

RID	Title	CN Patent Number	Priority Number	Prio Date
WP2007396444	Apparatus for separating monomers from a residue containing diisocyanate comprises providing a highly viscous and/or a non-brittle solid material, and removing the obtained mixture from the apparatus	CN 101273010 A	DE 2005-10051399 DE 2005-10046816	20051025 20050929
WP2004669976	Stabilization of highly concentrated formaldehyde solutions having a CH ₂ O content of greater than 70 wt.% against solids precipitation comprises heating the solution and storage at temperature	CN 1756732 A	DE 2003-1009286 DE 2003-1009286	20030304 20030504
WP2004518770	Purifying isocyanates by distillation, useful as monomers for making polyurethanes, includes separate step for eliminating non-evaporatable residues	CN 1982292 A CN 1729165 A CN 100569743 C	DE 2002-1060092 US 2005-539131	20021219 20050616
WP2004508308	Preparation of polyisocyanates, useful in preparation of polyurethanes, by reacting amine and phosgene in three stages, at progressively lower pressures	CN 1312123 C CN 1729168 A	DE 2002-1060082 DE 2002-1060082	20021219 20031219
WP2004224764	Preparation of isocyanates by reacting two partial amounts of chlorine with carbon monoxide, reacting phosgene with primary amines, separating and purifying isocyanates and hydrogen chloride, and separating chlorine	CN 1274673 C CN 1675174 A	DE 2002-1035476 US 2002-000227865	20020802 20020827
WP2002734024	Apparatus, for production of toluylene diisocyanate and methylenediphenyl diisocyanate, comprises distillation column and/or container and rotating evaporator	CN 1620329 A CN 1305840 C	DE 2000-1064196 WO 2002-EP01658 AU 2002-250959 EP 2002-719855 CN 2002-828041 DE 2002-503849 US 2004-503005 KR 2004-712539	20001222 20020215 20020215 20020215 20020215 20020215 20040729 20040813
WP2000431543	Hydrogenation of nitro compound to amine, using vertical reactor with internal circulation to prevent localized overheating and external circulation for recyle and product recovery.	CN 1190411 C CN 1330626 A	DE 1999-1032821 DE 1998-1057409	19990714 19981212
WP1999445403	Production of methylene-diphenylamine, useful for conversion into polyisocyanate, especially methylene-diphenyl-isocyanate	CN 1290245 A CN 1151119 C CN 1266124 C CN 1532189 A	DE 1998-1004915 US 2004-843046	19980207 20040511
WP2009G32601	Preparing diisocyanate, comprises mixing phosgene stream with diamine stream, mixing reaction mixture comprising e.g. isocyanate with a liquid, reconditioning condensed isocyanate and separating hydrogen chloride and phosgene stream	CN 101801920 A	EP 2007-116729	20070919
WP2009F47620	Producing polyisocyanate comprises reacting amines with phosgene, separating hydrogen chloride, phosgene and solvent from reaction mixture, separating liquid mixture to liquid and gaseous phase and processing gas phase to polyisocyanate	CN 101790510 A	EP 2007-115380	20070831

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WP2008K07406	Producing diisocyanate comprises reacting corresponding diamines with phosgene in a reaction zone loaded with diamine- and a phosgene containing gas stream and in such a reaction condition where the reaction components are in gasiform	CN 101622226 A	EP 2007-100644	20070117
WP2008G68345	Isocyanate preparation by gas-phase phosgenation of amine, includes rapid cooling of reaction gases in zone supplied with quenching liquid in curtain or closed chamber spray pattern	CN 101595086 A	EP 2006-123621	20061107
WP2008G68344	Production of isocyanate from amine and phosgene, for use in polyurethane production, involves gas-phase reaction followed by transfer via an expanded section to a zone with sprayed quench liquid	CN 101535242 A	EP 2006-123629	20061107
WP2008K18340	Production of isocyanate, e.g. diaminodiphenylmethane for use in polyurethane production, involves reacting phosgene with amine in at least two mixing chambers in parallel	CN 101528678 A	EP 2006-123015	20061026
WP2008D99431	Preparation of pentamethylene-1,5-diisocyanate, useful to prepare polyisocyanate or thermoplastic polyurethane, comprises converting lysine to 1,5-pentanediamine, and converting the 1,5-pentanediamine to pentamethylene-1,5-diisocyanate	CN 101495643 A	EP 2006-118256	20060801
WP2008C47583	Production of isocyanate, useful as basic material for producing polyurethane, comprises mixing amines, or a mixture of amines and a solvent in the form of aerosol with gaseous phosgene and subsequently reacting the amine with phosgene	CN 101489996 A	EP 2006-117172	20060713
WP2007708497	Preparation of isocyanate, useful in the preparation of e.g. urethane, isocyanurate, amide and/or urea, comprises reacting di- or polyamine with urea to give di- or polyurea and splitting of di- or polyurea to the corresponding isocyanate	CN 101374802 A	EP 2006-100315	20060113
WP2007468528	Preparation of isocyanate comprises reacting amine with urea and an alcohol to give corresponding urethane in a mixer, which is connected with retention time reactor and subsequently splitting of urethane gives corresponding isocyanate	CN 101263109 A	DE 2005-10043799	20050913
WP2007312054	Preparation of an isocyanate comprises reaction of the corresponding amines with phosgene, optionally in the presence of an inert medium, in the gas phase and in the amine steam reactor with phosgene streams	CN 101258127 A	DE 2005-10042392	20050906
WP2007161350	Diisocyanates production by supplying gas flow containing diamine and phosgene to reaction zone, separating surplus phosgene and hydrogen chloride gas from gaseous reaction mixture, and feeding back the separated phosgene into the reaction	CN 101238096 A	DE 2005-10037328	20050804
WP2007092418	Processing of isocyanate adduct, comprises reacting isocyanate adduct with pure ammonia, processing the obtained product and reducing the formed amine into the isocyanate production	CN 101198587 A	DE 2005-10027814	20050615

