Dermal Absorption Safety Fatality File



Ethylene Oxide Burn in a Chemical Plant Worker

A chemical plant worker suffered a burn on his foot after ethylene oxide solution permeated through his shoe and remained in contact for several hours. The burn and irritation appeared with a delay of more than 12 hours post-exposure.

He had been working in a plant producing surfactants and concrete hardeners, where ethylene oxide was used in process.
Investigators noted that contaminated clothing and shoes were not removed immediately, and that delayed decontamination allowed for dermal absorption and tissue damage.

This case underscores how dermal absorption can cause serious tissue injuries when chemical contamination is not recognized and mitigated promptly. Use of proper protective barriers, immediate removal of contaminated clothing, and awareness of delayed symptoms are crucial to preventing harm.

Source: pmc.ncbi.nlm.nih.gov