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A group structure on  $\mathbb D$  and its application for composition operators on model spaces

We present a group structure on  $\mathbb{D}$  via the automorphisms which fix the point 1. Through the induced group action, each point of  $\mathbb{D}$  produces an equivalence class which turns out to be a Blaschke sequence. We show that the corresponding Blaschke products are minimal/atomic solutions of the functional equation  $\psi \circ \varphi = \lambda \psi$ , where  $\lambda$  is a unimodular contant and  $\varphi$  is an automorphism of the unit disc. We also characterize all Blaschke products which satisfy this equation and study its application in the theory of composition operators on model spaces  $K_{\Theta}$ .