PatBase - Search results 27 July 2018
Search query (8): TA=((microspher* or microcapsul*) and expand* and slurry and thermoplastic) and PD=19600101:20141211
Results: 13

Search history

Search 1: FT=(microspheres and expand*) and PD=19600101:20141211 and EC=(C04B) (Results 561)

Search 2: FT=((microspher* or microcapsul*) and expand* and slurry) and PD=19600101:20141211 and EC=(C04B) (Results 339)

Search 3: TAC=((microspher* or microcapsul*) and expand* and slurry) and PD=19600101:20141211 and EC=(C04B) (Results 28)

Search 4: TA=((microspher* or microcapsul*) and expand*) and PD=19600101:20141211 and EC=(C04B) (Results 37)

Search 5: TA=((microspher* or microcapsul*) and expand*) and PD=19600101:20141211 and EC=(C0) (Results 0)

Search 6: TA=((microspher* or microcapsul*) and expand*) and PD=19600101:20141211 (Results 1523)

Search 7: TA=((microspher* or microcapsul*) and expand* and slurry) and PD=19600101:20141211 (Results 51)

Search 8: TA=((microspher* or microcapsul*) and expand* and slurry and thermoplastic) and PD=19600101:20141211 (Results 13)

1) Family number: 330983 (US3293114A)

Title: METHOD OF FORMING PAPER CONTAINING GASEOUS FILLED SPHERES OF **THERMOPLASTIC** RESINS AND PAPER THEREOF

Abstract: Substantially spherical hollow particles of synthetic **thermoplastic** polymer are made by first charging a polymerization reactor with deionized water, then adding colloidal silica, an aqueous solution of a diethanolamine/adipic acid copolymer and potassium dichromate. The pH is then adjusted to 4 with hydrochloric acid. An oil-phase mixture comprising methyl methacrylate, neopentane and benzoyl peroxide is then added with violent agitation. The mixture is held at 80 DEG C. for 24 hours, then filtered and the polymer particles dried at 30 degrees C. They are then heated at 150 DEG C., when they **expand** to hollow **microspheres**. The above process can similarly be used with comonomers for the methyl methacrylate, viz. ethyl methacrylate, butyl acrylate, acrylonitrile, vinyl acetate, styrene, o-chlorostyrene and p-t-butylstyrene; and similarly for the production of poly-o-chlorostyrene, polyvinylbenzyl chloride, and acrylonitrile/vinylidene chloride, styrene/methacrylic acid and styrene/methacrylic acid/vinyl benzyl chloride copolymers.ALSO:Paper comprises a web of fibres having enmeshed therein substantially spherical hollow particles of **thermoplastic** synthetic polymer. It may be made by deposition upon a screen from a **slurry** of the fibres and hollow particles. The hollow particles may be of polymethyl methacrylate, or of copolymers of methyl methacrylate with styrene, ethyl methacrylate, orthochloro-styrene, acrylonitrile, para-tertiarybutylstyrene, vinyl acetate or butyl acrylate or of polyorthochlorostyrene, or polyvinylbenzyl chloride, or of a copolymer of acrylonitrile and vinylidene chloride, a copolymer of styrene and methacrylic acid or a terpolymer of these two and vinylbenzyl chloride. A cationic starch, retention aid or alum may also be present in the **slurry**. The product has good opacity and low density, and can readily be embossed at a temperature about or above the softening temperature of the polymer.

Classifications:
International (IPC 8-9): D21H17/37 D21H21/28 D21H21/50 D21H21/54 (Advanced/Invention); D21H17/00 D21H21/00 D21H21/14 (Core/Invention)
International (IPC 1-7): C08L79/08 D21H1/02 D21H3/00 D21H3/34 D21H3/38 D21H3/78 D21H3/82 D21H5/00
CPC: D21H17/37 D21H21/54
European: D21H17/37 D21H21/54
US: 162/101 162/168.7 162/169 162/183 264/54 521/55

Family:

Publication number	Publication date	Application number	Application date
BE661981 A	00000000		00000000
DE1546244 A1	19700423	DE19651546244	19650311
DE1546244 C3	19730215	DE1965D046763	19650311
FR1439090 A	19660520	FR19650009322	19650316
GB1104987 A	19680306	GB19650011386	19650317
JP52024122 B4	19770629	JP19650016490	19650323
NL141596 B	19740315	NL19650004133	19650401
NL6504133 A	19651004	NL19650004133	19650401
NO120218 B	19700914	NO19650157505	19650402
SE300927 B	19680513	SE19650004283	19650402
US3293114 A	19661220	US19640357288	19640403

