



CSA Z462 Workplace Electrical Safety Standard, 2021 Edition

- “This Standard is based on NFPA 70E, Standard for Electrical Safety for the Workplace, and has been harmonized with Parts I, II, and III of the Canadian Electrical Code; CSA Z460, Control of hazardous energy — Lockout and other methods; and CSA M421, Use of electricity in mines. This revised edition of CSA Z462 has been developed by CSA Group from the original edition as promulgated by the National Fire Protection Association. In addition to its initial source, it includes significant revisions by CSA Group.” CSA Group www.csagroup.org/store/product/Z462-15/
- “CSA Z462 includes additional annexes that were not adopted into NFPA 70E. In the 2021 edition of CSA Z462, additional changes were included of a technical nature, related to the arc flash PPE category method, that will not be published in NFPA 70E.” Len Cicero www.arcflash.ca
- Adopted by companies across industry sectors where it applies to their facilities, but not to their specific industries (i.e., railway, electrical utilities, marine and telecommunications) as indicated in CSA Z462, Scope Clause 1.2 Application.
- “Offers direction on integrating electrical safety programs into OHS management systems, helping to comply with due diligence requirements.” Energy Safety Canada: Flame Resistant Workwear (FRW) A Program Development Guideline www.energysafetycanada.com
- As an electrical safety standard, it is developed for, and focused on helping end users with risk analysis, electrocution and arc incident prevention, and safe work practices, but it also goes further and specifies what standards personal protective equipment (PPE) must comply with. For clothing arc flash Section 4.3.7.3.14, Table 5, specifies:
 - Apparel - Arc-rated: ASTM F1506
 - Raingear - Arc-rated: ASTM F1891
- Arc-rated (AR) PPE can be selected one of two ways (see section 4.3.5.6.1):
 1. The incident energy analysis method. This might result in PPE requiring various minimum arc ratings i.e., 4 cal/cm², 10 cal/cm², 12 cal/cm² or different.
 2. The arc flash PPE category method.
- The arc flash PPE category method minimum required PPE arc ratings are:
 - PPE Cat. 1: 4 cal/cm², PPE Cat. 2: 8 cal/cm²,
 - PPE Cat. 3: 25 cal/cm², PPE Cat. 4: cal/cm²
 - PPE Cat. 5: 75 cal/cm², (Note: NFPA 70E does not include PPE Cat. 5)
- Annex H (informative) includes guidance with a simplified two category arc flash clothing system:
 - Minimum 8 cal/cm² arc rating for both PPE Cat 1 & PPE Cat 2
 - Minimum 40 cal/cm² arc rating for both PPE Cat 3 & PPE Cat 4
- CSA Z462 also includes additional information including:
 - Specifying how ASTM F1506’s and ASTM F1891’s ASTM F1959 arc rating test is to be done for clothing system arc ratings -some call total system arc ratings (TSAR).
 - How AR apparel and AR raingear is to be worn and maintained.

These are only a few very general points, and we strongly recommend consulting the latest edition of CSA Z462 available at www.csagroup.org/store/