

1) Family number: 29993220 (US2003171474A)

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Title: INSULATION PRODUCT ESPECIALLY A THERMAL INSULATION PRODUCT, AND ITS MANUFACTURE

Abstract: Source: US2003171474A Insulating product based on mineral wool sized with a binder based on a phenol-formaldehyde resin, in which the binder comprises, as a mixture: 60 to 90 parts by weight of a phenol-formaldehyde resol having a free formaldehyde content of less than or equal to 25 percent by weight with respect to the dry weight of resin and a free phenol content of less than or equal to 2.5 percent by weight with respect to the dry weight of resin, obtained by condensation in basic medium of phenol (P) and formaldehyde (F) in an F/P molar ratio of around 2.5 to 4 until the condensation product neutralized by sulphuric acid has a water dilutability of greater than 500 percent and less than or equal to 1500 percent; 10 to 40 parts by weight of urea. Use of such a sizing composition for manufacturing insulating products, while reducing the emissions of ammonia gas on the manufacturing line.

Classifications:

International (IPC 8-9): C03C25/10 C03C25/34 C08G14/08 C08K3/30 C08K5/21 C08K7/04 C08L61/34 C09J161/10 D06M11/00 D06M11/66 D06M13/432 D06M15/41 F16L59/04 G10K11/162 (Advanced/Invention);
C03C25/34 (Advanced/Non-invention);
C03C25/00 C03C25/24 (Core/Invention)

International (IPC 1-7): C03C25/10 C03C25/34 C08K3/34 C09J161/10 D06M11/66 D06M13/432 D06M15/41 E04B1/74 F16L59/04 G10K11/162

CPC: Y10T428/2935 D04H1/4218 C03C25/34 D04H1/4209 D04H1/587 D04H1/64 E04B1/7662 Y10T442/2992 Y10T442/604

European: C03C25/34 D04H1/4209 D04H1/4218 D04H1/587 D04H1/64 E04B1/76E2B

US: 252/62 252/62S 427/389.8 428/376 442/180 442/331 524/443 524/841

Family:

Publication number	Publication date	Application number	Application date
AT340774 E	20061015	AT20010945410T	20010613
AU2001267637 AA	20011224	AU20010267637	20010613
AU200167637 A5	20011224	AU20010067637	20010613
BRPI0111593 A	20030506	BR2001PI11593	20010613
BRPI0111593 B1	20101116	BR2001PI11593	20010613
CA2411475 AA	20021205	CA20012411475	20010613
CA2411475 C	20110719	CA20012411475	20010613
CN1221484 C	20051005	CN20018011133	20010613
CN1436157 A	20030813	CN20018011133	20010613
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EP1289901 A1	20030312	EP20010945410	20010613
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EP1289901 B2	20111214	EP20010945410	20010613
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HU0303683 AC	20110428	HU20030003683	20010613
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JP2012097261 A2	20120524	JP20110243653	20111107
JP5306567 B2	20131002	JP20020510401T	20010613
KR100770380 B1	20071026	KR20027016204	20010613
KR20030005427 A	20030117	KR20027016204	20010613
NO20025919 A	20021210	NO20020005919	20021210
NO20025919 A0	20021210	NO20020005919	20021210
PL194950 B1	20070731	PL20010359098	20010613
PL359098 A1	20040823	PL20010359098	20010613
PT1289901 T	20070131	PT20010945410T	20010613
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US2003171474 AA	20030911	US20030297589	20030501
US6893579 BB	20050517	US20030297589	20030501
WO0196254 A1	20011220	WO2001FR01824	20010613
ZA200209472 A	20030528	ZA20020009472	20021121

Priority:

EP20010945410 20010613 FR20000007535 20000613 JP20020510401 20010613
JP20020510401T 20010613 WO2001FR01824 20010613 WO2001FR01824 20021128