Priority:
US19640357288 19640403 FR19650009322 19650316

Probable Assignee: DOW CHEMICAL CO

Assignee(s): (std): DOW CHEMICAL CO

Assignee(s): PIERCE AND STEVENS CHEMICAL CORP ; THE DOW CHEMICAL CO ; THE DOW CHEMICAL COMPANY ; THE DOW CHEMICAL COMPANY MIDLAND MICHIGAN VER ST V AM

Inventor(s): (std): MILFORD GOOCH RALPH ; LEROY KENAGA DUANE ; KENAGA DUANE LEROY ; KENAGA DUANE L ; KENAGA D ; GOOCH RALPH MOLFORD ; GOOCH RALPH M ; GOOCH R

2) Family number: 142068 (US3556934A)

Title: METHOD OF FORMING A PAPER CONTAINING GASEOUS FILLED SPHERES OF **THERMOPLASTIC** RESINS

Abstract: ABSTRACT OF THE DISCLOSURE
Papers containing **expanded** **thermoplastic** **microspheres** are prepared by incorporating an **expandable** **thermoplastic** **microsphere** within the pulp **slurry** and the paper dried at about 90 degrees C, causing the **microspheres** to foam. This phenomenon appears to be peculiar to **microspheres** having a vinylidene chloride-acrylonitrile copolymer shell.

Classifications:
International (IPC 8-9): D21H21/54 (Advanced/Invention);
D21H21/00 (Core/Invention)
International (IPC 1-7): D21H3/42 D21H3/46 D21H3/82 D21H5/00
CPC: D21H21/54
European: D21H21/54
US: 162/101 162/169 162/185 521/56

Family:

Publication number	Publication date	Application number	Application date
BE758373 A	19710503		00000000
BE758373 A1	19710503		19701103
US3556934 A	19710119	US19670685974	19671127

Priority:

US19670685974 19671127

Probable Assignee: DOW CHEMICAL CO

Assignee(s): (std)**:** DOW CHEMICAL CO

Assignee(s): DOW CHEMICAL CO THE ; DOW CHEMICAL CY MIDLAND MICHIGAN E U A ; DOW CHEMICAL CY MIDLAND MICHIGAN EUA ; PIERCE AND STEVENS CHEMICAL CORP ; PIERCE AND STEVENS CORP ; THE DOW CHEMICAL CY MIDLAND MICHIGAN E U A ; CASCO NOBEL PO BOX AB

Inventor(s): (std)**:** F J MEYER ; MEYER F J ; MEYER FRED J

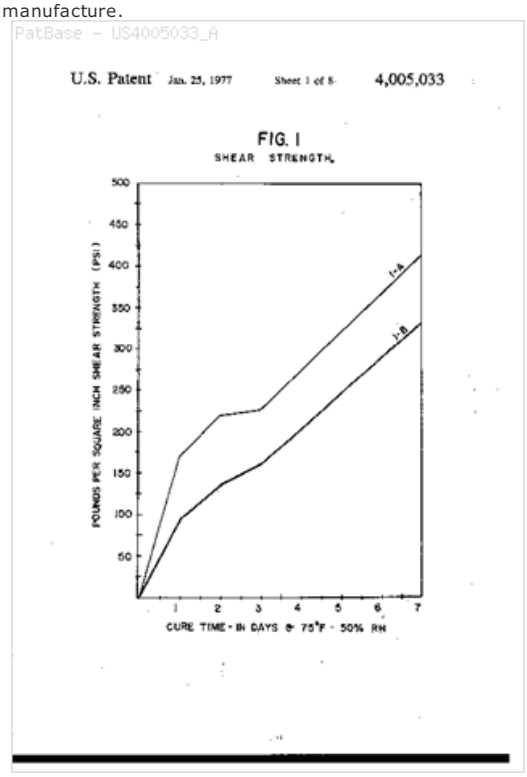
Inventor(s): FJ MEYER ; FRED J MEYER

3) Family number: 1160735 (US4005033A)

Title: Resilient organic **microspheres** in mastic adhesives, sealants, caulks, coating compounds and related products, and methods of manufacture

Abstract: Improved mastic adhesives, sealants, caulks, coating compounds and related products by using in combination therewith hollow resilient organic **microspheres** and the method of manufacture.

