



Why need ASTM E595 test to excavate problems

The ASTM E595 test is mainly derived from the United States Aeronautics and Space Administration (NASA). It is an outgassing test in a vacuum condition. Through this test, materials are screened, and the quality of raw materials/incoming materials is quality controlled. As the semiconductor/electronics is flourishing, and most of the processes are high vacuum, low pressure and high cleanliness occasions, it has gradually been widely used in the technology industry. It also extends from technology related processes to workshops, buildings and fire protection, taking into account high cleanliness maintenance and fire safety. In the lights of this, **SGS** is the first to exploit ASTM E595 testing services across Taiwan, hoping to use **SGS's** professional and large team to contribute to Taiwan's technology industry.

Occasions where outgassing is prone to occur

1. In a confined, limitations or small space
2. Process or environment where gets pressure changed
3. In high temperature (or heat generation) space or process
4. Spaces or processes with large temperature variations



SGS helps you find the right solution by ASTM E595

1. TML (Total Mass Loss): shrinkage, displacement and cracking phenomena.
The weight change of the test sample before and after the experiment for 24 hours under the vacuum 5×10^{-5} torr and 125°C .
→ Targeting: Semiconductor, heat conduction, cushioning, adhesive, fireproof materials and technological plants... etc.
2. CVCM (Collected Volatile Condensable Materials): Atomization, adhesion, corrosion and damage.
A 25°C condensing device is installed in the cabin to collect the amount of volatile matter condensed under a pressure of 5×10^{-5} torr.
→ Targeting: Vacuum components, systems, gaskets, glass, masks, lenses, PCBs, PCBA, electronic circuits... etc.
3. WVR (Water Vapor Regained): the water absorption capacity of the original/material or product.
Treat the sample for 24 hours at 25°C and 50% relative humidity, and then measure WVR after adsorbing water vapor.
→ Targeting: Sealing, waterproof materials, coating materials, water blocking materials and polymer molding materials... etc.