We consider Activated Random Walk (ARW), a model which generalizes the Stochastic Sandpile, one of the canonical examples of self organized criticality. Informally ARW is a particle system on $\mathbb{Z}$ with mass conservation. One starts with a mass density $\mu > 0$ of initially active particles, each of which performs a continuous time nearest neighbour symmetric random walk at rate one and falls asleep at rate $\lambda > 0$. Sleepy particles become active on coming in contact with other active particles. We investigate the question of fixation/non-fixation of the process and show for small enough $\lambda$ the critical mass density for fixation is strictly less than one. Moreover, the critical density goes to zero as $\lambda$ tends to zero. This positively answers two open questions from Dickman, Rolla, Sidoravicius (J. Stat. Phys., 2010) and Rolla, Sidoravicius (Invent. Math., 2012). (Received February 13, 2016)