

Title (en)

Colloidal alumina as a paper retention aid.

Title (de)

Kolloidale Tonerde als Papierretentionshilfsmittel.

Title (fr)

Alumine colloidale comme agent de rétention en papeterie.

Publication

**EP 0355816 A2 19900228 (EN)**

Application

**EP 89115581 A 19890823**

Priority

US 23681688 A 19880826

Abstract (en)

A binder which is added to a paper-making furnish comprising: a colloidal alumina sol having a positive surface charge and a colloidal alumina concentration in the range between 0.1-1%, the colloidal alumina having a particle size in the range between 1-50 nanometers and is added to the furnish in an amount between about 0.025-0.5% by weight; and an anionic polymer flocculant which is added to the furnish in an amount between about 0.01-0.1% by weight.

IPC 1-7

**D21H 17/69; D21H 21/10; D21H 23/76**

IPC 8 full level

**D21H 17/33** (2006.01); **D21H 17/37** (2006.01); **D21H 17/42** (2006.01); **D21H 17/63** (2006.01); **D21H 17/67** (2006.01); **D21H 21/10** (2006.01)

CPC (source: EP)

**D21H 17/42** (2013.01); **D21H 17/675** (2013.01); **D21H 21/10** (2013.01)

Cited by

GB2366576A; WO2008052844A1; US8303702B2

Designated contracting state (EPC)

AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

**EP 0355816 A2 19900228; EP 0355816 A3 19920909;** BR 8903325 A 19900313; DE 355816 T1 19900927; ES 2014959 A4 19900801;  
JP H02259196 A 19901019

DOCDB simple family (application)

**EP 89115581 A 19890823;** BR 8903325 A 19890706; DE 89115581 T 19890823; ES 89115581 T 19890823; JP 21759889 A 19890825