



:VAIARA 136
(TO + EA + IPA)

(Emerhency Telephone Number)
032-574-1989 (24 hours)

MSDS 등록번호 :AA13841-0000000002

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- : VAIARA 136
- UN : 1993
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- : ()
- : 032-574-1989
- : 가 37 17 (가)

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H225

H304

H315

H319

H336

H361

H373

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P201

P202

P210

P233

P240

P241

P242 가

P243

P260 가 ()

P261 가

P264

P271 가

P280

-

P301 + P310 ()

P302 + P352

P303 + P361 + P353 () /

P304 + P340 가

P305 + P351 + P338 . 가

P308 + P313

P312 ()

P314

P321

P331

P332 + P313

P337 + P313

P362 + P364

P370 + P378

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P403 + P233 가

P403 + P235 가

P405 가

P501 ()

	NFPA		
/ TOLUENE	2	3	0
/ ETHYL ACETATE	1	3	0
/ ISOPROPYL ALCOHOL	2	3	0

	[	2017.7.20.]	[	2017-12	, 2017.7.20.,	
] 5 ()_		4	.			
	4					
		[	2016.4.6]	[	2016-19	, 2016.4.6,
] < 1> 3.3 .			'			
,	/	2	.			
	[	2017.7.20.]	[	2017-12	, 2017.7.20.,	] 5 ()

3.

		CAS No.	(W%)
		108-88-3	50~60
		141-78-6	5~10
		67-63-0	20~30

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(flash back) .

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		ACGHI	
Toluene	TWA 50ppm, STEL 150ppm,	TWA 20ppm	2.5g/g crea
Ethyl acetate	TWA 400ppm,	TWA 400ppm	
Isopropyl alcohol	TWA 200ppm STEL 400ppm	TWA 200ppm STEL 400ppm	

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pH	
/	-84 ~ -95
	80 ~ 111

	-4 ~ 11
	.
(,)	
/	MIN : 1.1%, MAX : 12%
	526 mg/l (Toluene), 80 g/L (Ethyl acetate), (IPA)
()	
	28.4 mmHg (25) (Toluene), 93.2 mmHg (25) (Ethyl acetate), 33 mmHg (20) (Isopropyl alcohol)
	0.85
N- /	2.7
	427
	3.14(Toluene), 3.04(Ethyl acetate), 2.07 ~ 2.10(Isopropyl alcohol)
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- PRODUCT :
- : LD50 > 5580 / LD50 > 5620 /LD50 > 5280(mg/kg)

- PRODUCT :
- : LD50 > 5000 / LD50 > 18000 / LD50>12870(mg/kg)

- (가) PRODUCT :
- : / LD 50 > 100 / LC 50 > 72.6 (mg/L)

- () PRODUCT :
- : :

- (/) PRODUCT :
- : :

○ PRODUCT : 2

- : 2 / Rabbit : / :

○ PRODUCT : 2

- : 2/ : 2/ : 2/

○ PRODUCT :

- : :

○ PRODUCT :

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○ PRODUCT :

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- OSHA :
- NTP :
- IARC : 3
- EU CLP :
- ACGIH : A4

○ PRODUCT :

- / Mouse lymphoma cells

○ PRODUCT : 2

- 2 /

○ (1) PRODUCT : 3()

-	:	3() / 6.08 mg/L			
		3		Rat	,
○		() PRODUCT :	2		
-	:	2 /	600 ppm		Rat
○		PRODUCT :	1		
-	:	1 /			Human

12.

가.	PRODUCT -	:	,	:	
•					
-	:	LC50 5.5 mg/L	LC50=230		LC50=9640
•					
-	:	LC50 3.78 mg/L	EC50=717		EC50 > 10000
•					
-	:	NOEC 10 mg/L	EC50=1800~3200		:
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•					
-	:		: BOD 5 /COD 0.81	:	
•					
-	:	log Kow 2.73	: 0.73	:	0.05
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•					
-	:	BCF 90	BCF : 30		BCF : 1
•					
-	:	BOD/ThOD 69 %	100% 28 DAY		BODS = 49%
.					
•		(Koc)			
-	:	Koc >= 34	:		Koc >=25
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14.

- 가. : 1993
- : Flammable liquid, n.o.s (contains Toluene , Ethyl acetate, Iso propyl alcohol)
- : 3
- : PG II
- :
- 가 가 :
- : F-E
 - : S-D

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- 가.
- , (, 1 wt% : , , : , 30),
 (1 wt% , :12 , :6)
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- : , (85%) (25%)
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- - EU ()
 - F; R11 ,Xi; R36, R38 Xn; R48/20-65 Repr.Cat.3; R63 R66 R67
 - EU ()
 - R11, R36, R38, R48/20-65, R63, R65, R66, R67
 - EU ()
 - S2 S7 S16 S24 S25 S26 S33 S36 S37 S46 S62
 - 2006/507/EC
 -
 - 689/2008/EC
 -
 - Designation, Reportable Quantities, and Notification
 - : 1000 lb final RQ; 454 kg final RQ : :
 - Emergency Planning and Notification
 -
 - Toxic Chemical Release Reporting - Community Right-to-Know
 - : 1.0 % de minimis concentration : :
 - Process Safety Management of Highly Hazardous Chemicals
 -
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16.

가.

- ACGIH
 - ATSDR
 - American Chemical Society, Washington DC.
 - American Industrial Hygiene Association Journal 30, 470-476
 - Chemosphere 14 (10). 1589-1616.
 - EHC
 - EHCA
 - Ecotoxicol. Environ. Saf. 39, 136-146.
 - HSDB
 - IARC
 - IUCLID
 - Marine Biology 31, 305-310
 - Publication
 - RTECS
 - Study report
-

- Toxicology 4, 5-15
- Transactions A. Fish. Soc. 110, 430-436.
- Water Research 13, 627-630

. : 2009.07.07

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2010 5 20

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2018 3 7

((2016.4.16)
2018 9 12 2016 -19)

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MSDS : RGB () 02-597-0645