilate first**



# Respirators Matter

## What Does P100 Mean?

- P = Oil proof
- 100 = 99.97% filtration

## Excellent for

- sanding
- fiberglass
- epoxy dust
- hardwood dust





# Respirators Matter

## Organic Vapor Cartridges

- mineral spirits
- lacquer thinner
- acetone
- MEK
- xylene
- toluene

Usually combined with a P100 pre-filter.

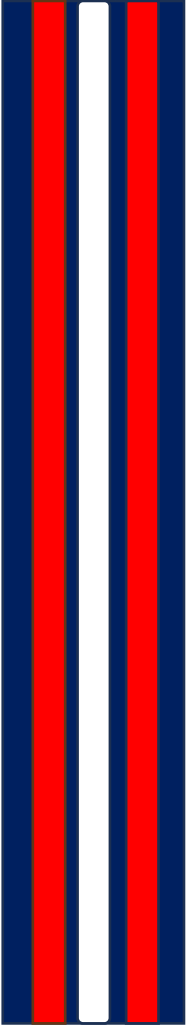




# Heat Illness

## Heat Exhaustion

- sweating
- weakness
- nausea
- headache
- dizziness





# Heat Illness

## Heat Stroke

- confusion
- collapse
- hot skin
- seizure

**Heat stroke is a medical emergency.**

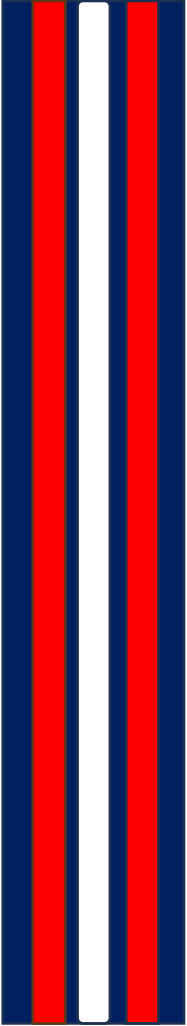
<https://www.osha.gov/heat-exposure/>





# Heat Illness

- Consume adequate fluids (water and sport drinks)
- Work shorter shifts
- Frequent rest breaks in the shade or away from heat sources
- Increased air flow, increased evaporative cooling
- Quickly identify any heat illness symptoms





# Eye Protection

**Safety glasses vs Face shield**

**Grinding requires BOTH.**

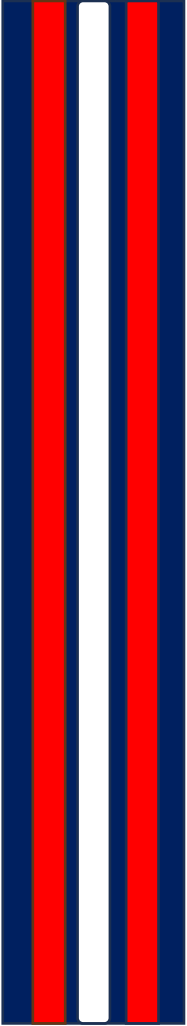
**Prescription glasses are NOT safety glasses.**





# Machine Safety

- **Never remove guards.**
- **Disconnect power before blade changes.**
- **Push sticks save fingers.**
- **Avoid loose clothing.**
- **No gloves around rotating machinery.**





