

**C6.7****Comparison between Lewis and Crine models for the electrical aging of extruded cables**

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The recently published electrical aging model of Lewis is compared with the modified version of Crine model. Both rely on thermodynamic and both associate the onset of aging with submicrocavity formation. The major differences in the two models are discussed in light of electrical aging data for PE and XLPE cables. Although both give a good fit to experimental data, Lewis model involves much more parameters and some of them are not readily accessible. Finally, the final equation is rather cumbersome and therefore difficult to use in the practical world. On the other hand, Crine revised model depends on the cohesion energy of the polymer, on the activation energy and on the volume activation of the process. The physical significance of these parameters for the accelerated aging of extruded cables is also discussed.