

Safety Data Sheet



1. Identification of the Substance/Mixture and the Supplier

National Institute of Advanced Industrial Science and Technology Supplier

(AIST)

Address : 1-3-1 Kasumigaseki, Chiyoda, Tokyo, Japan

Office in Charge : Reference Materials Office, Center for Quality Management of

Metrology, National Metrology Institute of Japan

Certified Reference Material Staff Person in Charge

Telephone No. +81-29-861-4059 Fax No. : +81-29-861-4009

Emergency

: Same as above Contact

> Prepared on : June 14, 2018 Revised on : August 31, 2022

Reference No. : 3409001

Identity Certified reference material NMIJ CRM 3409-a

Substance/Mixture Nitrogen in Argon (10 µmol/mol)

This CRM is intended for use in the calibration of instruments. Recommended Use

of the Chemical and Do not use this reference material for other purposes than

Restriction on Use testing/research.

This CRM is a reference material (specified in the Japanese

Industrial Standard (JIS) Q 0030).

2. Hazards Identification

GHS classification Combustible / flammable gas Not classified

Not classified Oxidizing gases Gas under pressure High pressure gas

Self-reactive substances and Not classified

mixtures

Corrosive to metals Not applicable Acute toxicity (Oral) Not applicable Acute toxicity (Dermal) Not applicable Acute toxicity (Inhalation, Not applicable

gas)

Acute toxicity (Inhalation, Not classified

vapor)

Acute toxicity (Inhalation, Not classified

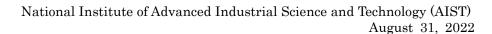
dust/mist)

Not applicable Skin corrosivity/irritant Severe eye damages/eye Not applicable

irritant

Respiratory sensitization Not applicable Skin sensitization Not applicable

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Germ-cell mutagenicity : Not applicable
Carcinogenicity : Not applicable
Reproductive toxicity : Not applicable
Specific target organ : Not applicable

toxicity/systemic toxicity

(Single exposure)

Specific target organ toxicity : Not applicable

/systemic toxicity (Repeated

exposure)

Aspiration hazard : Not classified

GHS label element



Signal word : Caution

Hazard and toxicity : High pressure gas: May explode if heated

Precautionary : [Preventive Measures]

statement Use it in a well-ventilated place.

Wear personal protective equipment.

[Response]

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

[Storage]

Shield it from sunlight and keep it in a well-ventilated place This CRM should be stored in compliance with your country's regulation for high pressure gases.

[Disposal]

When disposing of the content, do it in a place with good ventilation with no flame and inflammable material around it, little by little to avoid danger.

When this product is no longer necessary or passed the expiration date, do not dispose of the container and the remaining gas, but return them to the department in charge provided in the 1. Chemical Substances, etc. and The Manufacturer Information

Hazardous and toxic properties not specified in the above are not subject to the classification or not classifiable.

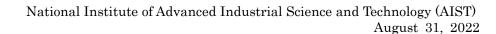
3. Composition/Information on Ingredients

Substance or mixture : Mixture

Ingredient 1

Chemical name : Argon
Synonym : Chemical formula : Ar
Molecular weight : 39.95
CAS number : 7440-37-1
Content : 99.9 % or over

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Reference Number in :

Act on the Evaluation of Chemical Substances and Regulation

Gazetted List in Japan

of Their Manufacture, etc. :Industrial Safety and Health Act :-

Ingredient 1

Chemical name : Nitrogen

Content : About 10 μ mol/mol(0.001%)

Reference Number in : Act on the Evaluation of Chemical Substances and Regulation

Gazetted List in Japan of Their Manufacture, etc.

Industrial Safety and Health Act :-

Hazardous Component : Argon (Simple asphygic gas)

4. First-aid Measures

If inhaled : Remove victim to fresh air and keep at rest in a position

comfortable for breathing. Get medical advice/attention if you

feel unwell.

If on skin : If skin irritation occurs, get medical attention and treatment.

If in eyes : If eye irritation persists, get medical advice / attention.

If swallowed : Get medical advice/attention if you feel unwell.

