SKILLSIGNAL™
Construction Safety & Compliance

# TOOLBOX TALK

*The Skull and Crossbones: A Mouthful, a Splash, or a Few Breaths Is Enough*

| TOPIC NO. | DURATION | AUDIENCE |
|---|---|---|
| **HC-09** | **10 to 15 min** | **All Crew** |

**OSHA REFERENCE** 29 CFR 1910.1200 Appendix A & C · 29 CFR 1926.55 · 29 CFR 1926.103

| PROJECT / JOBSITE | DATE | PRESENTED BY |
|---|---|---|
| | | |

## 01 THE HOOK

**START HERE**

*Every other health pictogram is about what happens over time or with enough exposure. The skull is about what happens today. “Fatal if swallowed.” “Toxic in contact with skin.” “Fatal if inhaled.” The manufacturer is telling you that the amount it takes to kill a person is small, and the time it takes is short. There is no slow version. On a jobsite it shows up on the rust remover with hydrofluoric acid in it, the methanol in the fuel can, the pesticide the landscaper left in the shed, and a few concrete admixtures nobody reads. You do not have to memorize them. You have to stop when you see the skull and read the next line.*

## 02 WHAT THE SYMBOL COVERS

SKULL AND CROSSBONES

### ACUTE TOXICITY, CATEGORIES 1 TO 3

Under **1910.1200 Appendix A**, acute toxicity is harm from a **single exposure or several exposures within 24 hours**, by three routes: **oral** (swallowed), **dermal** (through skin), and **inhalation** (breathed in). Categories 1 and 2 say “Fatal.” Category 3 says “Toxic.” All three get the skull and the signal word **DANGER**. Category 4 (“Harmful”) gets the exclamation mark and WARNING instead. The route matters: a product can be Category 2 by inhalation and Category 4 by skin, and the label will say both.

## 03 HOW SMALL IS SMALL

| CATEGORY | ORAL (LD50) | WHAT THAT MEANS |
|---|---|---|
| CAT 1 | Fatal if swallowed | Up to **5 mg per kilogram** of body weight. For a 200-pound worker, about **half a gram**, a few drops. Hydrogen cyanide, some organophosphate pesticides, certain mercury compounds. |
| CAT 2 | Fatal if swallowed | Up to **50 mg/kg**. About a teaspoon or less for an adult. Sodium fluoride, some rodenticides, concentrated nicotine. |
| CAT 3 | Toxic if swallowed | Up to **300 mg/kg**. A mouthful. **Methanol** (fuel, some windshield fluid), **hydrofluoric acid** products, some glycol ether solvents. |
| CAT 4 | Harmful (exclamation mark) | Up to **2,000 mg/kg**. Still a poisoning, but it takes a lot more. This is where most household and jobsite products land. |

LD50 is the dose that kills half the test population. The point is not the number. The point is that **Category 1 through 3 are measured in drops and teaspoons, not gallons**, and the skin and inhalation routes can be just as fast. A product that is “Fatal in contact with skin” does not need a cut to get in.

## 04 THE THREE ROUTES AND HOW TO CLOSE THEM

ROUTE 1

### SWALLOWED: HANDS, FOOD, AND THE WRONG BOTTLE

Nobody drinks from the can on purpose. They eat a sandwich with contaminated hands, or they drink from a water bottle somebody refilled with something else. “Do not eat, drink, or smoke when using this product. Wash hands thoroughly after handling.” And **never, ever store a toxic product in a food or drink container.** That rule has a body count.

ROUTE 2

### THROUGH THE SKIN: IT DOES NOT NEED A CUT

Toxic liquids absorb through intact skin, faster through the thin skin on the wrists, neck, and face, and much faster if the skin is wet or cut. “Wear protective gloves and protective clothing” means the specific glove in SDS Section 8. Hydrofluoric acid goes through skin, through leather, and into bone. If it gets on you, flush for 15 minutes and go to the hospital even if it does not hurt yet.

ROUTE 3

### INHALED: THE ROUTE YOU CANNOT SEE

Vapor, mist, dust, and fume. A toxic product sprayed in a closed room, a dust from a bag, a fume off a hot process. **29 CFR 1926.55** sets permissible exposure limits and requires engineering controls first and **respirators** (**1926.103**) when controls are not enough. The SDS Section 8 names the limit and the respirator. “Use only outdoors or in a well-ventilated area” on the label is a hard rule, not a suggestion.

⚠ **IF SOMEONE IS EXPOSED, THE SDS AND THE POISON CENTER COME FIRST**

Skull and crossbones first-aid statements say “Immediately call a POISON CENTER or doctor.” The U.S. Poison Control number is **1-800-222-1222**, 24 hours. Get the SDS (Section 4) in your hand so you can read them the product name and ingredients. Do not induce vomiting unless the SDS says to. Do not give anything by mouth to someone who is drowsy. For inhalation, get them to fresh air first and keep them still. For skin, strip the clothing and flush. Then 911 if they are not improving or the SDS says so.

## 05 WHY IT MATTERS

### [ JOBSITE ]

**FOR THE CREW**

Most sites have very few skull-labeled products, which is why they get treated casually. A crew that stops at the skull and reads the route keeps the toxic product in its own locked cabinet, in its own container, and off the lunch table.

### [ INDIVIDUAL ]

**FOR YOU**

The skull is the one pictogram where a single mistake can be the last one. A mouthful, a splash on the wrist, a few breaths in a closed room. Gloves from the SDS, ventilation, and clean hands before food are the three habits that cover all three routes.

### [ HOME ]

**FOR LIFE OFF-SITE**

Antifreeze, methanol fuel, some pesticides, and concentrated pool or spa chemicals carry this symbol at home. Original container, locked up, never in a drink bottle. Poison Control is the same number.

## 06 TODAY'S DRILL

**TODAY'S DRILL** **FIND THE SKULL, FIND THE ROUTE**

Walk the chemical storage and the trades' gang boxes. Find any product with the skull and crossbones. Read the hazard statement and name the route: swallowed, skin, or inhaled. Then find SDS Section 8 for that product and read the glove and respirator spec. Check that the product is in its original container, labeled, and stored away from food, drink, and anything that could be mistaken for it. Report anything that fails.

## 07 CREW DISCUSSION

*Take 2 minutes. Pick one.*

1. What skull-labeled products are on this site? If you cannot name one, have you looked?
2. Where does this crew eat lunch, and what is on your hands when you do?
3. Has anyone ever seen a chemical stored in a water bottle, soda bottle, or coffee cup on a site? What was it?

## 08 ATTENDANCE & SIGN-OFF

All attendees confirm they participated in this Toolbox Talk and understand the content covered.

| NAME (PRINT) | SIGNATURE |
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**SUPERVISOR SIGNATURE**

_____ Date: _____

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