

## Title (en)

Method of obtaining protected against caking ultrafine fractions of rain raw materials such as chalk, gypsum, limestone, and system for this method execution

## Title (de)

Verfahren zum Schutz gegen das Zusammenbacken ultrafeiner Fraktionen von Rohmaterialien wie Kalk, Gips, Kalkstein und System zur Durchführung des Verfahrens

## Title (fr)

Procédé d'obtention de matières premières à fractions ultrafines de pluie protégées contre l'agglomération telles que la craie, le plâtre, le calcaire et système pour l'exécution de ce procédé

## Publication

**EP 2689854 A1 20140129 (EN)**

## Application

**EP 12460055 A 20120828**

## Priority

PL 40015012 A 20120726

## Abstract (en)

Method of obtaining protected against caking, ultrafine particle fractions of raw materials such as chalk, gypsum and limestone in which the initial raw material is introduced to the impact mill (2), favourably a beater mill, where it is subject to crushing with simultaneous mechanical activation of particles, it is further delivered to the dynamic separator (4), it is subject to generation of fraction of particle sizes not exceeding 90 µm which is sent to the separating cyclone (5) where it is separated from the circulating gas and sent to the bunker (26), is according to the invention characterized by the fact that the obtained ultrafine loose material is, prior to further transport and storage, subject to customizing, i.e. mechanical de-caking and activation and discharge of electrostatic charges from the surface of particles in mechanical disintegrator (11) with simultaneous mixing, preliminary aeration in the chute cone of mechanical disintegrator (11), and then it is subject to intense process of aeration in pneumatic pressure pump (13) and transported to storage vessel (14). According to the invention version, additional loose material, favourably a halloysite is delivered to mechanical disintegrator (11) from additional vessel or set of vessels (21). The subject of the invention is also a system of this method execution. In systems of equipment according to the invention, by the method according to the invention, very fine particle fractions are obtained which are protected against undesired caking during their processing, storage, customizing, transportation and intended use.

## IPC 8 full level

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## Citation (applicant)

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- PL 182596 B1 20020228 - JACHOWICZ ROMUALD [PL], et al
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## Citation (search report)

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- [A] US 4269363 A 19810526 - ENTZMANN KARL
- [A] DE 1200657 B 19650909 - ONODA CEMENT CO LTD
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## Cited by

CN110102376A; CN109794323A; CN108100676A; CN109127080A; CN116651585A; US10207275B2

## Designated contracting state (EPC)

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## Designated extension state (EPC)

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**EP 2689854 A1 20140129**; **EP 2689854 B1 20150826**; PL 224411 B1 20161230; PL 400150 A1 20140203

## DOCDB simple family (application)

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