Claims

1. Catalyst for producing vinyl acetate, containing

   - 0.25 to 5 percent by weight palladium, 0.25 to 5 percent by weight gold, and 0.5 to 10 percent by weight potassium, and
   - with the property that the catalyst is dispersed on an oxidic carrier material, and
   - the catalyst is used in a reactor that comprises a number of tubes or stacked plates which have a number or gaps whereby the tubes or gaps can be aligned in any way with regard to each other and ideally run parallel to each other,

   characterized in that

   - the catalyst is adhesively applied by way of an oxidic or organic binding agent to a wall surface that is made of stainless steel., and
   - the oxidic binding agent are alkali metal silicates.

2. Catalyst according to the preceding claim 1, characterised in that the catalyst contains one or more elements from the group of earth alkali metals, lanthanoids, vanadium, iron, manganese, cobalt, nickel, copper, cerium, platinum, whereby the total proportion of these elements does not exceed 3% per weight.

3. Catalyst according to any one of the preceding claims 1 or 2, characterised in that the oxidic carrier material comprises a metal oxide from the group SiO_2, Al_2O_3, TiO_2 and ZrO_2.

4. Catalyst according to claim 3, characterised in that the oxidic carrier material contains an oxide from the group of the compounds SiO_2, Al_2O_3, TiO_2, or ZrO_2 as the principal component.

~~5. Catalyst according to any one of the preceding claims 1 to 4, characterised in that an oxidic or organic binding agent is applied, whereby bindings agents from the groups of metal oxide sols, cellulose derivatives or alkaline metal silicates are used.~~

~~6.~~5. Catalyst according to the preceding claim ~~5~~1, characterised in that an oxidic or organic binding agent is applied, whereby bindings agents from the groups of silicon oxide sols, methyl celluloses or water glass are used.

7.6. Catalyst according to any one of the preceding claims 1 to 65, characterised in that all doping and activation elements are homogeneously distributed in the entire volume of the catalyst layer.

8.7. Catalyst according to any one of the preceding claims 1 to 76, wherein the catalyst is characterised in that the palladium content of the catalyst is 0.8 to 5 percent by weight.

9.8. Catalyst according to any one of the preceding claims 1 to 87, wherein the catalyst is characterised in that the gold content of the catalyst is 0.4 to 2.5 percent by weight.

~~10.~~9. Catalyst according to any one of the preceding claims 1 to ~~9~~8, wherein the catalyst is characterised in that the potassium content of the catalyst is 1 to 4 percent by weight.