Silicates play a vital role in geopolymer science and applications. Silicate chemistry matters and understanding the links between silicate properties and geopolymer attributes/performances is crucial to the enhancement and development of geopolymer applications. With this in mind, this paper will attempt to highlight the manufacturing process of silicate, type of silicates available, relationship between silicate composition and structures, effect of different grade of silicates on geopolymer properties, safety and stability aspects of silicate and their implications especially to geopolymer scale up operations. In addition, work carried out to produce geopolymers at both pilot and plant scales will be illustrated.