

5% FLUORINE IN NEON

AL419


T+ : Very toxic



O : Oxidizing



C : Corrosive



Label 2.3 : Toxic gas.



Label 5.1 : Oxidizing substances.



Label 8 : Corrosive substance.

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade name : 5% FLUORINE IN NEON
MSDS Nr : AL419
Use : Laser resonators.
Company identification : Air Liquide
 Level 9, 380 St.Kilda Road
 3004 Melbourne AUSTRALIA
Emergency phone nr : 1800 812 588

2 HAZARDS IDENTIFICATION

Hazard classification : Classified as hazardous according to NOHSC criteria.
 Classified as a dangerous good by the criteria of the ADG code.

Hazards identification : Very toxic by inhalation.
 Very corrosive to eyes, respiratory system and skin.
 Oxidant. Strongly supports combustion. May react violently with combustible materials.
 Compressed gas.

R Phrase(s) : R8 : Contact with combustible material may cause fire. - R26 : Very toxic by inhalation. - R35 : Causes severe burns.

S Phrase(s) : S1 : Keep locked up. - S9 : Keep container in a well-ventilated place. - S17 : Keep away from combustible material. - S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. - S36/37/39 : Wear suitable protective clothing, gloves and eye/face protection. - S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Preparation : Preparation.
Components : This product is hazardous.

Substance name	Contents	CAS No	EC No	Annex No	Classification
Fluorine	: Between 1 and 5.5 %	7782-41-4	231-954-8	009-001-00-0	O; R8 T+; R26 C; R35
Neon	:	7440-01-9	231-110-9	----	

4 FIRST AID MEASURES

First aid measures
- Inhalation : Very toxic by inhalation.
 Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

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- **Skin/eye contact** : May cause severe chemical burns to skin and cornea. Suitable first-aid treatment should be immediately available. Seek medical advice before using product. Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical assistance.
- **Ingestion** : Ingestion is not considered a potential route of exposure.

5 FIRE-FIGHTING MEASURES

- Flammable class** : Non flammable.
- Specific hazards** : Supports combustion.
Exposure to fire may cause containers to rupture/explode.
- Hazardous combustion products** : Toxic gases.
- Extinguishing media**
- **Suitable extinguishing media** : All known extinguishants can be used.
- Specific methods** : If possible, stop flow of product.
Move away from the container and cool with water from a protected position.
- Special protective equipment for fire fighters** : Use self-contained breathing apparatus.
Use chemically protective clothing.

6 ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Evacuate area.
Ensure adequate air ventilation.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Use chemically protective clothing.
Eliminate ignition sources.
- Environmental precautions** : Try to stop release.
Reduce vapour with fog or fine water spray.
- Clean up methods** : Ventilate area.
Hose down area with water.
Wash contaminated equipment or sites of leaks with copious quantities of water.

7 HANDLING AND STORAGE

- Storage** : Segregate from flammable gases and other flammable materials in store.
Keep container below 50°C in a well ventilated place.
- Handling** : Avoid exposure, obtain special instructions before use.
Open valve slowly to avoid pressure shock.
Suck back of water into the container must be prevented.
Do not allow backfeed into the container.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Refer to supplier's container handling instructions.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- Personal protection** : Do not smoke while handling product.
Ensure adequate ventilation.
Keep self contained breathing apparatus readily available for emergency use.



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8 EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Occupational Exposure Limits

Keep suitable chemically resistant protective clothing readily available for emergency use.

Fluorine : ILV (EU) - 8 H - [mg/m³] : 158
Fluorine : ILV (EU) - 8 H - [ppm] : 1
Fluorine : ILV (EU) - 15 min - [mg/m³] : 316
Fluorine : ILV (EU) - 15 min - [ppm] : 2
Fluorine : TLV[®] -TWA [ppm] : 1
Fluorine : TLV[®] -STEL [ppm] : 2

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state at 20 °C : Compressed gas.
Colour : Colourless.
Odour : Characteristic. Ozone like odour
Relative density, gas (air=1) : Lighter or similar to air.
Solubility in water [mg/l] : Not known.

10 STABILITY AND REACTIVITY

Stability and reactivity : May react violently with combustible materials.
May react violently with reducing agents.
Violently oxidises organic material.

11 TOXICOLOGICAL INFORMATION

Toxicity information : Irritating to eyes and skin.
Very toxic by inhalation.
Severe corrosion to skin, eyes and respiratory tract at high concentrations.

12 ECOLOGICAL INFORMATION

Ecological effects information : May cause pH changes in aqueous ecological systems.
No known ecological damage caused by this product.
Effect on ozone layer : None.

13 DISPOSAL CONSIDERATIONS

General : Do not discharge into any place where its accumulation could be dangerous.
Avoid discharge to atmosphere.
Contact supplier if guidance is required.
Disposal method : Consult supplier for specific recommendations.

14 TRANSPORT INFORMATION

UN No. : 3306
Labelling ADG : Label 2.3 : Toxic gas.
Label 5.1 : Oxidizing substances.
Label 8 : Corrosive substance.
H.I. nr : 265

5% FLUORINE IN NEON**AL419****14 TRANSPORT INFORMATION (continued)**

Proper shipping name : COMPRESSED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S. (Fluorine, Neon)
HAZCHEM - Emergency Action Code : 2PE
: 2 = *Fine water spray.*
P = Risk of violent reaction or explosion. Recommended personal protective equipment : Liquid-tight chemical protective clothing and breathing apparatus. Appropriate measures : dilute.
E = There may be a public safety hazard outside the immediate area of the incident, and that the following actions should be considered :
1. People should be warned to stay indoors with all doors and windows closed, preferably in rooms upstairs and facing away from the incident. Ignition sources should be eliminated and any ventilation stopped.
2. Effects may spread beyond the immediate vicinity. all non-essential personnel should be instructed to move at least 250 metres away from the incident.
3. Police and fire brigade incident commanders should consult each other and with a product expert, or with a source of product expertise.
4. The possible need for subsequent evacuation should be considered, but it should be remembered that in most cases it will be safer to remain in a building than to evacuate.

- ADG Class : 2
- ADG Classification code : 1 TOC
Other transport information : Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Before transporting product containers :
- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

15 REGULATORY INFORMATION

EC Classification : O; R8
T+; R26
C; R35

EC Labelling
Symbol(s) : T+ : Very toxic
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AIR LIQUIDE

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16 OTHER INFORMATION

Users of breathing apparatus must be trained.
Ensure operators understand the toxicity hazard.
Receptacle under pressure.
Ensure all national/local regulations are observed.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

DISCLAIMER OF LIABILITY

: Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

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