

Material Safety Data Sheet

SDS date: 03-10-2017

SDS version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product Identifier****Trade Name:** Nitrogen, liquefied

Product- no.: -

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended uses: Nitrogen is used as a shielding gas in the heat treatment of metals and in the chemical industry. Nitrogen is also used as a medium when flushing tanks and pipes against fire and explosion hazards, for cooling and as a protective atmosphere in the production of foodstuffs.

1.3. Details of the supplier of the safety data sheet**Company and address**

Strandmøllen A/S
Strandvejen 895
DK-2930 Klampenborg
Tlf.: +45 701 02 107
www.strandmollen.dk

Contact person and E-mail:kundeservice@strandmollen.dk**The Safety data sheet is completed and validated by:**

mediator A/S, Centervej 2, DK-6000 Kolding. Consultant: SJ

1.4. Emergency telephone number

Use your national or local emergency number - See section 4 "First aid measures".

SECTION 2: Hazards identification**2.1. Classification of substance or mixture**

CLP (1272/2008): Press. Gas (Refrigerated liquefied);H281.

See full text of H-phrases in section 16.

2.2. Label elements**Signal word:**

Warning

According to EU regulation 1907/2006 (REACH)

Contains refrigerated gas; may cause cryogenic burns or injury. (H281)

Wear cold insulating gloves and either face shield or eye protection. (P282)

Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention. (P336+P315)

Protect from sunlight. Store in a well-ventilated place. (P410+P403)

2.3. Other hazards

-

Additional labelling:

-

Additional warnings:

-

SECTION 3: Composition/information on ingredients

3.1./3.2. Substances/Mixtures

| Substance | EU-Index no. | CAS / EINECS no. | CLP-classification | w/w % | Note |
|-----------|--------------|-----------------------|--------------------|-------|------|
| Nitrogen | - | 7727-37-9 / 231-783-9 | Press. Gas;H280 | <100 | - |

See full text of H-phrases in section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

- Inhalation: Seek fresh air. Keep victim under observation. Seek medical advice in case of discomfort.
- Ingestion: Not relevant as the product is a gas. Wash out mouth thoroughly and drink 1-2 glasses of water in small sips.
- Skin contact: On frostbite: rinse with plenty of lukewarm water (max 37°C). Do not remove clothes until thawed. Seek medical advice.
- Eye contact: Flush immediately with water (preferably using eye wash equipment) for at least 5 minutes. Open eye wide. Remove any contact lenses. Seek medical advice.
- Burns: Flush with water until pain ceases. Remove clothing that is not stuck to the skin – seek medical advice/transport to hospital. If possible, continue flushing until medical attention is obtained.
- Additional information: When obtaining medical advice, show the safety data sheet or label.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation of gases may cause irritation to the upper airways. Risk of suffocation at high concentrations in tight spaces.

4.3. Indication of any immediate medical attention and special treatment needed

No special immediate treatment required.

According to EU regulation 1907/2006 (REACH)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Extinguish with powder, foam or water mist.

5.2. Special hazards arising from the substance or mixture

The product is not directly flammable. Avoid inhalation of vapour and fumes – seek fresh air. Heating will cause a rise in pressure in packaging with a risk of bursting. Use water or water mist to cool non-ignited stock.

5.3. Advice for firefighters

Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases – seek fresh air.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment – see section 8. Use the product under well-ventilated conditions. Take precautionary measures against static discharges. Use spark-free tools and explosion proof equipment.

6.2. Environmental precautions

Not relevant as the product is a gas.

6.3. Methods and material for containment and cleaning up

Not relevant as the product is a gas.

6.4. Reference to other sections

See above.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

See section 8 for information about precautions for use and personal protective equipment. Smoking and naked flames prohibited. Work under effective process ventilation (e.g. local exhaust ventilation).

Protect the flask against the ingress of water. Only use equipment, which is suitable for this product and applied pressure and temperature.

7.2. Conditions for safe storage, including any incompatibilities

Pressurized container: Do not expose to temperatures exceeding 50 °C. Store in a well-ventilated area. The flasks must be stored and utilized in an upright position and must be secured with a chain.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits: -

DNEL and PNEC values:

No data.

8.2. Exposure controls

There are no exposure scenarios for this product.

Appropriate engineering controls:

Wash hands before breaks, before using restroom facilities, and at the end of the work. Wear personal protective equipment specified in below section.

