

Improvement of Defect through Fume Control on SOD
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The SOD (Spin on Dielectric) film is used as an insulation material in DRAM development. An issue of abnormal pattern etch as the Not Open Defect occurs when the SOD film is patterned. It was observed that the SOD deposition thickness is increased at the same time as the Not Open Defect occurred. The difference of the SOD deposition thickness was classified by the difference of the cleaning equipment before the SOD deposition. In other words, the SOD thickness and the Not Open Defect was increased when the Pre Cleaning process before the SOD Deposition was only performed with the specific cleaning equipment. Various evaluations were conducted to verify the cause of this and the cause was confirmed as the fume. The fume is getting bigger issues as the line width becomes smaller, and it must be managed. This study investigates the relationship between the fume and the Not Open Defect and proposes the fume management and improvement plans.

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