

Title (en)
HERBICIDAL AZA BISPHOSPHONIC ACID COMPOSITIONS

Title (de)
HERBIZIDE AZA-BISPHONSÄURE ZUSAMMENSETZUNGEN

Title (fr)
COMPOSITIONS HERBICIDES D'ACIDE AZA-BIPHOSPHONIQUE

Publication
EP 0722268 A1 19960724 (EN)

Application
EP 94928482 A 19941007

Priority
• GB 9402183 W 19941007
• US 13372293 A 19931007

Abstract (en)
[origin: WO9510188A2] Herbicidal compositions comprising: (A) a compound of formula (I), wherein R<1> is hydrogen, hydroxy, C1-C4 alkoxy, halogen, C1-C4 alkyl, C1-C4 haloalkyl, hydroxy-C1-C4-alkyl, hydroxy-C1-C4-alkoxy or N(R<6>)(R<7>) wherein R<6> and R<7> are each independently hydrogen or C1-C3 alkyl; R<2> and R<3> are each independently hydrogen; hydrocarbyl; substituted hydrocarbyl; hydrocarbyloxy; substituted hydrocarbyloxy; hydrocarbyl-S(O)m-; or substituted hydrocarbyl-S(O)m-; or R<2> and R<3> together form a 3-6 membered carbocyclic ring, optionally substituted with halogen, hydroxy, C1-C6 alkyl, C1-C6 alkoxy, C1-C6 alkylthio or N(R<8>)(R<9>) wherein R<8> and R<9> are each independently hydrogen or C1-C12 alkyl; and R<4> and R<5> are each independently hydrogen; hydrocarbyl; substituted hydrocarbyl; hydrocarbyloxy; substituted hydrocarbyloxy; hydrocarbylthio; substituted hydrocarbylthio; pyridyl; substituted pyridyl; or are of the formula N(R<10>)(R<11>) wherein R<10> and R<11> are independently hydrogen, hydrocarbyl or substituted hydrocarbyl; or R<4> and R<5> together with the nitrogen to which they are bound form an aziridine, piperazine, morpholine, thiomorpholine, thiomorpholine sulfinyl, thiomorpholine sulfonyl, hexamethyleneimine, piperidine, tetrahydropyridine, pyrazole, imidazole, pyrrole, triazole, tetrahydropyrimidine, dihydroimidazole, pyrrolidine, azetidine, perhydroindole, perhydroquinoline, perhydroisoquinoline or pyrrolidine ring, any of which may be optionally substituted with C1-C12 alkyl, halo, C6-C10 aryl, C6-C10 aryl substituted with halo or C1-C6 alkyl, C7-C16 aralkyl, C7-C16 aralkyl substituted with halo or C1-C6 alkyl, nitro, halo-C1-C10-alkyl, C1-C10 alkoxy, C1-C10 alkylthio, C1-C10 alkylsulfonyl, phenoxy, phenoxy substituted with halo or C1-C6 alkyl, C1-C10 alkenyl or cyano; or R<2> and R<4> together with the nitrogen and carbon atoms to which they are bound form an aziridine, piperazine, morpholine, thiomorpholine, thiomorpholine sulfinyl, thiomorpholine sulfonyl, hexamethyleneimine, piperidine, tetrahydropyridine, pyrazole, imidazole, pyrrole, triazole, tetrahydropyrimidine, dihydroimidazole, pyrrolidine, azetidine, perhydroindole, perhydroquinoline, perhydroisoquinoline or pyrrolidine ring, any of which may be optionally substituted with C1-C12 alkyl, halo, C6-C10 aryl, C6-C10 aryl substituted with halo or C1-C6 alkyl, C7-C16 aralkyl, C7-C16 aralkyl substituted with halo or C1-C6 alkyl, nitro, halo-C1-C10-alkyl, C1-C10 alkoxy, C1-C10 alkylthio, C1-C10 alkylsulfonyl, phenoxy, phenoxy substituted with halo or C1-C6 alkyl, C1-C10 alkenyl or cyano; and m is 0, 1 or 2; and agrochemically acceptable salts thereof; and (B) an agrochemically acceptable carrier therefor. In other aspects, this invention is directed to a method of controlling the growth of plants comprising applying to the area where control is desired an herbicidally effective amount of a compound of formula (I) above; as well as to certain novel compounds having a structure within the scope of formula (I) above.

IPC 1-7
A01N 57/18; C07F 9/38; C07F 9/553; C07F 9/645

IPC 8 full level
A01N 57/18 (2006.01); **A01N 57/24** (2006.01); **C07F 9/38** (2006.01); **C07F 9/40** (2006.01); **C07F 9/553** (2006.01); **C07F 9/568** (2006.01); **C07F 9/572** (2006.01); **C07F 9/58** (2006.01); **C07F 9/59** (2006.01); **C07F 9/60** (2006.01); **C07F 9/6503** (2006.01); **C07F 9/6506** (2006.01); **C07F 9/6512** (2006.01); **C07F 9/6518** (2006.01); **C07F 9/6533** (2006.01)

CPC (source: EP)
A01N 57/18 (2013.01); **C07F 9/3873** (2013.01); **C07F 9/405** (2013.01); **C07F 9/5532** (2013.01); **C07F 9/568** (2013.01); **C07F 9/572** (2013.01); **C07F 9/58** (2013.01); **C07F 9/59** (2013.01); **C07F 9/60** (2013.01); **C07F 9/65031** (2013.01); **C07F 9/6506** (2013.01); **C07F 9/6512** (2013.01); **C07F 9/6518** (2013.01); **C07F 9/6533** (2013.01)

Citation (search report)
See references of WO 9510188A2

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 9510188 A2 19950420; WO 9510188 A3 19950504; AU 690581 B2 19980430; AU 7790194 A 19950504; BR 9407762 A 19970304; CA 2173607 A1 19950420; CN 1134657 A 19961030; CZ 101596 A3 19960717; EP 0722268 A1 19960724; FI 961520 A0 19960404; FI 961520 A 19960527; HU 9600839 D0 19960528; HU T74893 A 19970228; IL 111180 A0 19941229; IL 111180 A 19990922; IL 114381 A0 19951031; JP H09506075 A 19970617; NO 961389 D0 19960403; NO 961389 L 19960603; NZ 274000 A 19980325; PL 313820 A1 19960722; SK 45296 A3 19960904; TW 401276 B 20000811; ZA 947814 B 19950814

DOCDB simple family (application)
GB 9402183 W 19941007; AU 7790194 A 19941007; BR 9407762 A 19941007; CA 2173607 A 19941007; CN 94194096 A 19941007; CZ 101596 A 19941007; EP 94928482 A 19941007; FI 961520 A 19960404; HU 9600839 A 19941007; IL 11118094 A 19941006; IL 11438195 A 19950628; JP 51144295 A 19941007; NO 961389 A 19960403; NZ 27400094 A 19941007; PL 31382094 A 19941007; SK 45296 A 19941007; TW 83109255 A 19941005; ZA 947814 A 19941006