

ABSTRACT

Provided is a catalyst that makes it possible to produce methacrylic acid at a high selectivity by a gas-phase catalytic oxidation of methacrolein. A methacrylic acid production catalyst is used when methacrylic acid is produced by a gas-phase catalytic oxidation of methacrolein with molecular oxygen, and has a composition in the following formula: $P_aMo_bV_cNb_dCu_eA_fE_gG_h(NH_4)_iO_j$ ('A' represents at least one of Si, Ge, As and Sb, 'E' represents at least one of Bi, Zr, Te, Ag, Se, W, B, Fe, Zn, Cr, Mg, Ca, Sr, Ta, Co, Ni, Mn, Ba, Ti, Sn, Pb, In, S, Pd, Ga, Ce and La, and 'G' represents at least one of Li, Na, K, Rb, Cs and Tl. When $b = 12$, $0.5 \leq a + f \leq 2.1$, $0.01 \leq c + d \leq 3$, $0.5 \leq a$, $0 \leq c$, $0.01 \leq d \leq 3$, $0.005 \leq e \leq 3$, $0 \leq f$, $0 \leq g \leq 3$, $0.01 \leq h \leq 3$ and $0 \leq i \leq 5$ are satisfied, and j is a mole ratio of oxygen that satisfies valences of the components).