Title (en)

PROCESS FOR COUPLED PREPARATION OF POLYSILAZANES AND TRISILYLAMINE

Title (de)

VERFAHREN ZUR GEKOPPELTEN HERSTELLUNG VON POLYSILAZANEN UND TRISILYLAMIN

Title (fr)

PROCÉDÉ DE PRODUCTION COUPLÉE DE POLYSILAZANES ET DE TRISILYLAMINE

Publication

EP 2882797 A1 20150617 (DE)

Application

EP 13730908 A 20130625

Priority

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- EP 2013063286 W 20130625

Abstract (en)

[origin: WO2014023470A1] The invention provides a process for preparing trisilylamine and polysilazanes in the liquid phase, by metering ammonia dissolved in an inert solvent initially in a substoichiometric amount relative to monochlorosilane which is likewise present in inert solvent. The reaction is performed in a reactor in which trisilylamine, formed according to the following equation: 4 NH3 + 3 H3SiCl --> 3 NH4Cl + (SiH3)3N, and polysilazanes are formed. The reactor is subsequently decompressed and TSA is removed from the product mixture in gaseous form. The TSA obtained is purified by filtration and distillation and is obtained in high or ultrahigh purity. Subsequently, further ammonia dissolved in inert solvent is metered into the reactor, in the course of which, together with the amount of ammonia introduced beforehand, a stoichiometric excess of ammonia relative to the amount of MCS present beforehand is used. Excess ammonia is subsequently discharged, inert gas is introduced, and the bottom product mixture from the reactor is conducted through a filter unit, removing solid ammonium chloride, and a liquid mixture of polysilazanes and solvent is obtained.

IPC 8 full level

C08G 77/62 (2006.01)

CPC (source: EP KR US)

B01J 19/24 (2013.01 - KR US); **C01B 21/087** (2013.01 - EP KR US); **C08G 77/62** (2013.01 - EP KR US); B01J 2219/24 (2013.01 - KR US)

Citation (search report)

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