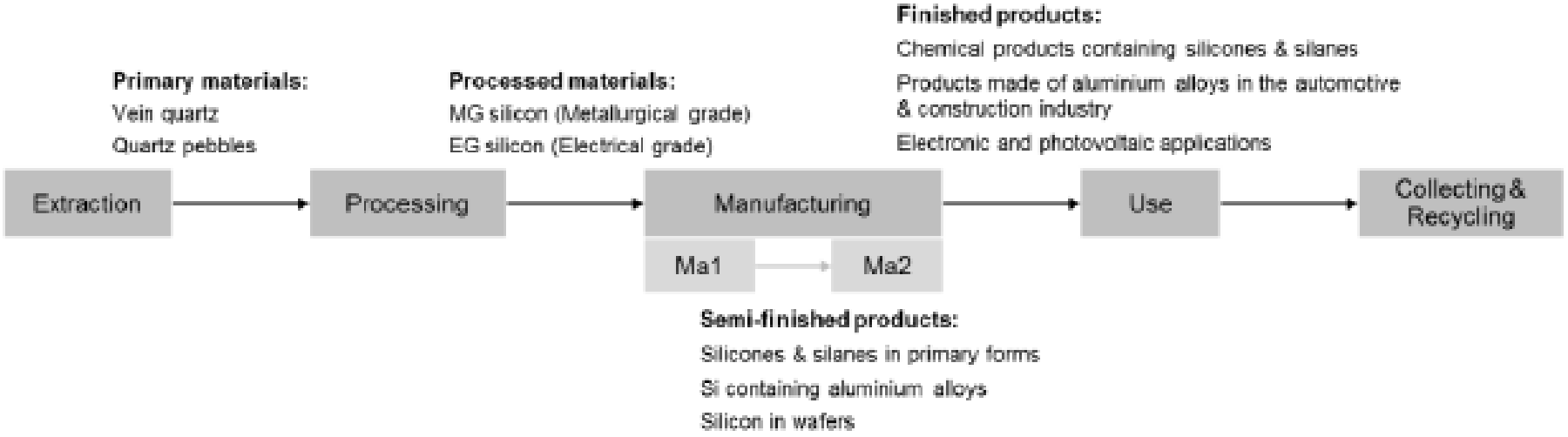
Silicon

This MSA aims to focus on silicon only, i.e. excluding silica or ferrosilicon and their applications. Silicon is a very high purity material and can only be processed from vein quartz and quartz pebbles, due to their high silica content. Two grades of processed materials exist: the metallurgical grade silicon (MG, < 99.99%) is used to produce silicones and aluminium alloys and the electrical grade silicon (EG, > 99.99%) is used to produce wafers. Those semi-finished products are then used to manufacture various finished products such as chemical products (e.g. shampoos, fixing materials, insulating materials used in cables etc.), products made of aluminium alloys for the automotive and construction industry, as well as electronic and photovoltaic applications. One can notice that the processing of silicon also generates silica fumes as by-product. Although the element Si is valued in that by-product, it was not embedded in this value chain because of its lower purity. The figure below presents the value chain of silicon and its main uses.



<u>โซ่คุณค่าของ Silicon</u>