

The present invention provides a temperature stable herbicidal composition comprising 2-amino-4-[hydroxy(methyl)phosphinoyl]butyric acid, its salts, its isomers, mixture of isomers, derivatives or their lower alkyl esters or salts thereof with acids or bases, (C<sub>8</sub>-C<sub>20</sub>) alkyldimethylamine N-oxide and an inorganic ammonium salt. Also provided is a process for preparing the composition by mixing said active ingredient in a formulation vessel with water and solvent followed by the addition of calculated amount of (C<sub>8</sub>-C<sub>20</sub>) alkyldimethylamine N-oxide and inorganic ammonium salt, and if required further customary adjuvants, solvents or other components such as wetting agent, coloring agent or defoamer followed by homogenizing the resultant mixture to obtain a clear solution. A method of weed control applying the composition of the present invention as well as a multipack herbicidal product comprising the composition are within the purview of the present invention.