# Fire Safety

**Stuff that burns....**

- **wood dust**
- **solvents**
- **finishes**
- **oily rags**

**Store oily rags in metal containers.**

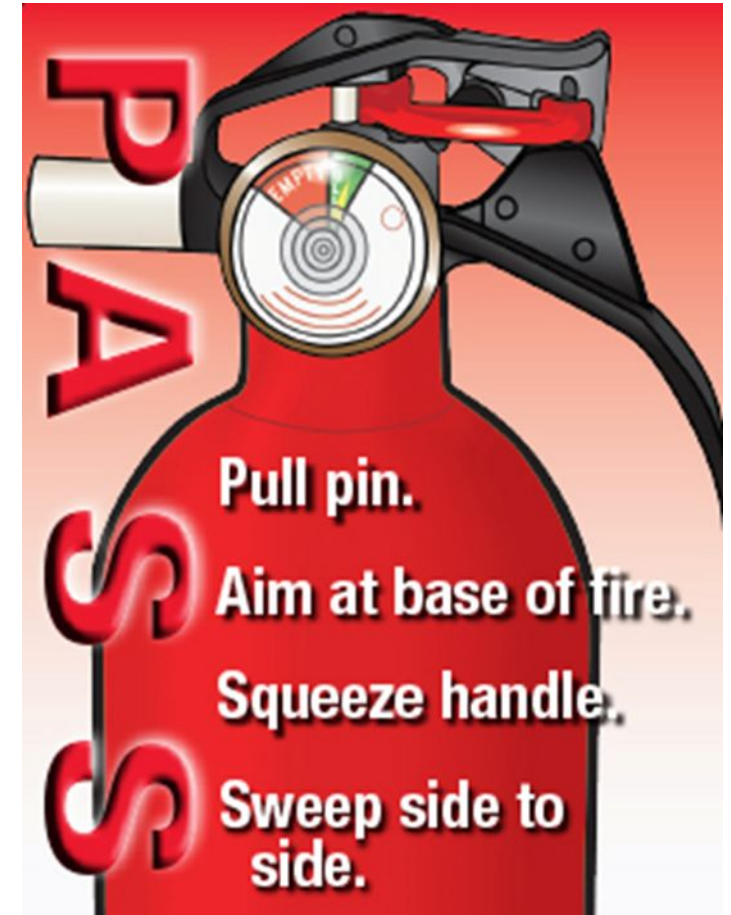
**Know where extinguishers are.**





# Fire Safety

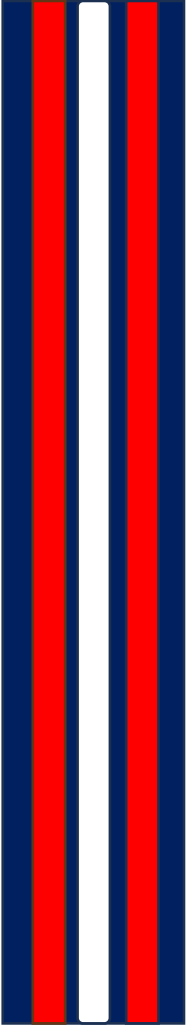
- Smoke detectors
- Carbon Monoxide detectors
- **PASS**





# Electrical Safety

- **Inspect cords.**
- **Don't overload circuits.**
- **Use GFCI outlets where appropriate around water.**
- **Replace damaged extension cords.**





# Stop the Bleed

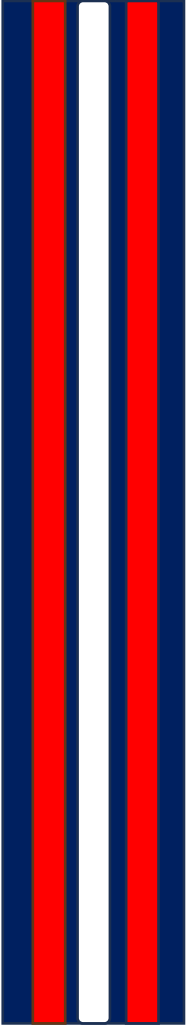
- Direct pressure. However and with whatever is clean.
- Elevate if possible.
- Call 911 if needed.





# Broken Bones

- Do not straighten.
- Immobilize.
- Ice if available.
- Call 911.



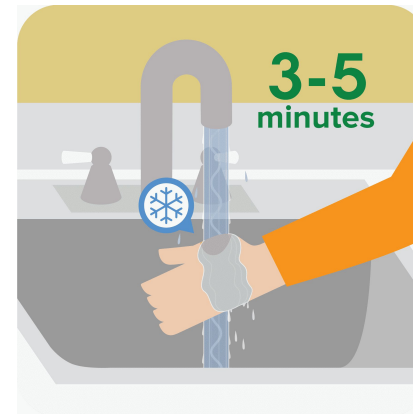


# Burns

- Cool running water
- 20 minutes
- No butter. No grease, No aloe. Just say no.

