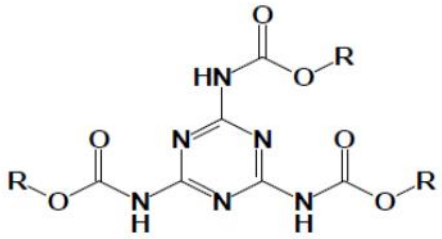
In some examples, the thermal cross-linking agent comprises a triazine compound. For example, the triazine compound may be a tris(alkoxycarbonylamino) triazine. Examples of tris(alkoxycarbonylamino) triazine (TACT) compounds are given by the structure below.



R = CH_3, n-C_4H_9

Such material(s) are sold by Allnex under the name Cymel NF 2000 and by BASF under the name Larotact 150. In addition to improving physical and chemical resistance to the solder mask, triazine compounds can also be used to prevent the copper circuitry under the solder mask from oxidising during thermal curing when the composition does not comprise a hydroxy-containing (meth)acrylate monomer. Thus, in one example the composition comprises a thermal cross-linking agent in the form of a triazine compound in the absence of a hydroxy-containing monomer radical polymerizable compound. In one example, the composition comprises a thermal cross-linking agent in the form of a triazine compound and a hydroxy-containing monomer radical polymerizable compound in a molar ratio of triazine:hydroxy of no more than 1:2, for example in a molar ratio of 1:1. Thus, for a monomer radical polymerizable compound having two hydroxyl groups, the molar ratio of triazine:monomer radical polymerizable compound is no more than 1:1, preferably 1:<1.

In some examples, the thermal cross-linking agent comprises an isocyanate compound and a triazine compound. In some examples, the thermal cross-linking agent comprises an isocyanate compound and a triazine compound in the absence of a hydroxy-containing (meth)acrylate monomer radical polymerizable compound.

In some examples, the thermal cross-linking agent is a triazine compound and is present in the composition in an amount of 10 wt% or less, for example 5 wt% or less, for example in a range of from 2 wt% to 5 wt%, for example in a range of from 3wt% to 5 wt%. In