According to EU regulation 1907/2006 (REACH)

Personal protective equipment:



| | |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Breathing equipment: | In case of insufficient ventilation, wear respiratory protective equipment. Use air-supplying respiratory protective equipment |
| Hand protection: | Recommended: Leather gloves. |
| Eye protection: | Wear safety goggles/ face protection when cutting and welding. |
| Body and skin protection: | Use safety shoes and safety apron when handling flask. |

Environmental exposure controls:

Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|----------------------------------------------------------------|------------|
| Form: | Gas |
| Colour: | Colourless |
| Odor: | Odourless |
| pH: | - |
| Melting point/ Freezing Point (°C): | - |
| Initial boiling point(°C): | - 196 |
| Decomposition temperature (°C): | - |
| Flash point (°C): | - |
| Evaporation speed: | - |
| Ignition (°C): | - |
| Upper / lower Flammability or Explosion limits (vol-%): | - |
| Vapour pressure (bar, 20 °C): | - |
| Vapour density (air=1) | 0,97 |
| Density (g/ml): | - |
| Solubility in water (mg/l): | 20 |
| Partition coefficient [n-octanol/water], Log K _{ow} : | - |
| Critical temperature (°C): | - 147 |
| Evaporation rate (nBuAc=1): | - |
| Viscosity: | - |
| Flammability: | - |
| Oxidizing properties: | - |

9.2. Other information

| | |
|--------------------------------|----------|
| Molecular weight: | 28 g/mol |
| Surface tension (mN/m, 25 °C): | - |

According to EU regulation 1907/2006 (REACH)

SECTION 10: Stability and reactivity

10.1. Reactivity

Non-reactive

10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

No risk of hazardous reactions.

10.4. Conditions to avoid

Avoid heating and contact with ignition sources.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Nitrogen forms nitrides with active metals, such as. calcium, lithium, magnesium and titanium at high temperatures.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| Substance | Route of exposure | Species | Test | Result |
|-----------|-------------------|---------|------|--------|
| No data | - | - | - | - |

Symptoms:

Inhalation: Vapors of liquid nitrogen can cause freeze burns of the lips, oral cavity and pharynx. In severe cases, the gas can replace the atmospheric air, so there can be a choking hazard. Symptoms may include rapid pulse, deep breathing and slight dizziness and at higher concentrations loss of mobility and loss of consciousness. The exposed person may not notice suffocation.

Skin contact: Direct contact can cause frostbites.

Eye contact: Eye splashes of liquefied gas can cause irritation and frostbites.

Ingestion: During normal handling gases can not be consumed.

Long term effects:

None known.

SECTION 12: Ecological information

12.1. Toxicity

| Substance | Test duration | Species | Test | Result |
|-----------|---------------|---------|------|--------|
| No data | - | - | - | - |

12.2. Persistence and degradability

| Substance | Biodegradability | Test | Result |
|-----------|------------------|------|--------|
| No data | - | - | - |

12.3. Bioaccumulative potential

| Substance | Potential bioaccumulation | LogPow | BCF |
|-----------|---------------------------|--------|-----|
| No data | - | - | - |

According to EU regulation 1907/2006 (REACH)

12.4. Mobility in soil

-

12.5. Results of PBT and vPvB assessment

No data.

12.6. Other adverse effects

None.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The product should be treated as dangerous waste.

EWC Code

16 05 04

Rented flasks should be disposed of via supplier.

Specific labelling

-

Contaminated packaging:

Uncleansed packaging is to be disposed of via the local waste-removal scheme.

SECTION 14: Transport information

This product is included in the regulation of dangerous goods.

14.1 -14.4.

ADR

| UN number.: | UN proper shipping name | Transport hazard class(es) | Packing group |
|-------------|-------------------------------|-------------------------------------------------------------------------------------------|---------------|
| 1977 | NITROGEN, REFRIGERATED LIQUID | 2.2  | - |

IMDG

| UN-no.: | Proper shipping name | Transport hazard class(es) | Packing group |
|---------|-------------------------------|-------------------------------------------------------------------------------------------|---------------|
| 1977 | NITROGEN, REFRIGERATED LIQUID | 2.2  | - |

14.5. Environmental hazards

-

14.6. Special precautions for user

-

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant.

According to EU regulation 1907/2006 (REACH)

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

-

Restrictions for application:

-

Demands for specific education:

-

15.2. Chemical safety assessment

Chemical safety assessment has not been performed.

SECTION 16: Other information

Other information:

Sources:

EC regulation 1907/2006 (REACH).

Directive 2000/532/EC.

EC Regulation 1272/2008 (CLP).

EH40/2005 WELs (United Kingdom (UK), 8/2007).

Full text of H-phrases as mentioned in section 2+3:

H280 - Contains gas under pressure; may explode if heated.

H281 - Contains refrigerated gas; may cause cryogenic burns or injury.

Other

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Minor changes have been made in following sections:

1-16

This material safety data sheet replaces version:

1.0 (26-02-2015)
