

Summary

In recent years the incorporation of flame retardants into polymer based products has come under increased scrutiny. While much of the debate surrounding these products has focussed on the cost of producing and introducing them into the products they are intended to protect, little mention has been made of their benefit in terms of reduction of danger to life and property and reduction of fire emissions.

This report shows the results of a study that has been made of the possibility of including the function of the flame retardant (in terms of decreasing the number and size of fires associated with the given product) into a holistic model for evaluating the real environmental impact of the flame retardant. A straw model has been proposed with details given of the data requirements of the model and the availability of the required data. Further, more detailed models have been proposed for three cases studies suggested for future research.

The effect of the presence of flame retardants on material recycling and waste destruction is discussed and methods for studying this effect are given. The report also discusses an example of the use of fire statistics to ascertain the effect of the inclusion of a flame retardant on the size and number of fires associated with a TV. Furthermore, a possible method for the inclusion of this effect into an LCA is proposed.

Finally, a strategy for the continuation of this project with a modified technical description included as Appendix 1 is presented.