

OSHA Training Toolbox Talk: Cutting, Welding, & Compressed Gas Safety – Protective Clothing

[Reference: 1910.252 / 1926.352 / CCOSH]

To most of us, it is second nature to put on a pair of gloves and a hood or shield when operating a welding machine or torch. However, the sparks and slag created during welding, cutting, and brazing operations create hazards to more than just our eyes, face, and hands; other parts of our bodies can be injured too. And in those cases where someone wears clothing and apparel made from the wrong kinds of material or design, the severity of those injuries can be quite severe, even deadly.

To help minimize the potential for injury due to sparks, slag, and high heat generated during welding, cutting, and brazing operations, remember the following:

- Do not wear clothing, jackets, shoes, or other apparel made from synthetic materials like nylon, polyester, or acrylic. This includes clothing and accessories made from synthetic blends, such as mix of a cotton and polyester. This is because, while synthetic fabrics actually resist igniting, they can easily melt when exposed to high heat and sparks, causing the material to literally melt onto your skin and produce severe burns.
- A good practice is to wear clothing made from heavyweight, tightly woven, 100% wool, cotton, or other fire-resistant material to prevent burning or ignition by hot metal, sparks, and open flames. This applies not only to your shirt and pants, but also to outerwear like coats or jackets, your undergarments such as t-shirts and briefs, and even your socks.
- Long-sleeved shirts with buttoned cuffs and collar work best to protect the neck and torso area. A leather or suede welding jacket can add extra protection when needed.
- Keep shirt pockets closed to avoid catching sparks or hot metal, preferably by wearing shirts with pockets that are covered with flaps that can be buttoned closed.
- Wear pants with no cuffs on bottom of the legs, as those catch sparks and slag. Pants should also cover the tops of your shoes or boots to prevent slag and sparks from entering them.
- Keep your boots or shoes fully laced to help prevent sparks from entering them and burning your feet or ankles.
- A fire-resistant skull cap or balaclava hood under your welding hood or shield can help protect your head from hot slag and sparks, as well as from harmful U.V. radiation.
- Keep your clothing and other wearable articles clean and free of oil, grease, and other combustible contaminants, as those can make clothing easier to ignite.
- Be aware that fire resistant clothing become less effective with repeated laundering and wear. Also, repair all frayed edges, tears or holes in clothing, as those areas ignite easily.
- Always remove ignition sources such as matches and cigarette lighters from your pockets. Hot slag or sparks could light the matches, or melt plastic lighter casings and ignite lighter fluid.
- Do not wear rings or other jewelry, as they conduct heat and trap sparks that burn your skin.

Does anyone have anything to add to today's discussion on proper protective clothing and associated articles to be used during conducting welding, brazing, and cutting operations? Please sign the training certification form to ensure you get credit for attending today's toolbox training session.