Probable Assignee: SAINT GOBAIN ISOVER

Assignee(s): (std): MAHIEUXE BRUNO ; SAINT GOBAIN ISOVER ; SAINT GOBAIN ISOVER SA ; ESPIARD PHILIPPE

Assignee(s): ISOVER SAINT GOBAIN ; SAINT GOBAIN ISOVER SOC ANONYME ; SAINT GOBAIN ISOVER SOCIETE ANONYME

Inventor(s): (std): B MAHIEUXE ; BRUNO MAHIEUXE ; ESPIARD P ; ESPIARD PHILIPPE ; ESPIARD PHILLIPPE ; MAHIEUXE B ; MAHIEUXE BRUNO ; P ESPIARD ; PHILLIPPE ESPIARD

Inventor(s): PHILIPPE ESPIARD

Agent(s): GRIFFITH HACK ; GOUDREAU GAGE DUBUC ; MULLER RENE ; DE ELZABURU ALBERTO ; SAINT GOBAIN RECHERCHE ; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

2) Family number: 44534954 (US2011210280A)

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Title: SIZING COMPOSITION FOR MINERAL WOOL BASED ON HYDROGENATED SUGAR AND INSULATING PRODUCTS OBTAINED

Abstract: Source: US2011210280A A sizing composition for insulating products based on mineral wool, in particular of glass or of rock, which includes at least one hydrogenated sugar and at least one polyfunctional crosslinking agent. Another subject matter of the present invention is the insulating products based on mineral fibers thus obtained.

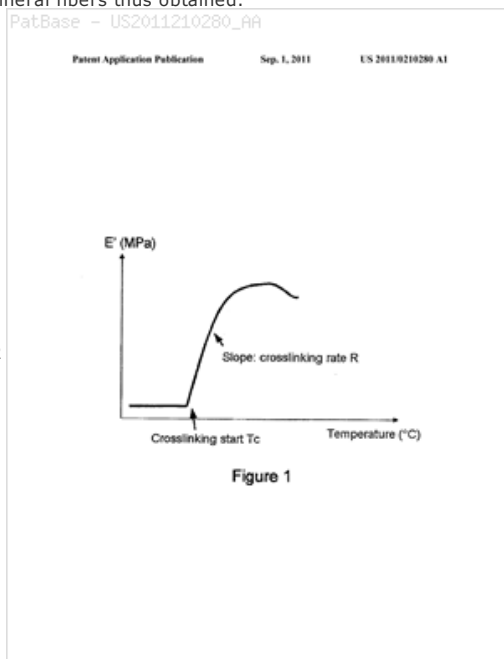
Classifications:

International (IPC 8-9): C03C25/10 C03C25/14 C03C25/24 C03C25/26 C03C25/32 C03C25/34 C03C27/10 C08J3/24 C08K3/32 C08K5/092 C09D103/00 C09J103/02 C09J105/00 C09J11/06 C09J133/02 D04H1/58 D04H1/587 D06M13/123 D06M13/192 D06M15/01 D06M15/03 D06M15/263 E04B1/74 (Advanced/Invention); C03C25/24 C03C25/26 D06M101/00 D06M15/01 (Advanced/Non-invention); C03C25/12 C03C25/24 C08J3/24 C08K3/00 C08K5/00 C09J103/00 C09J105/00 C09J11/02 C09J133/02 D04H1/58 E04B1/74 (Core/Invention); C03C C09J D04H (Subclass/Invention)

CPC: D04H1/587 C03C25/323 C03C25/34 C09J2400/00 C03C25/26 C03C25/321 D06M13/192 D06M13/203 D06M15/03 D06M15/11

European: C03C25/26 C03C25/32B D06M13/192 D06M13/203 D06M15/03 D06M15/11

US: 106/215.2 106/215.200S 106/217.5 106/217.6 106/217.7 252/62 252/62P



Family:

