

(3)

21) (Emulsify)

·
2
·
·
가
·
2 가
가
(Emulsion)
·
2
·
() 가
· 가
3 가 가
·

22) 가 (Solubilize)

(C.M.C)
· , · ,
가
·
가

23) (Hydrophilic) (Lipophilic), (Water Soluble)

가

. Machine Oil ,

. 가 가

. , ,

. Oil Oil

. Oil

Oil

.

Machine Oil,

가

(C_nH_{2n+2} ,

C_nH_{2n} , $n = 10 \sim 20$)

.

()

. C_nH_{2n}

(

)

.

($C_{17}H_{32} \cdot COOH$)

(

),

($C_{17}H_{32}(OH) \cdot COOH$)

($C_{17}H_{33}$, $C_{17}H_{32}$)

- $COOH$ - OH

danf

가

.

.

24) (Surface Active Agent)

(, ,)

.

, , , ,

.

가 가 .

+

: R - COONa R -
() - COONa

가 .

.

25) (C.M.C)

(,

, , ,) .

가

(Critical Micelle Concentration) .

26)

가

(CMC, ,) N

() .

.

27) - , , 가

, ,

Tallow Head

.

,

가

가 .

가 .

,

.

, , 가

3 .

28) ,

가 , , 가 ,

, , .

29)

, , 가

, 가 .

, . pH가

()가 가 .

30)

가 .

(가

) 가 .

가

.

31) ()

. 가 ()

() .

(%) 3가

.

: 共沸

.

가 : 105 1~3 .

:

.

32)

.

가 . (μ s) (μ d)가 ,

가 , 가

.

33)

μ s, μ d가 μ 가

. 가

.

, 가 .

34) , .
(Affinity)

.
.
.
.

35)
 2 , 가 2
.
.

36) 가
가 가 .
가 가 가 가
.

가
() 가 .
PVA Acryl 가 가 가 .
, PVA 가
.

37) ,

가 Heald, Reed .

(Filament)

.

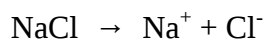
38) (Ion)

가 (+) (-)

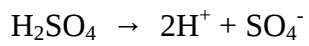
,

.

.



(食鹽)



()

39) (Metallic Ion)

.

. ,

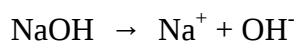
가

가

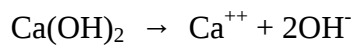
,

.

.



(가)



()



()

가 . Clay, Talc 가
(Ca, Fe, Al, Mg) .

가
가 가 .

40) (Metallic Soap)

, , (,)
 . , , , 鉛, , , .

: $\text{Ca}(\text{R} \cdot \text{COO})_2$

$\text{Fe}(\text{R} \cdot \text{COO})_3$

$\text{Pb}(\text{R} \cdot \text{COO})_2$ 鉛

가
, , , , 가 가 .
 .

41) (pH : Potenz Hydrogen)

pH

H^+ OH^-

.

10^{-7} $\frac{1}{10^7}$ 0.0000001g/l .

$$\text{pH} = -\log(\text{H}^+) = \log \frac{1}{(\text{H})}$$

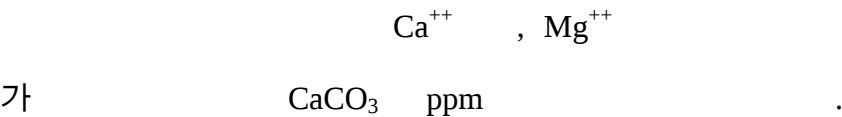
0.1 10^{-1} pH 1 10^{-2} pH 2 .
 10^{-7} pH 7 . pH
 pH가



42) (Hard Water), (Soft Water)



43) (Hardnss)



100cc

CaO 1mg(0.001g) 1°

. 10°

.

$$1\text{ppm} = \frac{1}{1,000,000} = 10^{-7}$$

44) (Concentration)

,

(,)

, 100g

10g

10%

.

()	(kg/cm ²)	(kg/cm ²)	砲火 ()
0	0.006228	0.02	17.202
4	0.008289	0.04	23.641
8	0.010932	0.06	35.82
12	0.014292	0.08	41.16
16	0.018529	0.10	45.45
20	0.023830	0.14	52.17
25	0.032291	0.20	59.66
30	0.043261	0.30	68.67
35	0.057337	0.40	75.41
40	0.075220	0.60	85.45
50	0.12581	0.80	92.99
60	0.20316	1.0	99.09
70	0.31780	1.2	104.25
80	0.48297	1.5	110.62

90	0.71493	2.0	119.62
100	1.03323	3.0	132.88
110	1.4609	4.0	142.92
120	2.0245	6.0	158.08
130	2.7544	8.0	169.61
140	3.6848	10.0	179.04
150	4.8535	15	197.36
160	6.3021	20	211.38
170	8.0759	30	232.75
180	10.224	40	249.17
190	12.799	50	262.70
200	15.856	60	274.29
220	23.660	70	284.48
240	34.144	80	293.62
260	47.868	100	309.53
280	65.456	120	323.14
300	87.611	140	335.08
320	115.14	160	345.74
340	148.98	180	355.35
360	190.40	200	364.09
374.15	225.65	255.65	374.15