

PROCESS FOR THE MANUFACTURE OF ACRYLIC ACID FROM
ACROLEIN BY A REDOX REACTION AND USE OF A
SOLID MIXED OXIDES COMPOSITION AS REDOX SYSTEM
IN THE SAID REACTION

ABSTRACT

The present invention relates to the use of a solid mixed oxides composition of formula (I):



$2 \leq a \leq 14$, $0.1 \leq b \leq 6$, $0 \leq c \leq 12$, $0 \leq d \leq 6$, $0 \leq e \leq 15$; x is the quantity of oxygen bonded to the other elements and depends on their oxidation states,

in the manufacture of acrylic acid by oxidation of acrolein, the said solid composition reacting with acrolein according to the redox reaction (1):



To manufacture acrylic acid a gaseous mixture of acrolein and of water vapour and, if appropriate, of an inert gas is passed over a solid composition of formula (I), to conduct the redox reaction (1) by operating at a temperature of 200 to 500°C, at a pressure of 1.01×10^4 to 1.01×10^6 Pa (0.1 to 10 atmospheres), and with a residence time of 0.01 second to 90 seconds, in the absence of molecular oxygen.