Publication number	Publication date	Application number	Application date
AU2009290744 AA	20100318	AU20090290744	20090911
AU2009290744 BB	20150625	AU20090290744	20090911
BRPI0918162 A2	20151201	BR2009PI18162	20090911
CA2736597 AA	20110309	CA20092736597	20090911
CL2011000525 A1	20110617	CL20110000525	20110311
CL52042 B	20160219	CL20110000525	20110311
CN102209764 A	20111005	CN200980144944	20090911
CN102209764 B	20170524	CN200980144944	20090911
CO6341646 A2	20111121	CO20110034623	20110322
EA018422 B1	20130730	EA20110070431	20090911
EA201170431 A1	20111031	EA20110070431	20090911
EP2324089 A1	20110525	EP20090741402	20090911
FR2935707 A1	20100312	FR20080056109	20080911
FR2935707 B1	20120720	FR20080056109	20080911
IN01076KN2011 A	20111125	IN2011KN01076	20110311
JP2012502199 T2	20120126	JP20110526545T	20090911
JP5694166 B2	20150401	JP20110526545T	20090911
KR101666601 B1	20161014	KR20117006135	20090911
KR20110056512 A	20110530	KR20117006135	20090911
MX2011002603 A1	20110523	MX20110002603	20090911
NZ592169 A	20130328	NZ20090592169	20090911
UA102266 C2	20130625	UA20110004322	20090911
US2011210280 AA	20110901	US20090063389	20090911
US8808443 BB	20140819	US20090063389	20090911
WO10029266 A1	20100318	WO2009FR51711	20090911
ZA201102675 A	20111228	ZA20110002675	20110411

Priority:

FR20080056109 20080911 WO2009FR51711 20090911

Probable Assignee: SAINT GOBAIN ISOVER

Assignee(s): (std): JAFFRENNOU BORIS ; SAINT GOBAIN ISOVER

Inventor(s): (std): BORIS JAFFRENNOU ; JAFFRENNOU BORIS

Agent(s): GRIFFITH HACK; GOUDREAU GAGE DUBUC; PORZIO; MARGARITA CASTELLANOS ABONDANO; JAMET VINCENT; SAINT GOBAIN RECHERCHE; PILLSBURY WINTHROP SHAW PITTMAN LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 48741301 (US2011086567A) © PatBase

Title: BIO-BASED BINDERS FOR INSULATION AND NON-WOVEN MATS

Abstract: Source: US2011086567A An aqueous binder composition is provided that includes a carbohydrate and a crosslinking agent. In exemplary embodiments, the carbohydrate-based binder composition may also include a catalyst, a coupling agent, a process aid, a crosslinking density enhancer, an extender, a moisture resistant agent, a dedusting oil, a colorant, a corrosion inhibitor, a surfactant, a pH adjuster, and combinations thereof. The carbohydrate may be natural in origin and derived from renewable resources. Additionally, the carbohydrate polymer may have a dextrose equivalent (DE) number from 2 to 20. In at least one exemplary embodiment, the carbohydrate is a water-soluble polysaccharide such as dextrin or maltodextrin and the crosslinking agent is citric acid. Advantageously, the carbohydrates have a low viscosity and cure at moderate temperatures. The environmentally friendly, formaldehyde-free binder may be used in the formation of insulation materials and non-woven chopped strand mats. A method of making fibrous insulation products is also provided.

Classifications:

International (IPC 8-9): A47G19/12 B05D3/02 B32B1/08 B32B17/02 B32B17/04 B32B27/04 B32B27/42 B32B5/02 C03C14/00 C03C25/00 C03C25/10 C03C25/14 C03C25/24 C03C25/26 C03C25/28 C03C25/32 C03C25/64 C03C27/10 C08G63/48 C08J3/24 C08J5/24 C08K3/16 C08K3/32 C08K5/00 C08K5/053 C08K5/06 C08K5/098 C08K5/11 C08K5/151 C08K5/16 C08K5/17 C08K5/544 C08K5/56 C08K7/14 C08L3/00 C08L33/02 C08L5/00 C08L5/02 C08L5/06 C08L89/00 C09D103/00 C09D103/02 C09D103/04 C09D105/00 C09D105/06 C09D133/02 C09D189/00 C09D191/00 C09D5/14 C09J103/00 C09J103/02 C09J103/04 C09J105/06 C09J11/04 C09J11/06 C09J167/00 D04H1/4218 D04H1/58 D04H1/587 D04H1/64 D04H1/732 D04H13/00 D06M13/192 D06M13/513 D06M15/01 D06M15/03 D06M15/11 D06M15/263 D06M15/507 D21H13/40 D21H19/10 E04B1/74 (Advanced/Invention); B32B17/02 B32B17/04 B32B27/04 C08K3/00 C08K5/00 C08L3/02 C08L3/04 C08L5/06 D04H5/00 (Advanced/Non-invention)

