

Halogen-Free Testing and Quality Assurance

Suppliers to the electronics industry are increasingly pressured by consumer electronic manufacturers to provide “Halogen-Free” or “Low-Halogen” products. Currently, most electronic products and components are treated with a flame retardant. Certain halogenated compounds are used as flame retardants in a variety of applications including thermoplastics, insulation materials, component mold compounds, solder masks and printed circuit board laminates. In addition, *polyvinyl chloride* (PVC – a resin that contains chlorine) is a commonly used base resin for certain cable jacketing.

What are Halogens? Halogens consist of five non-metallic elements found in group VIIA of the periodic table and they include: *Fluorine, Chlorine, Bromine, Iodine, and Astatine*. However, from the electronics industry point of view Halogen-Free products must not contain concentrations of Bromine or Chlorine above the threshold levels as defined by the International Electrotechnical Commission, IEC 61249-2-21 standard. Fluorine, Iodine and Astatine are not restricted at this point in time.

Halogens include:

- *Fluorine (F)*
- *Chlorine (Cl)*
- *Bromine (Br)*
- *Iodine (I)*
- *Astatine (At)*

Halogens Testing & Verification Service: The current threshold limits for Halogen-Free as per IEC 61249-2-21 is as follows:

SUBSTANCE	THRESHOLD LIMIT (by weight)
Bromine (Br)	≤ 900 parts per million (0.09%)
Chlorine (Cl)	≤ 900 parts per million (0.09%)
Total Bromine (Br) + Chlorine (Cl)	≤ 1500 parts per million (0.15%)



STR offers **Testing and Verification** of your electrical and electronic products/components for the presence and concentration values of Halogens (Bromine and Chlorine). In addition, we can help you with a quality assurance system such as IECQ Hazardous Substance Process Management (HSPM) QC080000 certification to greatly reduce or eliminate the presence of hazardous substances in your process and products.

For a quotation to perform Halogens Testing please submit your request to Kevin Smith at rohs@strus.com.