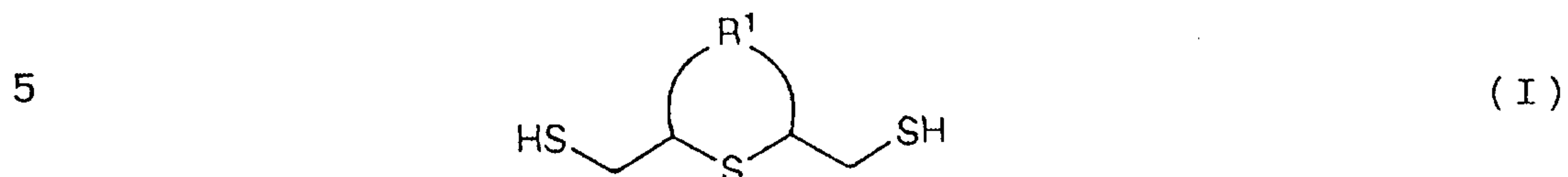


ABSTRACT OF THE DISCLOSURE

The present invention provides a cyclic sulfide compound represented by a general formula (I)



(where R¹ represents -CH₂-CH₂-, -CH₂-CH₂-CH₂-, -CH₂-O-CH₂-, -CH₂-O-, or -CH₂-S-).

According to this invention, a novel cyclic

10 sulfide compound which gives high refractive index and high Abbe number can be obtained. The polymerizable compositions for manufacturing optical products with this compound as their main component can be readily molded into plastic lenses which give superhigh refractive indices and

15 high Abbe numbers or those which give high refractive indices and high Abbe number with low sp.grs. in addition thereto. The castings obtained from said polymerizable compositions are useful as plastic lenses for glasses, manifesting optical uniformity and being excellent in

20 processability, transparency, and thermal, impact and light resistance. Further these polymerizable resin compositions are usable preferably as such optical products as prisms, optical fibers, optical disc substrates, color filters, or infrared absorption filters.

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TITLE OF THE INVENTION

A CYCLIC SULFIDE COMPOUND, POLYMERIZABLE COMPOSITIONS
FOR OPTICAL PRODUCTS AND OPTICAL PRODUCTS FORMED THEREOF

BACKGROUND OF THE INVENTION5 **1. Field of the Invention**

The present invention relates to a novel cyclic sulfide compound, polymerizable compositions comprising it for manufacturing optical products and optical products obtained therefrom.

10 **2. Description of the Prior Art**

Plastic lenses, as compared with glass lenses, have various advantages such as light in weight, hard to crack, easy to mold and ready to dye and so on. These characteristic features being appreciated, they have
15 recently established an important position as optical materials.

Heretofore, what is generally used as resins for lenses of eyeglass, prisms or optical fibers etc. are poly(methyl methacrylate), polycarbonate, poly(diethylene glycol bisallylcarbonate) etc. Particularly, as lens
20 materials for glasses, poly(diethylene glycol bisallylcarbonate) has most frequently been used because of its excellent transparency, processability, surface hardness and so on.

25 But because of its low refractive index ($n_D =$

- 5 -

sulfide compound (A) represented by the undermentioned formula:



(where R^1 represents $-\text{CH}_2-\text{CH}_2-$, $-\text{CH}_2-\text{CH}_2-\text{CH}_2-$, $-\text{CH}_2-\text{O}-\text{CH}_2-$, $-\text{CH}_2-\text{O}-$, or $-\text{CH}_2-\text{S}-$).

The present invention also provides a polymerizable composition for manufacturing optical products comprising the aforementioned compound (A) and a compound (B) represented by a general formula (II):



(where X^1 and X^2 may be mutually identical or different and

represent $-\text{N}=\text{C}=\text{O}$, $-\text{N}=\text{C}=\text{S}$, $-\text{O}-\text{C}(\text{R}^3)=\text{CH}_2$ (R^3 denotes $-\text{H}$ or $-\text{CH}_3$), or $-\text{C}(\text{R}^4)=\text{CH}_2$ (R^4 denotes $-\text{H}$ or $-\text{CH}_3$); n^1 and n^2 may be identical or different and represent integers of 1 - 5;

R^2 designates an organic residue with number of carbon atoms 2 - 25, respectively), and further provides a polymerizable composition for optical products comprising the compounds (A), (B), and a compound (C) represented by

A!