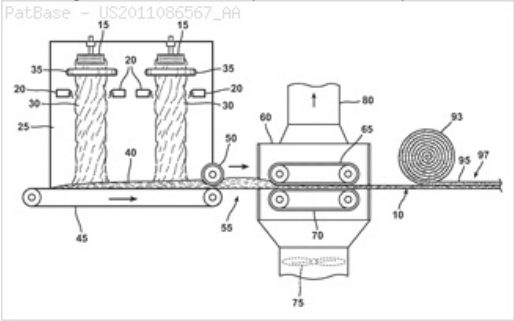
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European: A01N25/04 A01N25/34 C03C25/10Q C03C25/26 C03C25/28D C03C25/32B C03C25/32D C08K5/00P7 C09J103/02 C09J103/04 C09J105/06 D04H1/4218 D04H1/587

US: 1/1 106/146.4 106/15.05 106/15.050S 106/16 106/162.1 106/162.100S 106/18.31 106/205.2 106/206.1 106/206.100S 106/215.1 106/215.100S 106/215.5 106/215.500S 106/217.7 106/217.8 106/217.9 252/62 252/62S 427/212 427/212S 427/384 427/389.8 428/292.1 428/292.100P 428/292.100S 428/297.4 428/34.5 428/34.500P 442/176 442/176S 442/180 442/327 442/327P 442/327S 442/414 501/32 501/32S 524/17 524/311 524/377 524/388 524/414 524/521 524/556 525/50 525/54.2 525/54.200S 525/54.24 525/54.26 525/54.260S

Family:

Publication number	Publication date	Application number	Application date
AU2010303254 AA	20110414	AU20100303254	20101008
AU2010303254 BB	20151001	AU20100303254	20101008
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CA2954722 AA	20110414	CA20102954722	20101008
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EP2680723 A1	20140108	EP20120752191	20120301
EP2680723 A4	20150121	EP20120752191	20120301
EP2899227 A1	20150729	EP20150152030	20101008
IN02662KN2013 A	20140103	IN2013KN02662	20130902
JP2014515793 T2	20140703	JP2013055684T	20120301
JP2017008333 A2	20170112	JP20160197000	20161005
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US2011086567 AA	20110414	US20100900540	20101008
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US2011223364 AA	20110915	US20110037725	20110301
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US2015017858 AA	20150115	US20140487152	20140916
US2015033981 AA	20150205	US20140516660	20141017
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US8864893 BB	20141021	US20100900540	20101008
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WO11044490 A1	20110414	WO2010US52028	20101008



Priority:

CA20102777078	20101008	CA20172777078	20170120	US20090178745P	20090515
EP20100768139	20101008	JP20130556848T	20120301	JP20160197000	20161005
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US20110026415	20110214	US20110037725	20110301	US20140302604	20140612
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WO2012US27226	20120301	US20160230721	20160808		

Probable Assignee: OWENS CORNING INTELLECTUAL CAP

Assignee(s): (std): CHACKO JACOB ; CHEN LIANG ; COOPER WILLIAM R ; HAWKINS CHRISTOPHER ; HAWKINS CHRISTOPHER M ; OWENS CORNING INTELLECTUAL CAPITAL LLC ; HERNANDEZ TORRES JESUS M ; OWENS CORNING INTELLECTUAL CAP ; HERNANDEZ TORRES JESUS ; HERNANDEZ TORRES JESUS MANUEL ; MARTINE EDWARD ALAN

Assignee(s): NIDEC MOTOR CORP

Inventor(s): (std): ALAN MARTINE EDWARD ; CHACKO JACOB ; CHEN LIANG ; COOPER WILLIAM R ; HAWKINS CHRISTOPHER ; HAWKINS CHRISTOPHER M ; HERNANDEZ TORRES JESUS ; HERNANDEZ TORRES JESUS M ; HERNANDEZ TORRES JESUS MANUEL ; JACOB CHACKO ; LIANG CHEN ; MANUEL HERNANDEZ TORRES JESUS ; MARTINE EDWARD ALAN ; L CHEN ; JESUS HERNANDEZ TORRES ; CHRISTOPHER M HAWKINS ; CHRISTOPHER HAWKINS