**Seek professional care for**

- chemical burns
- electrical burns
- large burns





# Chemical Exposure

- Read the SDS.
- Flush eyes immediately.
- Remove contaminated clothing.
- Call Poison Center if needed. 800-222-1222

**SAFETY DATA SHEET (SDS)**  
According to the Hazard Communication Standard  
(29 CFR 1910.1200)

**Epoxy Resin System  
Part A (Resin)**

Revision Date: 04/24/2024  
Version: 1.0  
Page: 1 of 2

**1. IDENTIFICATION**

**Product Identifier:** Epoxy Resin System - Part A (Resin)

**Other Means of Identification:** Epoxy Resin

**Recommended Use:** For industrial and professional use only.

**Restrictions on Use:** Not for consumer use.

**Manufacturer/Supplier:** ABC Composite, Inc.  
1234 Industrial Way  
Anytown, USA 12345  
(800) 555-1234

**Emergency Telephone Number:** CHEMTREC (24 hours)  
(800) 424-9300 (US/CA)  
+1 (703) 527-3887 (International)

**2. HAZARD IDENTIFICATION**

**Classification:** Skin Irritation - Category 2  
Skin Sensitization - Category 1  
Eye Irritation - Category 2A  
Acute Toxicity (Inhalation) - Category 4  
Aquatic Chronic - Category 2

**GHS Label Elements:**

**Pictograms:**

**Signal Word:** Warning

**Hazard Statements:**  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H352 Harmful if inhaled.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary Statements:**

**Prevention:**  
P201 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P203 Wash hands thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/eye protection/face protection.

**Response:**  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P373+P313 If eye irritation persists: Get medical advice/attention.  
P501 Collect spillage.

**Storage:**  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

**Disposal:**  
P501 Dispose of contents/container in accordance with local/regional/national regulations.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name                    | CAS No.    | Concentration (%) |
|----------------------------------|------------|-------------------|
| Bisphenol A epoxy resin (liquid) | 25068-38-6 | 60 - 80           |
| Aliphatic glycidyl ether         | 68609-87-2 | 10 - 30           |
| Proprietary additives            | —          | 1 - 5             |
| Non-hazardous ingredients        | —          | Balance           |

Specific chemical identity and exact percentage are withheld as a trade secret.

**4. FIRST-AID MEASURES**

**General Advice:** Show this safety data sheet to the doctor in attendance.

**Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms persist.

**Skin Contact:** Wash off with soap and plenty of water. Remove contaminated clothing. If irritation or rash occurs, get medical attention.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

**Ingestion:** Do NOT induce vomiting. Rinse mouth. Get medical attention immediately.

**Most Important Symptoms/Effects, Acute and Delayed:** May cause skin and eye irritation, allergic skin reaction, respiratory irritation. Overexposure may cause headache, dizziness, nausea.

**Indication of Any Immediate Medical Attention and Special Treatment Needed:** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media:** Foam, dry chemical, carbon dioxide, water spray.

**Unsuitable Extinguishing Media:** Do not use a solid water stream as it may scatter and spread fire.

**Specific Hazards Arising from the Chemical:** May produce toxic fumes of carbon monoxide, carbon dioxide, and other organic compounds when burned.

**Special Protective Equipment and Precautions for Fire-Fighters:** Wear self-contained breathing apparatus and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures:** Wear appropriate protective equipment. Ensure adequate ventilation. Evacuate unnecessary personnel.

**Environmental Precautions:** Prevent from entering drains, sewers, or waterways.

**Methods and Materials for Containment and Cleaning Up:** Contain spill. Absorb with inert material (sand, vermiculite, etc.). Collect in suitable container for disposal. Clean area thoroughly.

**7. HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid breathing vapors or mist. Avoid contact with skin and eyes. Use in well-ventilated area. Wear appropriate PPE. Wash thoroughly after handling.

**Conditions for Safe Storage, Including Any Incompatibilities:** Store in a cool, dry, well-ventilated place. Keep container tightly closed. Store away from incompatible materials: strong oxidizers, strong acids, strong bases.

**Specific End Use(s):** For industrial and professional use only.

Date of Preparation: 04/24/2024



# Your Safety Culture

- "Hold on a second."
- Watch out for each other.
- Speak up.
- No shortcuts.
- Assertive, not Aggressive.





# Resources

Poison Control

American Red Cross First Aid/CPR/AED Online Class

CPR

First Aid

Heat Stress

Respirators

US Coast Guard Auxiliary

Take a Boating Class

Get a Vessel Safety Check

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