Elimination of Brominated Flame Retardants (BFRs) and Polyvinyl Chloride (PVC)

In line with Dell's Chemical Use Policy, the Precautionary Principle and with consideration for Chemicals for Priority Action identified by the Convention for the Protection of the Marine Environment of the NE Atlantic (OSPAR), Dell's goal is to eliminate the use of all brominated flame retardant (BFR) chemicals and polyvinyl chloride (PVC) plastics in our products, worldwide.

Brominated flame retardants and PVC are covered in Dell's banned and restricted material program. For more information see Dell's Supply Chain Management and Compliance Process.

We currently avoid the use of BFRs and PVC by using plastics that can be flame retarded with non-halogenated compounds and by using design strategies that minimize plastics and therefore reduce the need to use flame retarded plastics at all.

Current BFR and PVC restrictions

- Dell currently prohibits the use of PBBs and PDBEs (including DecaBDE) for all applications.
- Dell currently prohibits the use of all other BFRs (including TBBP-A and HBCD) in plastic parts for desktops, laptop and server products as well as TCO certified displays and Blue Angel certified printers.
- Since June 2006, Dell prohibits the use of all BFRs in plastic parts.[1]
- Fire safety standards require the use of some flame-retarded plastics.
- Dell currently prohibits the use of PVC in mechanical plastic parts and product packaging materials.

Long Term Elimination Goal

Dell and industry partners are actively working to help the supply chain develop the capability and capacity to use viable alternative materials. These alternative materials will be needed to realize our goal of eliminating all remaining uses of BFRs and PVC in our new products. These include the elimination of TBBP-A in circuit boards, in advance of regulation and as acceptable alternatives are identified. However, to be acceptable, any alternative materials must have a reduced impact on health and the environment without compromising product performance. We will continue to strive to meet our goal to eliminate the use of environmentally sensitive materials in our products, as well as continue to evaluate the viability of halogen-free flame-retardant alternatives.

Progress Towards Long Term Goals Since 2006, Dell has been working to better understand supply chain readiness for BFR and PVC-free electronics, to develop technology roadmaps, and to qualify suitable replacement materials. The following key milestones have been met in recent months:

- Dell is currently leading four different industry consortia projects aimed at development of BFR/PVC-free technologies (within IPC and HDPUG). The HDPUG Halogen-Free Guideline will be publicly available in summer 2008, over 40 companies contributed to developing this Guideline over the past year.
- To better understand the environmental, health and safety aspects of halogenated vs. halogen-free printed circuit boards, Dell is contributing funding and resources to the US EPA circuit board flame retardant project.
- In an ongoing effort to eliminate the remaining uses of BFRs and PVC within our new products, the following ‘Halogen-Reduced’ products have been introduced:
    - UltraSharp 2009W, the first Halogen-Reduced Dell flat panel monitor, offers multiple printed circuit boards containing halogen-free laminates (per JPCA ES-01-1999), as well as “halogen-free” chassis plastics.
    - Dell SP2009W offers multiple printed circuit boards containing “halogen-free” laminates (per JPCA ES-01-1999), as well as “halogen-free” chassis plastics.
    - Dell’s Studio Hybrid is the first Halogen-Reduced Dell desktop that offers a motherboard containing “halogen-free” laminates (per JPCA ES-01-1999), as well as “halogen-free” chassis plastics.
    - Dell is developing additional “Halogen-Reduced” products for introduction later in 2008.