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weight VAc and 51% by weight VA, are dissolved in 37.3 g of DMA, and 0.6 g (5.9 mmol) of anhydrous triethylamine is added. 0.62 g (5.9 mmol) of methacrylic acid chloride is added at room temperature, with stirring, and the mixture is then heated at 40° C. for 25 hours (end point determination by means of titration, acid chloride determination with 0.1N NaOH). The reaction solution is then introduced slowly into half a liter of acetone, with stirring, whereupon a white flocculent precipitate forms. The latter is filtered off with suction, washed with acetone and then dried (30° C., 10 Pa) until a constant weight is reached. Care must be taken to ensure that light is strictly excluded. There remain 2.7 g of a solid (yield: 60% by weight). The prepolymer so modified is readily soluble in water, alcohol, DMF, DMA and DMSO.

EXAMPLE 10

0.3% by weight Irgacure®2959 (calculated relative to the polymer content) is added to aqueous solutions of modified prepolymers prepared in accordance with Examples 8 and 9. Contact lens moulds are filled with those solutions, are sealed, and are then irradiated using a Hönle Hg medium-pressure lamp (3200 W). The irradiation intensity is from 50 to 100 mW/cm², measured using a Hönle UV-C detector in a wavelength range of from 200 to 280 nm. Crosslinking of the prepolymers takes place commencing after one second.

EXAMPLE 11

Various terpolymers having different VP, VAc and VA contents are modified with IEM analogously to Example 8 and are then crosslinked analogously to Example 10. The Table below indicates the composition and the water content of such hydrogels.

% content of VP	% content of VA	% content of crosslinking agent (VA-IEM)	% water content of the hydrogel
23	55	6	74 ± 2
44	21	9	76 ± 2
69	18	8	74 ± 2
38	30	17	67 ± 2
45	22	5	80 ± 2
22	52	11	70 ± 2
33	18	30	62 ± 2

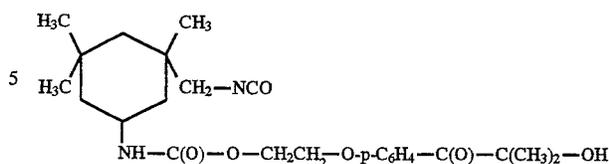
EXAMPLE 12

Analogously to Example 11, various crosslinked polymers having the compositions indicated below are prepared in the form of small disks (as a small disk mould). The Table below indicates their composition as well as their water content.

VP	VAc	VA	crosslinking agent (VA-IEM)	water content
38	15	30	17	67%
40	17	29	14	70%
comparison contact lenses				
Weicon 38 E (Poly-HEMA)				38%
New Vues ®				59%

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EXAMPLE 13 Preparation of



In a 500 ml flask equipped with a reflux condenser, a thermometer, a stirrer and a nitrogen inlet pipe, a solution of 11.125 g (0.05 mol) of freshly distilled isophorone diisocyanate (IPDI) in 50 ml of dry methylene chloride is mixed, under nitrogen, with a solution of 11.2 g (0.05 mol) of 4'-(β-hydroxyethoxy)-2-hydroxyprop-2-yl-phenone (Irgacure 2959®) in 300 ml of dry methylene chloride, and the mixture is stirred at 40° C. for 48 hours. The progress of the reaction is monitored by means of thin-layer chromatography on silica gel plates (60 F₂₅₄, art. 5719 Merck) (eluant: toluene/acetonitrile 7:3). The resulting product is freed of small amounts of unreacted Irgacure®2959 and bisadduct of IPDI by column chromatography on silica gel 60 (eluant: toluene/acetonitrile 7:3). Concentration of the pure fractions by evaporation in a rotary evaporator yields a colourless oil which crystallises slowly when cooled to -16° C. and is then recrystallised from dry diethyl ether. 15.6 g of a white crystalline product (70% of the theoretical yield) having a melting point of 76° C. are obtained.

The isocyanate content of the product is determined by titration with dibutylamine in toluene: calculated 2.242 mVal/g, found 2.25 mVal/g. The method is described in "Analytical Chemistry of Polyurethanes" (High Polymer Series XVI/Part III, D. S. David+H. B. Staley editors, Interscience Publishers, New York 1969 p. 86).

EXAMPLE 14

With the exclusion of light and analogously to Example 8, 4.07 g of a terpolymer prepared in accordance with Example 1 or 3, containing 28% by weight VP, 21% by weight VAc and 51% by weight VA, are dissolved in 40 g of anhydrous DMSO. A solution of 1.02 g of IEM and 18.3 g of photoinitiator derivative from Example 13 in 6 ml of DMSO are added thereto at room temperature, with stirring, and the mixture is then heated at 40° C. for 18 hours. After the indicated reaction time, an IR spectroscopic measurement exhibits no NCO band at 2270 cm⁻¹. The reaction solution is then introduced slowly (still with the exclusion of light) into half a liter of acetone, with stirring, whereupon a white flocculent precipitate forms. The latter is filtered off with suction, washed with acetone and then dried (30° C., 10 Pa) until a constant weight is reached. There remain 3.71 g of a solid (yield: 73% by weight). The prepolymer so modified is readily soluble in water, alcohol, DMF, DMA and DMSO.

What is claimed is:

1. A water-soluble crosslinkable prepolymer that comprises, in the copolymer chain, units derived from the following monomeric structural units: a vinyl lactam (a), vinyl alcohol (b), optionally a lower alkanecarboxylic acid vinyl ester (c), a vinylic crosslinking agent (d) and optionally a vinylic photoinitiator (e).
2. A prepolymer according to claim 1, comprising
 - from 5 to 85% by weight of a vinyl lactam (a),
 - from 3 to 80% by weight of vinyl alcohol (b),
 - from 0 to 65% by weight of a lower alkanecarboxylic acid vinyl ester (c),