Sorbet is a complex food colloid consisting of a frozen matrix, containing air bubbles, ice crystals and an unfrozen serum phase. The rheology of sorbet is strongly related to microstructure features, such as air bubbles and ice crystal size distribution. In this work, the rheology of a commercial sorbet has been studied online by means of a pipe rheometer connected at the freezer exit. This work aimed at studying separately the influence of the ice volume fraction ($X_{v.i.}$) on the increase in the apparent viscosity ($\eta_{app}$) of a non aerated frozen sorbet, and the influence of the air volume fraction ($X_{v.a.}$) on the increase in $\eta_{app}$ of an aerated frozen sorbet. The rheometer was composed of a series of pipes in PVC of different diameters, making it possible to apply a range of apparent shear rate from 1-100 s$^{-1}$. Results showed that in the non aerated frozen sorbet, an increase in $X_{v.i.}$ of 20% led to an increase in $\eta_{app}$ that represents 20 times the viscosity of the non frozen sorbet mix. For this given $X_{v.i.}$, an increase in $X_{v.a.}$ of 50% led to an increase in $\eta_{app}$ of the aerated frozen sorbet that represents 2.6 times the $\eta_{app}$ of the non aerated frozen sorbet. This indicates that the influence of $X_{v.i.}$ on the increase in $\eta_{app}$ of the product is predominant, with respect to the effect of $X_{v.a.}$. These results can be used as quantitative indicators of sorbet microstructure, which is highly related to the quality attributes of the product.