

## **IARC Classification Change Statement**

In August of 2018, the International Agency for Research on Cancer (IARC) published its Volume 118 Monograph, wherein they stated that they have determined that welding fumes and ultraviolet radiation from welding are carcinogenic to humans (Group 1). IARC had previously classified welding fumes as “possibly carcinogenic to humans,” Group 2B, in 1989. According to IARC, welding fumes cause cancer of the lung and positive associations have been observed with cancer of the kidney. Also according to IARC, ultraviolet radiation from welding causes ocular melanoma. IARC identifies gouging, brazing, carbon arc or plasma arc cutting, and soldering as processes closely related to welding.

The agency indicates in its monograph that the new classification is based on evidence from case studies and experimental research. According to the agency, cofounders such as asbestos exposure and tobacco use were determined to be inadequate to account for all of the excess risk indicated.

In accordance with sound welding practice, exposure controls must be considered and implemented where welding takes place. Adequate ventilation, including the use of local exhaust ventilation, continues to be required. Unless exposure levels are confirmed through properly conducted industrial hygiene assessments to be below the applicable limits, respiratory protection is required when welding. When choosing respiratory protection, ensure that it provides protection commensurate with the levels of employee exposure. In many cases, the use of positive pressure options like supplied-air or Powered Air Purifying (PAPR) systems may be necessary in order to provide an adequate level of protection. In addition to proper ventilation, other considerations might include changing the welding process or procedure to reduce the rate of fume production where this option is consistent with the welding application requirements.

Lincoln Electric continues to recommend that exposures in the workplace be controlled to levels below the TLV or the applicable regulatory exposure limit standard, whichever is the more conservative. As always, Lincoln Electric will continue to work with its customers to provide the solutions they need to weld safely and effectively.