

Flame Testing of AmerCable Mining Cables



Materials used in trailing cables for the underground coal mining industry have all been flame tested and approved by the Mine Safety and Health Administration (MSHA) as having “flame-resistant properties”. This means that, under the criteria of Part 7, Subpart K of Title 30 Code of Federal Regulations (CFR), these Trailing Cables and Mine Power Feeder are acceptable to use in any location in the mine. The cables will not propagate flame and will self-extinguish within a specified amount of time. The actual measured lengths of time for AmerCable products to self-extinguish are only a very small fraction of the maximum time limit shown in CFR 30.

For cable users, this means that Trailing Cables and Mine Power Feeder cables will not ignite unless the cable is placed in a direct flame for some period of time. In the extremely small probability of this occurrence, the cable will not spread the flame anyway. When the source of flame is extinguished, the cable stops burning. However, the smoke is still of

concern due to the presence of personnel. Any combustible material in the mine will release high amounts of carbon monoxide when burning. The outer jacket of the cable is the primary flame barrier. Common jackets in the industry are Chlorinated Polyethylene (CPE), Neoprene, Chlorosulfonated Polyethylene (CSPE), and Thermoplastic Polyurethane (TPU). All have been tested and show that very similar gases are released. Of the jackets above, there is no one jacketing compound that has more toxic gases than another. Where one may be higher in carbon monoxide, it is lower in another type of gas by-product.

CPE, Neoprene, CSPE, and TPU all fall well within the accepted limits as established by the public transportation industries such as rail and airlines. The test used in this comparison was to Boeing specification BSS-7239. All AmerCable Tiger Brand products met the test criteria.

