

Hand Sanitizer Gel – Thermal Burn

What Happened

A worker performing activities for an Oil & Gas company used an alcohol-based hand sanitizer as recommended by current hygiene recommendations in the Site COVID-19 plan. Just after the application to his own hands, but before the liquid disinfectant had evaporated and completely dried, the worker touched a metal surface. On this metal surface, an accumulation of static electricity created an ignition source, and the disinfectant (ethyl-alcohol based) flashed, resulting in an almost invisible flame (blue) in both hands. The contractor managed to extinguish the flames but suffered from first and second-degree burns to both hands.

1. Hand gels contain high concentrations of alcohol. Once the hand sanitizer was applied, the worker did not ensure that the gel had completely evaporated before proceeding with their work activity.
2. Alcohol vapors can flame or flash if exposed to an ignition source, switches, or any surface containing static electricity.

Corrective/Preventive Actions

1. When using alcohol-based hand sanitizers, be sure to allow for the sanitizer to dry/evaporate before resuming work activity.
2. Avoid touching any surface until the gel has completely dried. Stay away from any potential ignition source while sanitizer is still wet and follow the directions and warning labels on the sanitizer container or review the SDS.
3. If you are not sure about the use of alcohol-based disinfectants, please use warm water and soap to wash your hands if available rather than using alcohol-based hand sanitizer.