

[54] **HYDROPHILIC COPOLYMER OF  
N,N-DI(C<sub>1</sub>-C<sub>2</sub>ALKYL)ACRYLAMIDE  
CROSS-LINKED WITH A GLYCIDYL ESTER**

[75] **Inventor:** Herman S. Schultz, Lexington, Mass.

[73] **Assignee:** Itek Corporation, Lexington, Mass.

[21] **Appl. No.:** 643,212

[22] **Filed:** Dec. 22, 1975

[51] **Int. Cl.<sup>2</sup>** ..... C08F 224/00; C08L 37/00;  
G02C 7/04

[52] **U.S. Cl.** ..... 260/29.6 R; 264/1;  
351/160; 526/230; 526/273

[58] **Field of Search** ..... 260/80.72, 86.1 N, 29.6 R;  
264/1; 351/160; 526/273

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

3,082,178	3/1963	Coover	260/86.1 N
3,112,296	11/1963	Maeder	260/86.1 N
3,563,953	2/1971	Lehmann et al.	260/80.72

3,787,380 1/1974 Stamberger ..... 260/80.72

*Primary Examiner*—Harry Wong, Jr.  
*Attorney, Agent, or Firm*—Homer O. Blair; Robert L. Nathans; David E. Brook

[57] **ABSTRACT**

A hydrophilic copolymer of an N,N-di(C<sub>1</sub>-C<sub>2</sub> alkyl)acrylamide is disclosed. The copolymer is formed by reacting, based on 100 parts, from about 20-80 parts of a C<sub>1</sub>-C<sub>2</sub> alkyl substituted acrylamide, about 10-80 parts of a C<sub>1</sub>-C<sub>4</sub> alkyl acrylate, methacrylate, or combinations of acrylate and methacrylate, and about 2-20 parts of a glycidyl ester of acrylic, methacrylic or crotonic acid. The resulting copolymerization product can be equilibrated with water or other aqueous solutions to form hydrogels useful in forming shaped hydrogel articles. One particular shaped article which can be formed is a hydrophilic contact lens. A process for forming the hydrogels is also disclosed.

**13 Claims, No Drawings**