Patent claims

1. Process for producing foamable crosslinked polymers, characterized in that the polymer comprises (meth)acrylic acid, (meth)acrylonitrile and a (meth)acrylic diester of a diol, ~~which~~ wherein the diol has a molar mass of at least 250 g/mol.

2. Process for producing foamable crosslinked polymers according to Claim 1, characterized in that a mixture made of

(A) from 30 to 70% by weight of (meth)acrylic acid, from 30 to 60% by weight of (meth)acrylonitrile, from 0 to 35% by weight of other vinylically unsaturated monomers,

(B) from 0.01 to 15% by weight of a (meth)acrylic diester of a diol, ~~which~~wherein the diol has a molar mass of at least 250 g/mol,

(C) from 0.01 to 15% by weight of blowing agent,

(D) from 0 to 10% by weight of another crosslinking agent,

(E) from 0.01 to 2.0% by weight of polymerization initiators and

(F) from 0 to 20% by weight of conventional additives

is polymerized in bulk to give a sheet.

3. Process for producing foamable crosslinked polymers according to Claim 2, characterized in that the diol is a polyetherdiol, a polyesterdiol, an oligo(meth)acrylic

telechelic compound or a polyolefindiol, preferably a polyetherdiol.

4. Process for producing foamable crosslinked polymers according to Claim 2 or 3, characterized in that a mixture made of

(A) from 30 to 70% by weight of (meth)acrylic acid, from 30 to 60% by weight of (meth)acrylonitrile, from 0 to 30% by weight of other vinylically unsaturated monomers,

(B) from 0.01 to 15% by weight of a (meth)acrylic diester of a diol, ~~which~~ wherein the diol has a molar mass of from 250 to 1500 g/mol,

(C) from 0.01 to 15% by weight of blowing agent,

(D) from 0.01 to 10% by weight of another crosslinking agent,

(E) from 0.01 to 2.0% by weight of polymerization initiators and

(F) from 0 to 20% by weight of conventional additives

is polymerized in bulk to give a sheet.

5. Process for producing foamed crosslinked polymers according to at least one of Claims 1 to 4, characterized in that the mixture is polymerized in bulk to give a sheet, optionally heat-conditioned and then foamed at temperatures of from 150 to 250°C.