2-hydroxy-2-methyl-1-phenyl-propane-1-one (product of BASF, DAROCUR 1173: Product of Lamberti, ESACURE KL200), oligo(2-hydroxy-2-methyl-1-phenyl-propane-1-one) (Product of Lamberti, ESACURE KIP150), (2-hydroxyethyl)-phenyl)-2-hydroxy-2-methyl-1-propane-1-one (product of BASF, IRGACURE 2959), 2-methyl-1(4-(methylthio) phenyl)-2-morpholino propane-1-one (product of BASF, IRGACURE 907), 2-benzyl-2-dimethylamino-1-(4-morpholino phenyl) - butanone-1 (product of BASF, IRGACURE 369), bis(2,4,6-trimethylbenzoyl) phenyl phosphine oxide (product of BASF, IRGACURE 819), bis(2,6-dimethoxybenzoyl)-2,4,4-trimethyl-pentyl phosphine oxide (product of BASF, CGI403), 2,4,6-trimethylbenzoyl-diphenylphosphine oxide (= TMDPO: Product of BASF, LUCIRIN TPO, Product of BASF, DAROCUR TPO), thioxanthone or derivatives thereof and the like, and these may be used alone, or a mixture of two or more thereof may be used. The amount of the additives is desirably within the range of from 0.01 to 10.0 parts by weight with respect to 100 parts by weight of (meth)acrylate compound.

[0186]

In addition, for the purpose of the photosensitization effect, tertiary amines such as, for example, triethanolamine, ethyl-4-dimethylamino benzoate, isopentyl methylamino benzoate and the like may be added.

[0187]

Examples of thermal polymerization initiator used herein mainly include peroxides such as benzoyl peroxide (= BPO) or the like

2-hydroxy-2-methyl-1-phenyl-propane-1-one (product of BASF, DAROCUR 1173: Product of Lamberti, ESACURE KL200), oligo(2-hydroxy-2-methyl-1-phenyl-propane-1-one) (Product of Lamberti, ESACURE KIP150), 1-[4-(2-hydroxyethoxy)-phenyl]-2-hydroxy-2-methyl-1-propane-1-one product of BASF, IRGACURE 2959), 2-methyl-1(4-(methylthio) phenyl)-2-morpholino propane-1-one (product of BASF, IRGACURE 907), 2-benzyl-2-dimethylamino-1-(4-morpholino phenyl) - butanone-1 (product of BASF, IRGACURE 369), bis(2,4,6-trimethylbenzoyl) phenyl phosphine oxide (product of BASF, IRGACURE 819), bis(2,6-dimethoxybenzoyl)-2,4,4-trimethyl-pentyl phosphine oxide (product of BASF, CGI403), 2,4,6-trimethylbenzoyl-diphenylphosphine oxide (= TMDPO: Product of BASF, LUCIRIN TPO, Product of BASF, DAROCUR TPO), thioxanthone or derivatives thereof and the like, and these may be used alone, or a mixture of two or more thereof may be used. The amount of the additives is desirably within the range of from 0.01 to 10.0 parts by weight with respect to 100 parts by weight of (meth)acrylate compound.

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