Dermal Absorption Safety Meeting Kit

WHAT'S AT STAKE

Your skin is your first line of defense but it's not impenetrable. Many chemicals used on the job can pass right through your skin without you noticing. Once absorbed, these substances can enter your bloodstream and travel to vital organs, causing short- or long-term health effects. The danger isn't always visible but it's very real.

WHAT'S THE DANGER

Not all chemical hazards come from breathing fumes — some enter silently through your skin. Dermal absorption is the process by which chemicals pass through the skin and enter the bloodstream. This can happen without cuts or visible irritation, especially with substances like solvents, oils, and industrial cleaners. The thinner or more sensitive the skin (like your wrists or face), the faster absorption can occur.

Invisible Entry, Serious Impact

You might not see or feel it happening — but that doesn't mean it's safe. Even a small splash or contact with contaminated gloves or tools can let harmful substances into your system. The risk is even greater when skin is sweaty, damaged, or exposed for long periods.

Common Substances That Absorb Through Skin

- Solvents (like toluene, xylene, acetone)
- Pesticides and herbicides
- Paints, coatings, and industrial dyes
- Fuels, degreasers, and lubricants
- Cleaning agents and corrosives

Health Effects Vary — But They're Often Serious

Once inside your body, these chemicals don't just stay on the skin — they can travel to your liver, kidneys, nervous system, or even cross the blood-brain barrier. Potential health effects include:

- Skin rashes, burns, or allergic reactions
- Liver or kidney damage
- Nervous system disorders
- Hormonal disruption or reproductive harm
- Increased risk of cancer with chronic exposure

HOW TO PROTECT YOURSELF

Preventing dermal absorption isn't just about avoiding spills — it's about building smart habits that protect your skin from invisible dangers.

Wear the Right PPE — and Wear It Right

Your best line of defense is a proper barrier between your skin and hazardous substances. Not all gloves or clothing are created equal — make sure your gear matches the chemical you're using.

- Choose chemical-resistant gloves (like nitrile, neoprene, or butyl rubber) — latex doesn't protect against most solvents.
- Use long sleeves, aprons, or coveralls when working with splash-prone materials.
- Make sure sleeves go over gloves, not tucked inside — this helps prevent drips from running down into your hands.

· Replace gloves if they're torn, degraded, or contaminated.

Wash Before You Eat, Drink, Smoke — or Touch Your Face — Even trace amounts of hazardous chemicals on your hands can be dangerous. Before you eat lunch, use your phone, or take a smoke break:

- Wash thoroughly with soap and water — not just a quick rinse.
- Use designated wash stations or hand sanitizers designed for chemical removal.
- Never use solvents or fuels to "clean" your hands — they increase absorption.

Keep Contaminated Gear and Tools Separate — If gloves, tools, or clothing get contaminated, don't bring them into break areas or vehicles. Even dried chemical residue can transfer to your skin or surfaces others will touch.

- Store PPE in clean areas — not in your locker next to your lunch.
- Wash or replace work clothing regularly — don't bring it home for laundry unless it's been decontaminated.
- Keep tools clean and inspect handles or grips that may absorb chemicals over time.

Cover Cuts, Rashes, or Damaged Skin — Broken or irritated skin absorbs chemicals more quickly and deeply. Use bandages or protective sleeves, and avoid working with hazardous substances if you have open wounds unless properly protected.

Follow the SDS (Safety Data Sheet) — Always review the chemical's SDS before use. It tells you what type of PPE is required, what first aid steps to follow if skin exposure occurs, and which areas of the body are most at risk.

Example:

Let's say you're cleaning tools with a solvent and wearing basic latex gloves. You think it's enough protection, but after an hour, your hands start to itch and burn. Turns out, that solvent eats through latex — and now your skin's absorbed it. Switching to nitrile gloves and checking the SDS beforehand would've prevented the exposure.

FINAL WORD

Your skin is one of your body's biggest organs — and one of the easiest ways for chemicals to get inside you. Just because a liquid doesn't burn or smell strong doesn't mean it's safe.