Classifications:
International (IPC 8-9): C08K7/00 C08K7/16 C08L1/00 C08L27/00 C08L33/00 C08L33/02 C09D5/34 C09J11/00 C09J11/06 C09J201/00 C09K3/10 (Advanced/Invention);
C08K7/00 C08L1/00 C08L27/00 C08L33/00 C09D5/34 C09J11/00 C09J11/02 C09J201/00 C09K3/10 (Core/Invention)
International (IPC 1-7): B01J13/02 C08F29/34 C08F45/00 C08J9/22 C08J9/32 C08K7/22 C08L101/00 C09D5/34 C09J3/00 C09J3/12 C09J3/14 C09K3/00 C09K3/10
CPC: C09D5/34
European: C09D5/34
US: 260/2.5B 521/134 521/54 521/59



Family:

Publication number	Publication date	Application number	Application date
AU197468985 A1	19751120	AU19740068985	19740515
BE815224 A	19740916	BE19740144483	19740517
BR7403975 A0	19741224	BR19740003975	19740516
DE2423767 A1	19741212	DE19742423767	19740516
ES426362 A1	19760701	ES19740426362	19740516
FR2229751 A1	19741213	FR19740017042	19740516
FR2229751 B1	19780811	FR19740017042	19740516
GB1475546 A	19770601	GB19740021362	19740514
JP50053434 A2	19750512	JP19740055343	19740517
NL7406661 A	19741119	NL19740006661	19740517
US4005033 A	19770125	US19730361364	19730517
ZA7403083 A	19750528	ZA19740003083	19740514

Priority:

US19730361364 19730517

Probable Assignee: DAP INC

Assignee(s): (std): CHAMPION INT CORP ; CHAMPION PAPER CO LTD

Assignee(s): CHAMPION PAPER CO LTD LUZERN SCHWEIZ ; CHAMPION PAPER CY ; CHAMPION PAPER CY CH ; CONGRESS FINANCIAL CORP ; DAP INC ; ROBERTS HOLDING INT ; WASSALL USA ACQUISITION INC ; BANKERS TRUST CO ; BEECHAM HOME IMPROVEMENT PRODUCTS INC

Inventor(s): (std): GEORGEAU PHILIP CARL ; GEORGEAU PHILLIP CARL ; WINEBRENNER LESTER I ; WINEBRENNER L ; GEORGEAU P

Inventor(s): LESTER I WINEBRENNER ; PHILIP CARL GEORGEAU

4) Family number: 2721565 (US4513106A)

Title: PROCESS FOR **EXPANDING** **MICROSPHERES**

Abstract: A process for **expanding** **expandable** **thermoplastic** **microspheres** containing a blowing agent which will be volatilized at heating. A **slurry** of the unexpanded spheres is fed to a pressure zone together with steam whereby volatilization of the blowing agent occurs in the zone and the **expanded** **microspheres** are then allowed to leave the zone at a considerable pressure drop.

Classifications:
International (IPC 8-9): B01J13/02 B01J19/20 C08J9/22 C08J9/228 C08J9/32 (Advanced/Invention); B01J13/02 B01J19/18 C08J9/00 (Core/Invention)
International (IPC 1-7): B01J13/02 C08J9/16 C08J9/22
CPC: Y10S264/09 B01J19/20 C08J9/228 C08J9/32
European: B01J19/20 C08J9/228 C08J9/32
US: 264/53 264/DIG.9 521/56 521/58 521/60

Family:

Publication number	Publication date	Application number	Application date
AT30521 E	19871115	AT19830850311T	19831117
DE3374276 D1	19871210	DE19833374276	19831117
EP0112807 A2	19840704	EP19830850311	19831117
EP0112807 A3	19840905	EP19830850311	19831117
EP0112807 B1	19871104	EP19830850311	19831117
SE452471 B	19871130	SE19820006733	19821126
SE452471 C	19880310	SE19820006733	19821126
SE8206733 A	19840527	SE19820006733	19821126
SE8206733 A0	19821126	SE19820006733	19821126
SE8206733 L	19840527	SE19820006733	19821126
US4513106 A	19850423	US19830554313	19831122

Priority:
SE19820006733 19821126 EP19830850311 19831117

Probable Assignee: KEMANORD AB

Assignee(s): (std): CASCO NOBEL AB ; KEMA NORD AB

Assignee(s): KEMANORD AB ; KEMANORD BOX 11020 S 100 61 STOCKHOLM SWEDEN A COR

Inventor(s): (std): SOEDERBERG JAN ; SODERBERG JAN ; SODERBERG J ; EDGREN ANDERS ; EDGREN A ; BERGSTROM BENGT ; BERGSTROM B O ; BERGSTROEM BENGT