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WP2006697804	Preparation of isocyanate comprises preparing raw methylene diphenylamine mixture; separating the raw-mixtures; and phosgenizing the obtained monomer methylene diphenylamine and polymethylene diphenylamine	CN 101137617 A	DE 2005-10014846	20050330
WP2006749107	Preparation of isocyanate comprises preparing a raw-methylene diphenylamine mixture; transferring the mixture in to a gaseous phase; and phosgenizing the raw-methylene diphenylamine in the gaseous phase	CN 101151241 A	DE 2005-10014847	20050330
WP2006363357	Production of polyisocyanate for use in making polyurethane, involves reacting the corresponding polyamine with phosgene in a solvent which forms a salt melt with hydrogen chloride, e.g. dioxan or a glycol ether	CN 101056847 A	DE 2004-10053661	20041103
WP2006321588	Preparation of polyisocyanate, useful as basic materials for the production of polyurethane, comprises reaction of primary amines with phosgene in the presence of an ionic liquid solvent	CN 100577638 C	DE 2004-10053662	20041103
WP2006028992	Producing isocyanates comprises reacting amines with phosgene that is substantially isocyanate-free and has a low hydrogen chloride content	CN 1956948 A	DE 2004-10026095	20040525
WP2005571110	Distilling tolylenediamine from a feed stream containing heavy and light boilers comprises using a partitioned column	CN 1910133 A CN 100406429 C	DE 2004-10001456	20040108
WP2005522554	Separating trioxan from a stream also containing formaldehyde and water, useful as part of a trioxan production process, includes three distillations at different pressures to avoid formation of ternary azeotrope	CN 100554262 C CN 1918142 A	DE 2003-1061516	20031223
WP2005512613	Separation of trioxane from mixtures also containing water and formaldehyde, useful as part of a trioxane production process, includes three distillations at different pressures to avoid formation of ternary azeotrope	CN 1897999 A	DE 2003-1061518	20031223
WP2005132292	Production of diaminodiarylmethane, for use as a source of di-isocyanate and polyurethane, involves reacting aryl-amine with a methylene source using homogeneous acid catalyst and removing catalyst with basic ion exchange resin	CN 1823033 B CN 1823033 A	DE 2003-1031772	20030711
WP2004679243	Production of polyisocyanates useful for polyurethane production comprises reacting an amine with phosgene in a tubular reactor and passing the reactor effluent to a distillation column	CN 100374196 C CN 1758956 A	DE 2003-1010888	20030311
WP2004669977	Production of highly concentrated gaseous formaldehyde from an aqueous formaldehyde solution comprises evaporation with removal of the resulting gas phase under defined conditions of temperature	CN 1756730 A	DE 2003-1009288	20030304
WP2004508403	Production of isocyanates by reacting amines with phosgene comprises using phosgene with a high hydrogen chloride content	CN 100540531 C CN 1729167 A	DE 2002-1061187	20021220

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WP2004526522	Preparation of isocyanates from amines and phosgene, useful as monomers for polyurethane, with separation and purification of product in a counterflow distillation column	CN 1729166 A	DE 2002-1060093	20021219
WP2004518758	Production of isocyanates, especially useful for polyurethane production, by reacting amines with phosgene in an organic solvent comprises solvent recovery by two-stage distillation with heat exchange	CN 100334072 C CN 1729170 A	DE 2002-1060027	20021219
WP2004489224	Partial or complete separation of mixture of hydrogen chloride and phosgene, used in vinyl chloride manufacture or Deacon process and in isocyanate synthesis, involves condensing and stripping phosgene and scrubbing gas stream	CN 1729169 A	DE 2002-1060084	20021219
WP2004365917	Production of isocyanates by reaction of a suspension comprising a primary amine with phosgene, comprises processing of a suspension of solid carbamyl chloride in liquid isocyanate in a film evaporator	CN 1684942 A CN 1305841 C	DE 2002-1045584	20020927
WP2004270783	Production of aromatic di-isocyanate e.g. used in polyurethane production, comprises gas-phase reaction of phosgene with diamine under moderate pressure in reactor with low phosgene hold-up	CN 1675175 A CN 1310875 C	DE 2002-1038995	20020820
WP2004053214	Continuous production of isocyanate by phosgenation of primary amine involves using reactor cascade in which volume of first reactor is less than average volume and only liquid phase is passed to next reactor	CN 1656062 A CN 101108812 B CN 101108812 A CN 100361968 C	DE 2002-1022968	20020523
WP2003664830	Production of isocyanate involves gas-phase reaction of prim. amine with phosgene in a reactor channel with an internal width which is at least twice the height	CN 1592736 A CN 1266123 C	DE 2001-1058160	20011128
WP2003183974	Isocyanate production by reacting primary amines with phosgene in an isocyanate solvent, comprises adding at least part of the solvent after combining the amine and phosgene	CN 1516688 A CN 1218934 C	DE 2001-1029233	20010619
WP2003211969	Distillation column for mixtures, with toxic component, has packing with variable inner geometry to form lower bubbling layer with dispersed gas phase and an upper film layer with a continuous gas phase	CN 1229177 C CN 1509207 A	DE 2001-1024386	20010518
WP2000073709	Work-up of distillation residuals from toluylene diisocyanate preparation	CN 1305456 A CN 1165520 C	DE 1998-1027086	19980618
WP1999602357	Production of diphenylmethanediisocyanate and polyphenylene-polymethylene-polyisocyanate mixtures	CN 1160319 C CN 1298385 A	DE 1998-1017691	19980421