

★★★ <第 23 回知的財産翻訳検定試験【第 11 回英文和訳】> ★★★

≪ 1 級課題 -化学- ≫

【解答にあたっての注意】

1. 問題の指示により和訳してください。
2. 解答語数に特に制限はありません。適切な箇所で行改行してください。
3. 課題文に段落番号がある場合、これを訳文に記載してください。
4. 課題は 4 題あります。それぞれの課題の指示に従い、4 題すべて解答してください。

問 1 以下の特許請求の範囲を和訳してください。

\*\*\*START\*\*\*

Claims

1. A curable film comprising a reactive composition, wherein the curable film is a flexible, free-standing, optically clear, conformable film having a complex viscosity of greater than 100,000 poise (10,000 Pascal seconds) at 25°C and less than 100 poise (10 Pascal seconds) at 85°C, prior to setting; and wherein the set film has an adhesive shear strength of greater than 100 Newtons per square centimeter (N/cm<sup>2</sup>) to a glass substrate when measured according to the Shear Adhesion Test Method.
2. The curable film of claim 1 wherein the reactive composition comprises: an ethylenically unsaturated polyester-containing oligomeric composition that is a reaction product of a saturated, amorphous co-polyester-polyol and a compound with a terminal polyol-reactive group and a terminal ethylenically unsaturated group; a (meth)acrylate functional material; and at least one initiator.
3. The curable film of claim 2, wherein the reaction product comprises the reaction product of a reaction mixture, wherein the ratio of hydroxyl groups on the saturated, amorphous co-polyester-polyol to the number of terminal polyol-reactive groups is less than 1:1.

\*\*\*END\*\*\*

問2 以下の背景技術を和訳してください。

\*\*\*START\*\*\*

#### BACKGROUND

[0001] Surfaces can be modified to exhibit various characteristics, such as a phobicity to water-base liquids, oil-based liquids, or both.

[0002] Hydrophobic and oleophobic surfaces are desirable in many commercial applications. For example, hydrophobicity is useful in a surface exposed to water or subject to ice and snow accumulation. Oleophobicity is useful for surfaces in which build up of lipid-based or oil-containing liquids is to be avoided. In some instances, hydrophobicity and/or oleophobicity can render a surface self-cleaning, so that contact with a liquid serves to wash away particulate matter residing on the surface.

[0003] Various coatings or texture modifications have been used to impart hydrophobicity or oleophobicity to surfaces. Instances of some approaches to rendering surfaces ultraphobic, that is superhydrophobic and/or oleophobic, can involve roughening them or otherwise changing their surface properties, for example by introducing a micro- or a nano-texture that creates a layer of air between the liquid droplet and the surface that prevents the droplet from forming a connected layer on the surface. These technologies, however, are frequently expensive and inefficient for widespread use. Moreover, in many cases, the ultraphobic surface has poor resistance to abrasion and wear, so that it loses its ultraphobic properties as it is eroded or damaged.

\*\*\*END\*\*\*

問3 以下の実施形態の説明を\*\*\*START\*\*\*から\*\*\*END\*\*\*まで和訳してください。

\*\*\*START\*\*\*

The dyes according to the invention are distinguished by high reactivity, good fixing ability and a very good build-up behaviour. They can accordingly be used in accordance with the exhaust dyeing method at low dyeing temperatures and require only short steaming times in the pad-steam method. The degrees of fixing are high and unfixed dye can be washed off easily, the difference between the degree of exhaust and the degree of fixing being remarkably small, that is to say the soaping loss being very low.

The dyeings and prints produced using the dyes according to the invention have a high tinctorial strength and a high fibre-to-dye binding stability in both the acidic and the alkaline range, and furthermore have good fastness to light and very good wet-fastness properties, such as fastness to washing, to water, to sea water, to cross-dyeing and to perspiration, as well as good fastness to pleating, to ironing and to rubbing.

\*\*\*END\*\*\*

問4 以下の実施例の説明を\*\*\*START\*\*\*から\*\*\*END\*\*\*まで和訳してください。

\*\*\*START\*\*\*

Mild chemical hydrolysis reaction conditions were tested for the hydrolysis of 2-benzyl-3-hydroxy diethyl glutarate coming from the reduction with KRED 1008 as in Example 7. In small-scale reactions (1.5 mL total volume) various basic hydrolysis conditions (different solvents and ratios as well as NaOH concentrations) were prepared and the reaction progress was followed using HPLC analysis. Every sample that was analyzed was first acidified with glacial acetic acid and injected without any other treatment onto a C18 reverse phase column.

Incubating the hydroxydiester in a mixture of Ethanol/H<sub>2</sub>O (v/v, 2/8) containing differing amounts of NaOH and analyzing the reaction progress with HPLC showed the formation of two products. The compound with the longer retention time formed quickly, even under very mild hydrolysis conditions. Isolation and <sup>1</sup>H NMR analysis of this compound showed it to be a mono-ester, identical to that obtained from the reactions with the regioselective hydrolysis catalyzed by the hydrolytic enzyme in Example 17.

注：KRED 1008 は還元酵素の商品名

\*\*\*END\*\*\*