

How Important are Hazardous Materials to the Semiconductor Industry?

How lucky are we to be living in a world full of modern technology? While some of us may not be as thankful for technology as others, we can't overlook the fact that our world has become reliant on various technologies. Many modern day technologies require the use of raw hazardous materials to create and power them. Just how important are hazardous materials to the technology industry?

Recently, Japan and South Korea have been featured in international news regarding a trade dispute of sorts over the export and import of hazardous materials. South Korea has historically relied on Japan for the import of fluorinated polyimide (UN1250), hydrogen fluoride (UN1052), and resist (UN3077). It's been reported that Japan produces around 90% of the world's supply of fluorinated polyimide and about 70% of the world's hydrogen fluoride.* These hazardous materials are essential to the semiconductor industry. South Korean companies such as Samsung, SK Hynix, and other manufacturers of memory chips, microprocessors, and integrated circuits rely on the import of these raw materials from Japan to sustain. While South Korea was once able to obtain these materials as needed from Japan, recently the Japanese government has put measures in place that have restricted and delayed the export of the three chemicals to South Korea.

So what does this mean for South Korea's semiconductor industry? As you can imagine the industry is slotted to be disrupted by these delays and restrictions. Being that Japan is the majority producer of these chemicals, it will likely be difficult for South Korea to seek out an alternative provider of these materials. Major players in the semiconductor industry such as Samsung and SK Hynix have been reported to account for 61% of the global supply of memory chips.* Their customers include high-profile tech companies such as Apple and Huawei.

With all of this being said, it's safe to say that hazardous materials play a major role in our modern world. We hope that South Korea and Japan will soon be able to remedy their import and export situation in order to minimize the impact on the industry.

*Statistic cited from IHS Markit.

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