



# Trends in Environmental Measures for Polyvinyl Chloride Adhesive Tape



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## [Summary]

Polyvinyl chloride adhesive tape (hereinafter referred to as "PVC tape") has properties not possessed by other resin-based tapes and has come to be used in a wide range of fields.

In recent years, however, environmental problems have been pointed out, resulting in countermeasures being implemented mainly for the tape used on wire harnesses for automobiles.

In this paper, I will report on the development status of environmental measures for our company's PVC tape.

1. The issue of dioxins being released when PVC tape is incinerated due to the halogens that they contain is one of the problems that have been raised. Although sorting is being encouraged during recycling, some parts are difficult to sort and the recycling of mixed items poses problems. In order to solve this problem we developed olefin-based tape that does not contain any PVC.
2. PVC is a polymer that can be freely designed with any degree of softness or hardness by adding different amounts of

plasticizer. However, it is thought that the dioctyl phthalate (hereinafter referred to as "DOP") used in this plasticizer contains environmental hormones. We therefore developed a PVC tape using diisononyl phthalate (hereinafter referred to as "DINP") as a plasticizer in place of DOP.

PVC tape contains volatile organic compounds (hereinafter referred to as "VOCs") and there are problems associated with meeting indoor concentration guideline values determined by the Ministry of Health, Labor and Welfare. In order to deal with this problem, we developed a PVC tape with a latex-based adhesive to use in place of solvent-based adhesives, which use toluene as a solvent, as a means of reducing VOCs.

Nitto Denko manufactures PVC tape in four locations throughout the world. As part of our ongoing efforts to care for the global environment we are developing these and other kinds of halogen-free tape in order to address the concerns that have been raised in recent years with regard to solvent-based PVC tape.