Catalytically activated reactions involve particles that react only in the presence of another agent, which is called a catalyst. Such catalytic processes are widespread in the nature and different technological applications. To study the properties of equilibrium and out of equilibrium properties of such reactions is devoted a lot of attention. In particular, it is known that the thermodynamic properties of the monolayers of adsorbed molecules, formed in the course of catalytically-activated reactions, are very similar to the properties of the adsorbates modelled by athermal hard core lattice gases. Therefore we study a lattice-gas model of two species particles and focus on the equilibrium properties of a catalytically activated $A + B \rightarrow 0$ reaction. Particles $A$ and $B$, involved in the reaction, being in thermal contact with their vapor phases acting as reservoirs and may adsorb onto substrate and desorb from it. This process taking place on a substrate with some non-uniform catalytic properties. We consider the simplest case of reactions on a one-dimensional chain with some structural elements of which have catalytic properties. We consider that some bonds of a chain are catalytic and other case that some sites are catalytic. For both cases these structural elements placed randomly with mean concentration $p$. We consider two types of disorder in placement of catalytic elements when disorder can be viewed as annealed, and other case with a quenched random distribution of the catalytic elements. For both models we obtain the thermodynamic functions, namely the disorder-averaged pressure, particles density and the compressibility and compare obtained results for both types of disorder.