

## Title (en)

Process for producing high tenacity, high modulus crystalline thermoplastic article and novel product fibers.

## Title (de)

Verfahren zur Herstellung eines thermoplastischen kristallinen Gegenstandes mit hoher Festigkeit und hohem Modulus und Faserprodukte.

## Title (fr)

Procédé pour la fabrication d'un article thermoplastique cristallin ayant une haute ténacité et un module élevé et produits fibreux fabriqués utilisant le procédé.

## Publication

**EP 0064167 A1 19821110 (EN)**

## Application

**EP 82102964 A 19820407**

## Priority

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- US 35901982 A 19820319
- US 35902082 A 19820319

## Abstract (en)

Solutions of ultrahigh molecular weigh polymers such as polyethylene in a relatively non-volatile solvent are extruded through an aperture (25) at constant concentration through the aperture and cooled to form a first gel of indefinite length (33). The first gels are extracted (D) with a volatile solvent to form a second gel (41) and the second gel is dried (E) to form a low porosity xerogel (47). The first gel, second gel or xerogel, or a combination, are stretched (F). Among the products obtainable are polyethylene fibers of greater than 38 or even 40 g/denier tenacity and of modulus greater than 1000 or even 1600 or 2000 g/denier.

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## IPC 8 full level

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- [AD] GB 2042414 A 19800924 - STAMICARBON
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