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1.

- : (Oxygen, refrigerator liquid)
 - : (Oxygen)
 - / : Oxygen USP, LOX, (Cryogenic Liquid Oxygen), Refrigerated Liquid Oxygen
 - : O2
- :
: 538 J-Tower, A 6
: (02) 3019-2500 FAX : (02) 525-9770
:
: ALK HSE

2.

- : > 99%
- CAS : 7782-44-7
- (Exposure Limits)
 - 1) OSHA : PEL-TWA (Not established)
 - 2) ACGIH: TLV-TWA (Not established)
 - 3) NIOSH : IDLH (Not established)

3.

- (Emergency overview)

, , 가 .

가 . ,

. 가

. (23%) ,

. (SCBA) .
- : 061-690-9700 (24 /365)
-)
- - 1) : . 가 .
 - 2) :

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가

3) : 가 80% , (nasal stuffiness), , 가

(dark adaptation) (peripheral vision)

- 1) : (inhalation)
- 2) :
- 가 :
- (Oxygen, Refrigerated Liquid) - 1/5 - (Oxygen, Refrigerated Liquid) - 2/5 - (OSHA), (NTP), (IARC)

4.

- : 가 , 40 가 15
- : (Not Applicable)
- : 가
- : , 40 (Dry heat)
- (Physician) : (Supportive treatment) (immediate sedation) (Anti-convulsive therapy) "Section 11. "

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5.

- (Flash point): (Not Applicable)
- (Autoignition) : 가 (Nonflammable)
- (Flammable Limits) : 가 (Nonflammable)
- : , . 가
- : . 가 , 가
- 가) , (가 (SCBA)가
- : , 가 (23%) 가
- ()가 , 가 가
- : (None).

6.


: , 가

가 , 가

가

7.

- (Storage) : 가 ,

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가

,

6m

가

30

1.5

.(

(Oxygen, Refrigerated Liquid) - 3/5 -

CGA

가

8. 가

4.

.)

- (Handling) :

가

,

가

가

가

(Connection)

(Adapter)

가

- :

).

가

(,)

CGA

G-4.1

가

가

- 가

8.

- (Engineering Control)

:

가23%

, 가 가

-

:


가 23%

- :

- :

가

- :

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가 가
30 (,)

9.


- : ,
- : 32.0
- (1) : -183.0
- (=1) : 1.10
- / : -218.8
- : 21.1
- (21.1 , 1) : 1.326kg/m³
- (/ , 0) : 0.049
- (, 21.1) : 1 860.5

10.

- (Chemical stability) : (stable)
- :
- (Incompatibility) : 가 , , , , , . NFPA 491M
manual of Hazardous Chemical Reactions
- (Reactivity)
(Oxygen, Refrigerated Liquid) - 4/5 -
1) :
2) :

11.

-
- , 100%
- 24 48 , . 2
- 3 , , , 2 , , 6
- (Physician) :

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, E가
가
()
(vacuum - type)

12.

13.


- :
- : , 가 가

14.

- (DOT Shipping Name) : (Oxygen, Refrigerated liquid)
- (Hazard Class) : 2.2 (가)
- (Identification Number) : UN1073
- (Shipping Label): 가 (Nonflammable Gas) (Oxidizer)
(Oxygen)
- PLACARD() : 가 (Nonflammable Gas) (Oxygen)
- : 가
- : 가 () 가 가 ,
() , ()
(49 CFR 173.301)
() ,

15.

- :

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- 1) :
- 2) :
- 3) :
- 4) 가 : , , ,

• :

1) CERCLA (40CFR Parts 117 302): Reportable Quantity(RQ) .

2) SARA 302/304 (40CFR 355): .

(Oxygen, Refrigerated Liquid) - 5/5 -

3) SARA 311/312 (40 CFR 370):

: , : , : , : , :

4) SARA 313 (40 CFR 372): .

5) TSCA(Toxic Substance Control Act) : TSCA .

6) OSHA (29CFR1910.119): .

16.

가

(Compatibility)

MSDS (European Directives) , 가

AIR LIQUIDE S.A.

MSDS ALK