

## ABSTRACT

### HIGH POROSITY VITRIFIED SUPERABRASIVE PRODUCTS AND METHOD OF PREPARATION

A vitrified superabrasive product includes a superabrasive component and a vitrified bond component in which the superabrasive component is dispersed, wherein the vitrified bond component defines pores occupying greater than about 50% of the total volume of the vitrified superabrasive product. The vitrified superabrasive product can be in the form of a grinding tool, such as a grinding wheel. A superabrasive mixture includes a glass powder, a superabrasive grit, a binder and a silicon carbide. The mixture can be in the form of a green body, which is fired under an atmosphere and pressure, and at a temperature sufficient to form a porous vitrified superabrasive product.

Figure 1