The most important

characteristics and

symptoms

Measures to be taken

to protect the person applying first aid

: No data

No data

5. Fire-fighting Measures

Extinguishing Media : Water fog, Foam extinguishing agent, Dry chemical

extinguisher, Carbon dioxide, Dry sands

Unsuitable : Direct water jet

extinguishing media

 $\label{eq:Fire-Specific Hazards} \qquad : \quad \text{Container may explode if heated.}$

Burst container may fly.

Specific Fire-Fighting

Method

: Move containers away from area of fire if this can be done

without risk.

Keep cooling container thoroughly with plenty of water even

after extinction.

Do not spray water directly to gas leaking point or safety device,

which may make them frozen.

Only experts are allowed to handle damaged container.

Protection of Fire-

Fighters

: Fight fire upwind in order to avoid breathing hazardous gas.

Use personal protective equipment such as fireproof clothing, heat-resistant clothing, protective clothing, compressed air open-

circuit self-contained breathing apparatus, and compressed

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oxygen closed-circuit self-contained breathing apparatus.

6. Accidental Release Measures

Personal Precaution : Wear appropriate personal protective equipment (See "8. Exposure

Controls/Personal Protection") during the operation to avoid

contact with eyes and skin and inhalation of gas.

Immediately designate restricted leakage area with appropriate

distance taken in every direction. Keep out unauthorized people.

Stay upwind.

Ventilate affected areas.

Maintain the restricted area until gas diffuses.

Personal Protective Equipment and Emergency Procedures : Ventilate affected areas thoroughly, if it is in an indoor environment, until the clean-up operation is completed.

Wear appropriate personal protective equipment (See "8. Exposure Controls/Personal Protection" during the operation to avoid contact

with eyes and skin and inhalation.

Environmental Precautions

: No environmental effects

Method and Tool for Confinement and

Clean-up, Recovery and Neutralization

: Stop leakage if safe to do so.

Prevention of

Secondary Disaster

: Prevent leaked materials from entering sewers, drainage systems,

basement rooms or confined space.

Mark the restricted area with rope etc. to keep out unauthorized

people.

Carry out the clean-up operation from the upwind side and make

people on the downwind side evacuate.

7. Handling and Storage

Handling

Engineering Precautions

Take the engineering precautions stipulated in "8. Exposure

Controls/Personal Protection."

Local and General

Ventilation

Provide local and general ventilation as necessary.

Precautions for Safe

Handling

Do not eat, drink or smoke when using this reference material. Wear personal protective equipment stipulated in "8. Exposure

Controls/Personal Protection" as necessary.

Provide ventilation, when using indoors, in order to prevent

decline of oxygen concentration.

Take out gas from container by using pressure regulator.

Make it sure to close container valve after use.

Storage

Appropriate Storage :

Conditions

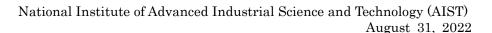
Store in accordance with the High Pressure Gas Safety Act, etc.

Store in designated container storage area for flammable gas and

toxic gas. Store fully-charged containers separately from

containers with residual gas.

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Keep away from combustible materials.

Strict ban on fire.

Do not store in the vicinity of electric wires or ground wires.

Store in a well-drained and well-ventilated dry place. Protect from rain, wind and direct sunlight and keep

temperatures at 40 °C or below.

Store locked up.

Safe Container Packaging Material Use container stipulated in the High Pressure Gas Safety Act and the United Nations Recommendations on the Transport of

Dangerous Goods.

See the Certificate for the details on appropriate storage conditions and instructions for use as a reference material.

8. Exposure Controls/Personal Protection

Administrative levels

Not established

Occupational exposure limit(Nitrogen/Argon)

ACGIH TLV-TWAJapan Society forNot establishedNot established

Occupational Health Recommended Reference Value

• OSHA PEL TWA : Not established

Facility engineering control

Ventilation, exhaust : Local ventilation equipment or general ventilation equipment.

Safety management, : Oxygen monitor

gas detection

Storage precaution : Store in a well-ventilated place.

Keep it at a temperature of 40 ° C or less, avoiding wind and

rain and direct sunlight.

Protective equipment

Respiratory organ : If necessary, air respirator, oxygen respirator, air supply mask.

Hand : Protective gloves

Eyes : Wear appropriate eye protection such as safety goggles.

Skin and body : Protective clothing, safety shoes

Hygiene Controls

Handle this reference material in accordance with industrial health and safety standards.

9. Physical and Chemical Properties (as Argon)

Appearance, etc.

