CLAIMS

1. A photopolymerizable inkjet ink, comprising:

photopolymerizable monomers containing at least one selected from the following compound group (A) compounds of which are negative for skin sensitization, and at least one selected from the following compound group (B) compounds of which are negative for skin sensitization,

wherein the compound group (A) is a compound group consisting of caprolactone-modified dipentaerythritol hexaacrylate, polyethoxylated tetramethylol methane tetraacrylate, ethylene oxide-modified bisphenol A diacrylate, caprolactone-modified hydroxy pivalic acid neopentyl glycol diacrylate, polypropylene glycol diacrylate [CH_2=CH−CO−(OC_3H_6)n−OCOCH=CH_2 (n≈12)], hydroxyethyl acryl amide, trimethylol propane trimethacrylate, and tricyclodecane dimethanol dimethacrylate, and

the compound group (B) is a compound group consisting of ethylene oxide-modified phenolacrylate, isostearyl acrylate, ethylene oxide-modified trimethylol propane trimethacrylate, stearyl methacrylate, and glycerin dimethacrylate.

2. The photopolymerizable inkjet ink according to claim 1, wherein an amount of the compound group (A) in the photopolymerizable monomers is 10% by mass to 50% by mass.

3. The photopolymerizable inkjet ink according to any one of claims 1 or 2, wherein an amount of the compound group (B) in the photopolymerizable monomers is 10% by mass to 85% by mass.

4. The photopolymerizable inkjet ink according to any one of claims 1 to 3, wherein a blending ratio of the compound group (A) and the compound group (B), which is expressed by a mass ratio of (A)/(B), is 15/85 to 85/15.

5. The photopolymerizable inkjet ink according to any one of claims 1 to 4, wherein the photopolymerizable monomers further contain at least one selected

from the following compound group (C) compounds of which are negative for skin sensitization,

where the compound group (C) is a compound group consisting of triethylene glycol divinyl ether, hydroxybutyl vinyl ether, ethyl vinyl ether, t-butyl methacrylate, n-pentyl methacrylate, and n-hexyl methacrylate.

6. The photopolymerizable inkjet ink according to any one of claims 1 to 5, further comprising a photoradical polymerization initiator.

7. The photopolymerizable inkjet ink according to claim 6, wherein the photoradical polymerization initiator is at least one selected from the group consisting of 2-dimethylamino-2-(4-methylbenzyl)-1-(4-morpholin-4-yl-phenyl)butan-1-one, 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one, and 2-benzyl-2-dimethylamino-1-(4-morpholinophenyl)butanone-1, 2,4-diethyl thioxanthone.

8. An ink cartridge, comprising:

the photopolymerizable inkjet ink as defined in any one of claims 1 to 7; and

a container housing the photopolymerizable inkjet ink.

9. An inkjet recording device, comprising:

the photopolymerizable inkjet ink as defined in any one of claims 1 to 7; and

an ink applying unit configured to apply the photopolymerizable inkjet ink on a base material to be printed.

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wherein the compound group (A) is a compound group consisting of caprolactone-modified dipentaerythritol hexaacrylate, polyethoxylated tetramethylol methane tetraacrylate, ethylene oxide-modified bisphenol A diacrylate, caprolactone-modified hydroxy pivalic acid neopentyl glycol diacrylate, polypropylene glycol diacrylate [CH_2=CH−CO−(OC_3H_6)n−OCOCH=CH_2 (n≈12)], hydroxyethyl acryl amide, trimethylol propane trimethacrylate, and tricyclodecane dimethanol dimethacrylate, and

the compound group (B) is a compound group consisting of ethylene oxide-modified phenolacrylate, isostearyl acrylate, ethylene oxide-modified trimethylol propane trimethacrylate, stearyl methacrylate, and glycerin dimethacrylate.

2. The photopolymerizable inkjet ink according to claim 1, wherein an amount of the compound group (A) in the photopolymerizable monomers is 10% by mass to 50% by mass.

3. The photopolymerizable inkjet ink according to any one of claims 1 or 2, wherein an amount of the compound group (B) in the photopolymerizable monomers is 10% by mass to 85% by mass.

4. The photopolymerizable inkjet ink according to any one of claims 1 to 3, wherein a blending ratio of the compound group (A) and the compound group (B), which is expressed by a mass ratio of (A)/(B), is 15/85 to 85/15.

5. The photopolymerizable inkjet ink according to any one of claims 1 to 4, wherein the photopolymerizable monomers further contain at least one selected

from the following compound group (C) compounds of which are negative for skin sensitization,

where the compound group (C) is a compound group consisting of triethylene glycol divinyl ether, hydroxybutyl vinyl ether, ethyl vinyl ether, t-butyl methacrylate, n-pentyl methacrylate, and n-hexyl methacrylate.

6. The photopolymerizable inkjet ink according to any one of claims 1 to 5, further comprising a photoradical polymerization initiator.

7. The photopolymerizable inkjet ink according to claim 6, wherein the photoradical polymerization initiator is at least one selected from the group consisting of 2-dimethylamino-2-(4-methylbenzyl)-1-(4-morpholin-4-yl-phenyl)butan-1-one, 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one, and 2-benzyl-2-dimethylamino-1-(4-morpholinophenyl)butanone-1, 2,4-diethyl thioxanthone.

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