

### 삼산화 안티몬 함량에 따른 난연보조성능 분석

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Antimony Oxide is generally used as Flame Retarding assistant that produces a synergy effect when used with halogen type Flame Retardants.

In this paper's experiment, 0, 3, and 6phr of Antimony Oxide were put in the PVC and the oxygen index examined, in order to verify the synergy effect of Antimony Oxide. As can be seen from the experiment results, Antimony Oxide can be confirmed to have a synergy effect of flame retardation in the presence of halogen, but when the input goes over a certain volume its effect shows a tendency to become small or reduced. This has been verified in the research on polyurethane and other high molecular materials.

The results of this paper's research suggests that it would be appropriate for application of antimony oxide into PVC to stay within a 3-5phr range. When the level of Sb<sub>2</sub>O<sub>3</sub> is 0phr OI records 21.9 the level of 3phr, OI records 27.7 the level of 6phr, OI records 29.1. The results show that as the input volume of Sb<sub>2</sub>O<sub>3</sub> increases, the flame retardation proportionally increases as well.