These objects are achieved by the realization of the characterizing features of the independent claims. Features which refine the invention in an alternative or advantageous manner can be derived from the dependent patent claims.

In accordance with an aspect of the invention, closure element, in particular a valve disk, for a vacuum valve and configured for the gastight close-off of a process volume by means of cooperation with a vacuum valve opening, provided for the process volume, of the vacuum valve is disclosed. The closure element includes a first sealing surface, corresponding, in particular in terms of shape and size, to a second sealing surface of the vacuum valve opening wherein the second sealing surface surrounds the vacuum valve opening, and a sealing material vulcanized onto the first sealing surface and in accordance with the course thereof and having a defined height in the direction of the surface normal of the first sealing surface, wherein the sealing material has a defined shape with respect to a sealing material cross section. The sealing material includes a first seal portion, provided, in particular, on the process volume side, and a second seal portion, provided, in particular, facing away from the process volume. The closure element has a compression adjoining the first seal portion and having a pressing edge, and the pressing edge is shaped, and is configured with respect to the first seal portion, such that the surface course of the sealing material, which surface course is given by the shape of the first seal portion and tapers into the pressing edge, is continued substantially homogeneously, in particular linearly.

The invention relates to a closure element for vacuum valves, wherein the seal is applied to the closure element such that a following material-removing machining of the closure element, at least in those regions which during use are facing toward the process volume to be shut off, in particular are in direct contact with this volume, can be dispensed with. Thus no machine-cutting reworking of the closure element in these regions, for example trimming, is any longer necessary, whereby, broadly speaking, there is no formation of microparticles or burrs.

The closure element is generally the shutter (also referred to as the valve disk, closure plate or closure member) by means of which the opening in the vacuum valve can be closed in a gastight manner. In an arrangement in a vacuum valve of the generic type, the closure element, which can be configured, for instance, as a valve disk, is typically displaceable at least linearly along a geometric adjustment axis, running transversely to the opening axis, in a closure element plane between an open position and a closed position. Preferably, the adjustment axis runs perpendicular to the opening axis and lies on a plane which is breached perpendicularly by the opening axis. Alternatively, the adjustment axis runs obliquely and non-parallel to the opening axis, wherein the angle of intersection is in particular between 90 degrees and 45 degrees.