Inventor(s): A EDGREN ; B O BERGSTROM ; J SODERBERG

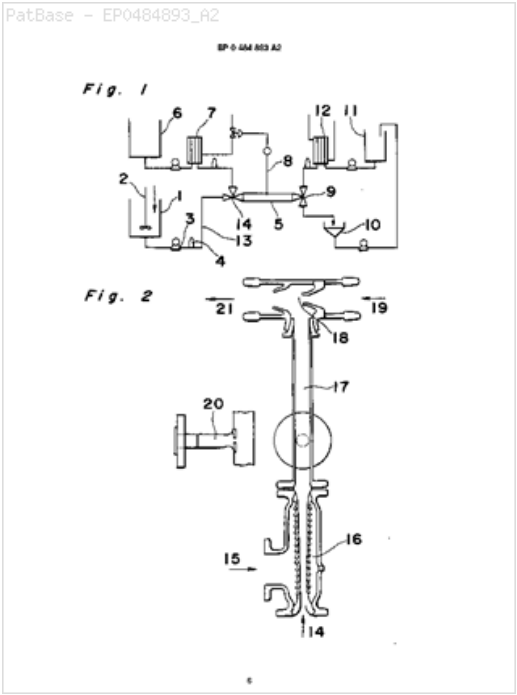
Designated states: AT BE CH DE FR GB IT LI LU NL SE

5) Family number: 3351120 (EP0484893A2)

Title: HOLLOW FINE PARTICLE COMPOSITION.

Abstract: The present invention relates to a composition comprising hollow fine particles wetted with a liquid organic compound not dissolving the particles, and to a method of preparing the hollow fine particles, in which thermally **expandable microspheres** are heated in the liquid organic compound not dissloving the particles; said hollow fine particles are substantially not agglomerated and can be easily and homogenously compounded with a plastics, coatings, rubber, sealant and the like.

Classifications:
International (IPC 8-9): C08J3/12 C08J9/16 C08J9/22 C08J9/32 (Advanced/Invention); C08J3/12 C08J9/00 (Core/Invention)
International (IPC 1-7): C08J3/12 C08J9/16 C08J9/22 C08J9/32
CPC: C08J9/32
European: C08J9/32



Family:

Publication number	Publication date	Application number	Application date
DE69127422 D1	19971002	DE19916027422	19911106
DE69127422 T2	19980102	DE19916027422T	19911106
DE69127422 T3	20020529	DE19916027422T	19911106
EP0484893 A2	19920513	EP19910118889	19911106
EP0484893 A3	19920708	EP19910118889	19911106
EP0484893 B1	19970827	EP19910118889	19911106
EP0484893 B2	20010627	EP19910118889	19911106
JP2927933 B2	19990728	JP19900305006	19901109
JP4178442 A2	19920625	JP19900305006	19901109

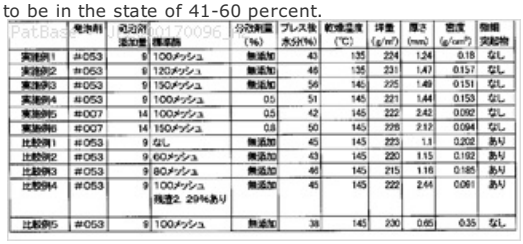
Priority:
JP19900305006 19901109

Probable Assignee: MATSUMOTO YUSHI SEIYAKU KK
Assignee(s): (std): MATSUMOTO YUSHI SEIYAKU CO ; MATSUMOTO YUSHI SEIYAKU KK
Assignee(s): MATSUMOTO YUSHI SEIYAKU CO LTD ; MATSUMOTO YUSHI SEIYAKU CO LTD YAO OSAKA JP
Inventor(s): (std): KIDA SUEO ; KITANO KENICHI ; TANAKA KOJI ; TANAKA KOSHI
Inventor(s): TANAKA KOJI KASHIWARA CITY OSAKA JP ; KITANO KENICHI OSAKA CITY OSAKA JP ; KIDA SUEO KASHIHARA CITY NARA JP
Designated states: DE FR GB NL SE

6) Family number: 14022741 (JP2000170096A)

Title: LOW DENSITY FOAMED PAPER AND ITS PRODUCTION

Abstract: PROBLEM TO BE SOLVED: To provide a new production method of a foamed paper having low density, excellent in heat-insulating properties, cushioning properties, etc., capable of greatly decreasing the consumption of thermal energy compared with conventional production methods, and hardly causing the generation of dioxin when the low density foamed paper of the product is subjected to the incineration treatment by compounding a blowing agent with a pulp **slurry**, and further to obtain the product.SOLUTION: This method for heating and foaming the paper web obtained by compounding **expandable** particles with the pulp and subjecting the obtained pulp with the **expandable** particles to the paper-making to provide the objective low-density bulky paper comprises selecting **microcapsules** obtained by using an acrylonitrile-based **thermoplastic** resin as the outside shells of the capsules as a heat-blowing agent added to the pulp, dispersing the capsules so that the capsules passing 100 mesh may occupy 98 percent or more of the capsules to uniformly disperse the capsules in the pulp **slurry**, forming the wet paper web, and heating and foaming the wet paper web while regulating the amount of moisture of the wet paper web before the heating and foaming so as to be in the state of 41-60 percent.



