

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl. 7
C02F 5/14

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(43)

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(86) PCT/EP2001/01734
(86) 2001 02 16

(87) WO 2001/64006
(87) 2001 09 06

(30) 09/515,729 2000 02 29 (US)

(71) 120

(72) ,
- 1341 - - - - 2

(74)

(54)

, 가 { Nic Booker CSIRO, Molec
 ular Science, entitled, " Struvite formation in wastewater treatments plants: an accident waiting to happe
 n?" } 가 1
 mg/ 가
 , 24 ,

5,352,365 , , 2 -

pH 2 9 ,

pH

()

, 가 pH

20mg/

0.25mg/

가

가

08 - 099091 /

가

(A)

(blend)

()

, 20,000

(B)

/



가

(A)

()

, 20,000

(B)

[(B)] 25 75 %
%, 가 30 70 %, 가
%, 가 40 60 %

[(A)] 25 75 %

, 40 60 %

, 30 70

0%

() 5

가

, 50 %

(), (), () 가

, 000 , 1,500 10,000, 가 GPC 20, 2,000 5,000

20 40% , 30 35%
, 2 - , 2000 ppm

, 10 500 ppm

, 10 50ppm

/

3

(radical)

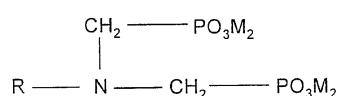
70 95

(gel)

가 가

가 가

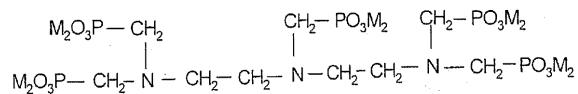
가

126528 150933 102760
(bead)127388 129329 185458
가 1.5(B)
(A)

M

R - H, CH₂CH₂N(CH₂PO₃M₂)₂, - N(CH₂PO₃M₂)CH₂CH₂N(CH₂PO₃M₂)₂ - (CH₂)₆N(CH₂PO₃M₂)₂

가 () II



Solutia) (Dequest) RTM 2066

()

(

(Dequest) RTM 2066

가

가

200m

가

1

(bed) . 2 7 / ,
(pre - screening) (pumping) . 2 (aeration) (pe
llet)
)

(A) 40 %
48%w/w

4,500 5,000(GPC)

)

(B) 45 49%

() 52%

100m 30mg/ (

)

330mg/m³ 160mg/m³

2

(nitrifying trickling filter)

2 (tank)

(Bardenpho)

/

/

1

50mg

(57)

1.

() (blend)
(A) , 20,000

tiscaient composition) , (B) / (an

2.

1 , (struvite)

3.

1 2 ,

4.

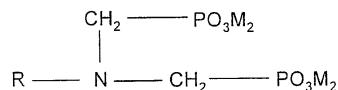
1 3 , (A) 25 75 % , (B)
25 75 %

5.

6.

7.

1 6 , (B)가 1

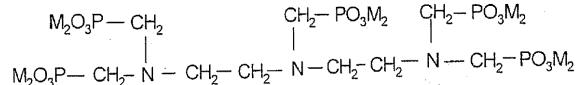


M

$$R = -H, \text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{PO}_3\text{M}_2)_2, -\text{N}(\text{CH}_2\text{PO}_3\text{M}_2)\text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{PO}_3\text{M}_2)_2, -(\text{CH}_2)_6\text{N}(\text{CH}_2\text{PO}_3\text{M}_2)_2$$

8.

1 7 , (B)가 II



M H,

9.

1 8

10.

1 9

(A) (B)

11.

(A)

()

20,000

(B)

12.

11 , (A) 25 75 % , (B) 25 75 %

13.

11 12 , (A)가 () , () (

14.

15.

11 14

$$\begin{array}{c} \text{CH}_2 - \text{PO}_3\text{M}_2 \\ | \\ \text{R} - \text{N} - \text{CH}_2 - \text{PO}_3\text{M}_2 \end{array}$$

M

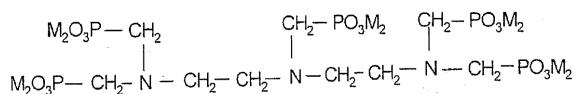
R = H, $\text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{PO}_3\text{M}_2)_2$, -N-

$$R - H, \text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{PO}_3\text{M}_2)_2, -\text{N}(\text{CH}_2\text{PO}_3\text{M}_2)\text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{PO}_3\text{M}_2)_2 - (\text{CH}_2)_6\text{N}(\text{CH}_2\text{PO}_3\text{M}_2)_2$$

16.

11 15

II



M H,

17.

11 16 ,

18.

11 17 , (A) (B)