Inventor(s): MARTINE EDWARD

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

4) Family number: 52872328 (US2013026408A)

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Title: SIZING COMPOSITION FOR MINERAL WOOL BASED ON MALTITOL AND INSULATING PRODUCTS OBTAINED

Abstract: Source: US2013026408A A sizing composition for insulating products based on mineral wool, in particular of rock or of glass, includes: a hydrogenated sugar or a mixture of hydrogenated sugars comprising at least 25 percent by weight of maltitol, calculated on the basis of the dry matter of hydrogenated sugar(s), and at least one polyfunctional crosslinking agent. Another subject matter of the present invention is the insulating products based on mineral fibers thus obtained.

Classifications:

International (IPC 8-9): C03C25/10 C03C25/26 C03C25/32 C08B37/00 C08K5/07 C08K5/09 C08K5/092 C08L3/02 C09J105/00 C09J11/06 D04H1/587 D06M11/71 D06M13/02 D06M13/123 D06M13/192 D06M13/513 D06M15/00 D06M15/03 D06M15/263 D06M15/643 E04B1/78 E04B1/84 E04B1/88 F16L59/00 G10K11/16 (Advanced/Invention); D06M101/00 (Advanced/Non-invention); C09J105/00 (Core/Invention); C03C C09J D06M (Subclass/Invention)
CPC: C03C25/26 C03C25/321
US: 1/1 252/62 252/8.83 536/123.1

PatBase - US2013026408_AA

Patent Application Publication Jan. 31, 2013 US 2013/0926408 A1

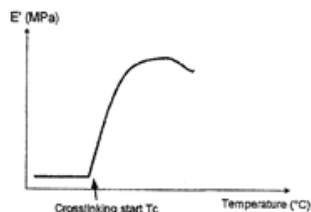


Figure 1

Family:

Publication number	Publication date	Application number	Application date
AU2012288680 AA	20130131	AU20120288680	20120727
AU2012288680 BB	20151105	AU20120288680	20120727
BR112014001988 A2	20170221	BR20141101988	20120727
CA2842757 AA	20140122	CA20122842757	20120727
CL2014000187 A1	20140725	CL20140000187	20140124
CN103857763 A	20140611	CN201280047218	20120727
CN103857763 B	20170405	CN201280047218	20120727
CO6890089 A2	20140310	CO20140029730	20140212
EA025355 B1	20161230	EA20140090345	20120727
EA201490345 A1	20140630	EA20140090345	20120727
EP2736995 A1	20140604	EP20120748747	20120727
FR2978446 A1	20130201	FR20110002369	20110727
FR2978446 B1	20150605	FR20110002369	20110727
IN00587CN2014 A	20150403	IN2014CN00587	20140124

JP2014527126 T2	20141009	JP20140522144T	20120727
JP6141840 B2	20170607	JP20140522144T	20120727
KR20140046014 A	20140417	KR20147003015	20120727
MX2014000962 A1	20140227	MX20140000962	20120727
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US2013026408 AA	20130131	US20110333475	20111221
US9174868 BB	20151103	US20110333475	20111221
WO13014399 A1	20130131	WO2012FR51787	20120727
ZA201400628 A	20141126	ZA20140000628	20140124

Priority:

FR20110002369 20110727 WO2012FR51787 20120727

Probable Assignee: SAINT GOBAIN ISOVER

Assignee(s): (std): JAFFRENNOU BORIS ; OBERT EDOUARD ; SAINT GOBAIN ISOVER

Inventor(s): (std): BORIS JAFFRENNOU ; EDOUARD OBERT ; JAFFRENNOU BORIS ; OBERT EDOUARD

Agent(s): GRIFFITH HACK; GOUDREAU GAGE DUBUC; PORZIO RIOS AND ASOCIADOS; MARGARITA CASTELLANOS ABONDANO; JAMET VINCENT; SAINT GOBAIN RECHERCHE; AOKI ATSUSHI; KOGA TETSUJI; ISHIDA TAKASHI; PILLSBURY WINTHROP SHAW PITTMAN LLP; SAINT-GOBAIN RECHERCHE

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW