



(51) International Patent Classification:

A01N 43/48 (2006.01) *A01N 43/54* (2006.01)
A01P 3/00 (2006.01) *A01N 43/56* (2006.01)
A01N 37/10 (2006.01) *A01N 43/713* (2006.01)
A01N 37/18 (2006.01) *A01N 43/76* (2006.01)
A01N 43/10 (2006.01) *A01N 43/80* (2006.01)
A01N 43/40 (2006.01) *A01N 43/90* (2006.01)
A01N 43/50 (2006.01)

(21) International Application Number:

PCT/US2013/023703

(22) International Filing Date:

30 January 2013 (30.01.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/593,540 1 February 2012 (01.02.2012) US
61/662,149 20 June 2012 (20.06.2012) US

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(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

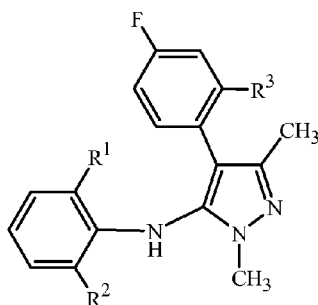
Published:

— with international search report (Art. 21(3))

(88) Date of publication of the international search report:

20 February 2014

(54) Title: FUNGICIDAL PYRAZOLE MIXTURES



(1)

(57) Abstract: Disclosed is a fungicidal composition comprising (a) at least one compound selected from the compounds of Formula (1), *N*-oxides, and salts thereof, wherein R¹ is F, Cl or Br; R² is H or F; and R³ is Cl or Br; and (b) at least one fungicidal compound selected from (b1) through (b13) as disclosed herein. Also disclosed is a method for controlling plant diseases caused by fungal plant pathogens comprising applying to the plant or portion thereof, or to the plant seed, a fungicidally effective amount of a compound of Formula 1, an *N*-oxide, or salt thereof (e.g., as a component in the aforesaid composition). Also disclosed are process intermediate compounds useful for preparing compounds of Formula (1).



INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/023703

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|---|-----------|-----------|-----------|-----------|------------|
| A. CLASSIFICATION OF SUBJECT MATTER | | | | | |
| INV. | A01N43/48 | A01P3/00 | A01N37/10 | A01N37/18 | A01N43/10 |
| | A01N43/40 | A01N43/50 | A01N43/54 | A01N43/56 | A01N43/713 |
| | A01N43/76 | A01N43/80 | A01N43/90 | | |
| According to International Patent Classification (IPC) or to both national classification and IPC | | | | | |

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data, CHEM ABS Data, BEILSTEIN Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
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| X | US 2009/156592 A1 (PASTERIS ROBERT JAMES [US] ET AL) 18 June 2009 (2009-06-18) the whole document | 1-8 |

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

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|---|---|
| Date of the actual completion of the international search 30 October 2013 | Date of mailing of the international search report 15/11/2013 |
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| Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016 | Authorized officer Lorenzo Varela, M |
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/023703

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

10, 12(completely); 1-8(partially)

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b1) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

2. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b2) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

3. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b3) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

4. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b4) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

5. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b5) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

6. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b6) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

7. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b7) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

8. claims: 1-8(partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b8) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

9. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b9) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

10. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b10) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

11. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b10a) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

compositions as disclosed above.

12. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b10b) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

13. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b11) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

14. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b12) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

15. claims: 1-8(partially)

A fungicidal composition comprising at least one compound selected from the compounds of formula I, N-oxides and salts thereof and at least one fungicidal compound selected from (b13) and salts thereof, possibly further comprising (c) at least one additional compound or agent that is biologically

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

active and possibly at least one additional component selected from the group consisting of surfactants, solid diluents and liquid diluents and a method of protecting a plant or plant seed from diseases caused by fungal pathogens comprising applying a fungicidal effective amount of a compositions as disclosed above.

16. claim: 9

Compound of formula 14, intermediate in the preparation of compound of formula 1

17. claims: 10, 12

Compounds of formulae 17 and 22, intermediates in the preparation of compound of formula 1

18. claim: 11

Compound of formula 20, intermediate in the preparation of compound of formula 1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2013/023703

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