

Title (en)

CATALYST SYSTEM FOR PRODUCING AROMATIC AMINES

Title (de)

KATALYSATORSYSTEM FÜR DIE HERSTELLUNG VON AROMATISCHEN AMINEN

Title (fr)

SYSTÈME CATALYSEUR POUR LA PRODUCTION D'AMINES AROMATIQUES

Publication

EP 3953322 A1 20220216 (DE)

Application

EP 20714620 A 20200401

Priority

- EP 19168919 A 20190412
- EP 2020059228 W 20200401

Abstract (en)

[origin: WO2020207874A1] The invention relates to a catalyst system suitable for hydrogenating aromatic nitro compounds (I) to form the corresponding aromatic amines (II), the catalyst system containing, as essential constituents: a component A selected from the group consisting of silicon carbide, corundum (alpha-Al₂O₃) and slightly porous to non-porous zirconium oxide (ZrO₂); and a component B, containing B1 – a carrier substance selected from the group consisting of silicon dioxide, gamma-, delta- or theta-aluminum oxide Al₂O₃, titanium dioxide, zirconium dioxide and graphite, B2 – a metal or a plurality of metals selected from the group consisting of copper, nickel, palladium, platinum and cobalt, and optionally B3 – an additional metal selected from the group consisting of at least one metal selected from main group I, main group II, main group IV and sub-groups II, V, VI and VIII of the periodic table of the elements, the proportion of component A being in the range of 5 to 60 wt%, in relation to the total weight of the catalyst system, and the aromatic nitro compounds (I) being those of the general formula R-(NO₂)_n, (I), and the aromatic amines (II) being those of the general formula R-(NH₂)_n, (II), and the moieties R and indices n in formulas (I) and (II) having the following meaning: R is a substituted or unsubstituted aromatic C₆-C₁₀ moiety and n is an integer from 1 to 5.

IPC 8 full level

C07C 209/36 (2006.01); **B01J 21/08** (2006.01); **B01J 21/12** (2006.01); **B01J 23/42** (2006.01); **B01J 23/44** (2006.01); **B01J 23/72** (2006.01); **B01J 23/75** (2006.01); **B01J 23/755** (2006.01); **B01J 27/224** (2006.01); **B01J 35/00** (2006.01); **B01J 37/02** (2006.01); **C07C 211/46** (2006.01)

CPC (source: EP KR US)

B01J 8/24 (2013.01 - US); **B01J 23/72** (2013.01 - EP KR US); **B01J 23/94** (2013.01 - EP KR); **B01J 27/224** (2013.01 - US); **B01J 35/635** (2024.01 - EP KR); **B01J 37/0205** (2013.01 - EP KR); **B01J 37/0207** (2013.01 - US); **B01J 37/082** (2013.01 - US); **B01J 37/088** (2013.01 - EP KR); **B01J 38/12** (2013.01 - EP KR); **C07C 209/36** (2013.01 - EP KR US); **C07C 211/46** (2013.01 - KR); **Y02P 20/584** (2015.11 - EP KR)

C-Set (source: EP)

C07C 209/36 + C07C 211/46

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2020207874 A1 20201015; CN 113661157 A 20211116; EP 3953322 A1 20220216; KR 20210150559 A 20211210; US 2022161237 A1 20220526

DOCDB simple family (application)

EP 2020059228 W 20200401; CN 202080027917 A 20200401; EP 20714620 A 20200401; KR 20217037095 A 20200401; US 202017602887 A 20200401