Classifications:
International (IPC 8-9): D21H21/22 D21H21/50 (Advanced/Invention); D21H21/00 D21H21/22 (Core/Invention)
International (IPC 1-7): D21H21/22 D21H21/50

Family:

Publication number	Publication date	Application number	Application date
JP2000170096 A2	20000620	JP19980347250	19981207
JP4025444 B2	20071219	JP19980347250	19981207

Priority:

JP19980347250 19981207

Probable Assignee: OJI PAPER CO

Assignee(s): (std): OJI PAPER CO ; TOYO FIBER KK

Assignee(s): OJI HOLDINGS CORP ; OJI PAPER CO LTD

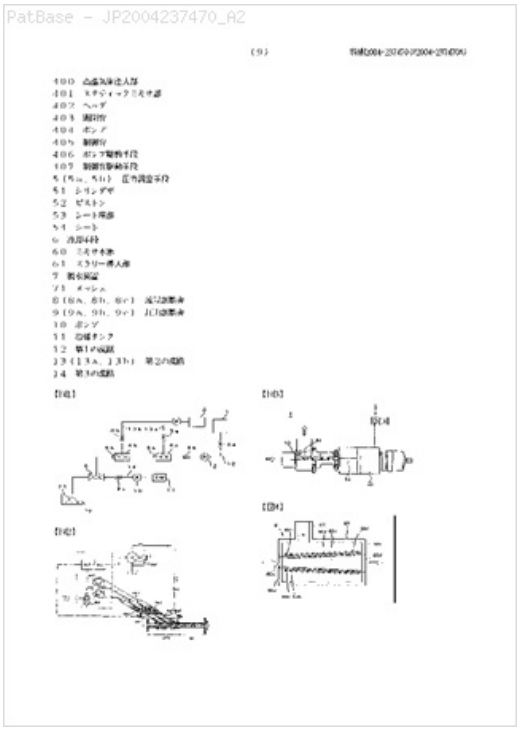
Inventor(s): (std): KANDA NOBUO ; SANO EIGO ; SUZUKI MITSUO ; WATANABE YASUTO

7) Family number: 31013723 (JP2004237470A)

Title: METHOD AND APPARATUS FOR MANUFACTURING THERMALLY **EXPANDED** **MICROCAPSULE**

Abstract: PROBLEM TO BE SOLVED: To provide a manufacturing apparatus capable of manufacturing a uniform thermally **expanded** **microcapsule** by suppressing coalescence. SOLUTION: This manufacturing apparatus is adapted so as to manufacture the thermally **expanded** **microcapsule** by heating a thermally expansible **microcapsule**, wherein a foaming agent comprising a volatile liquid is housed in a shell comprising a **thermoplastic** resin, to **expand** the same and constituted by the mutual in-line connection of a **slurry** supply means for supplying a **slurry** prepared by mixing the thermally expansible **microcapsules** with a liquid medium, a **slurry** feed means for feeding the **slurry**, a high temperature gas supply means, a heating/mixing means equipped with a static mixer element and supplying a high temperature gas to the **slurry** fed by the **slurry** supply means from the high temperature gas supply means to mix the same with the **slurry** by the static mixer element while heating the **slurry** and a pressure adjusting means equipped with an air pressure type back pressure valve and provided to the piping on the downstream side of the heating/mixing means to absorb fluctuations in the pressure applied to the piping.

Classifications:
International (IPC 8-9): B01F5/00 B01J13/12 B29C44/00 C08J9/32 (Advanced/Invention);
B01F5/00 B01J13/06 B29C44/00 C08J9/00 (Core/Invention)
International (IPC 1-7): B01F5/00 B29C44/00



Family:

Publication number	Publication date	Application number	Application date
JP2004237470 A2	20040826	JP20030026440	20030203
JP4099077 B2	20080611	JP20030026440	20030203

Priority:
JP20030026440 20030203

Probable Assignee:	SEKISUI CHEMICAL CO LTD
Assignee(s): (std):	SEKISUI CHEMICAL CO LTD
Assignee(s):	SEKISUI CHEM CO LTD
Inventor(s): (std):	KOSAKA YOSHIYUKI ; SATO HIROSHI