Color

Color

Colorless

Odor

PH

No data

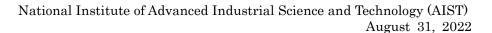
Melting point

-189.3 °C

Boiling point

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Explosive range : Nonflammable

Vapor pressure : No data Relative vapor : 1.38

density(Air=1)

Solubility

Specific gravity or bulk

specific gravity

: 30 mg/L(25 °C)

: 0.00178 g/cm³

n-Octanol/water : 0.94

partition coefficient

(Log Po/w)

Auto-ignition : Nonflammable

temperature

Decomposition : No data

temperature

Flammability : Nonflammable

10. Stability and Reactivity

Stability : Stable under normal preservation conditions.

Reactivity : Stable under normal preservation conditions.

Hazardous : Cause pressure rise with risk of burst if heated.

Reactivity Simple-asphyxiant gas

This gas is heavier than air. It may get stagnant to cause deficiency

of oxygen in a low-ceilinged place.

Conditions to avoid

Incompatible

No data No data

materials

Hazardous

No data

decomposition

products

11. Toxicological information

Acute toxicity

Acute : No data

toxicity(Skin)

Acute : No data

toxicity(Oral)

Acute toxicity : Not classified (Inhalation, gas) : Asphyxiant gas

Skin corrosivity/ : No data

irritation

Severe damage to : No data

eyes/ eye irritation

Respiratory : No data

sensitization

Skin sensitization : No data Germ cell : No data

mutagenicity

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Carcinogenicity : No data Reproductive : No data

toxicity

Specific organ : No data

toxicity/(single

Asphyxiant gas

exposure)

Specific organ

No data

toxicity/(repeated

exposure)

Aspiration hazard : Not classified

12. Ecological Information

Hazardous to the aquatic : No data

environment, short-term (Acute)

Hazardous to the aquatic : No data

environment, long-term (Chronic)

Ecotoxicity : No data
Persistence and Degradability : No data
Bioaccumulation : No data
Mobility in soil : No data
Ozone depletion potential : No data

13. Disposal Consideration

Residual Waste : Dispose of gas under pressure in accordance with the Regulation on

Safety of General High Pressure Gas of the High Pressure Gas Safety

Act.

Contaminated Container and

Package

Return this reference material back to the function in charge given in "1. Identification of the Substance/Mixture and the Supplier" when it becomes no longer necessary to use it or when it becomes beyond its

shelf life.

Container must be disposed of by its owner in accordance with relevant legislation. User of container, therefore, must not dispose of

it by his/her discretion.

14. Transport Information

UN Number : 1006 UN : Class 2.2

Classification

Material name : ARGONCOMPRESSED

Container :

grade

ICAO/IATA : Class 2.2

Marine : ·

pollutant

Precautions : Transport this reference material carefully while keeping it away from

direct sunlight and fire and preventing accidental release due to falling,

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overturning, etc.

15. Applicable Laws and Regulations

♦Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

- · Not applicable
- ♦ High Pressure Gas Safety Act
- Compressed gas (Article 2-1)
- •Inert gas (general high pressure gas safety regulation Article 2-4)
- ♦ Civil Aeronautical Act:
- •High Pressure Gas (Regulation Article 194 Notification of dangerous goods Appendix No. 1)
- ♦ Ship Safety Law:
- · High Pressure Gas (Regulation Article 3 Notification of dangerous goods Appendix No. 1)
- ♦ Act on Port Regulations:
- Other dangerous goods / high pressure gas (Article21-2)
- ◇Road act:
- Restriction on the passage of vehicles (Article 19-13 of the Enforcement Order, Public Notice of Japan Highway Ownership and Debt Repayment Organization No. 12, Appended Table 2)
- This SDS is originally prepared for the use of the material in Japan, thus the stated laws and regulations are stipulated and carried out in Japan. The use of the material in other countries should be referred to and by application of the relevant laws and regulations of the country in which the material will be used.

16. Other Information

Others

The information in this document is not intended to be exhaustive and is based on currently available information and data. The measures given in this document are applicable only to normal handling conditions. When handling this reference material under special conditions etc., it is recommended to take safety measures appropriate to each specific application and context of use. This document is intended to provide information and not intended to guarantee anything in handling this reference material.

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