

**Material Safety Data Sheet**

SDS date: 02-10-2017

SDS version: 1.1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product Identifier****Trade Name:** Dinitrogen oxide

Product- no.: -

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

Recommended uses: Dinitrogen oxide is primarily used for medical purposes as anesthetic and as refrigerant. Is also used as propellant in some types of aerosols and especially whipped cream dispensers.

**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](http://www.strandmollen.dk)

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

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

**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): Ox. Gas 1;H270, Press. Gas (Liquefied);H280, STOT SE 3;H336.

See full text of H-phrases in section 16.

**2.2. Label elements****Signal word:**

Danger

According to EU regulation 1907/2006 (REACH)

May cause or intensify fire; oxidiser. (H270)  
 Contains gas under pressure; may explode if heated. (H280)  
 May cause drowsiness or dizziness. (H336)

Keep/Store away from clothing/combustible materials. (P220)  
 Keep valves and fittings free from oil and grease. (P244)  
 In case of fire: Stop leak if safe to do so. (P370+P376)  
 Protect from sunlight. Store in a well-ventilated place. (P410+P403)

### 2.3. Other hazards

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#### Additional labelling:

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#### Additional warnings:

-

## SSECTION 3: Composition/information on ingredients

### 3.1./3.2. Substances/Mixtures

Substance	EU-Index no.	CAS / EINECS no.	CLP-classification	w/w %	Note
Dinitrogen oxide	-	10024-97-2/ 233-032-0	Ox. Gas 1;H270, Press. Gas;H280, STOT SE 3;H336.	< 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 at room temperature. 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.

According to EU regulation 1907/2006 (REACH)

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

Inhalation of gases may cause irritation to the upper airways. May cause drowsiness or dizziness. See section 11.

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

No special immediate treatment required.

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### **SECTION 5: Firefighting measures**

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#### **5.1. Extinguishing media**

Extinguish with powder, foam or water mist.

#### **5.2. Special hazards arising from the substance or mixture**

Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Hazardous fumes are formed in fire conditions. 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.

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### **SECTION 6: Accidental release measures**

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#### **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.

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### **SECTION 7: Handling and storage**

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#### **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). Keep valves and fittings free from oil and grease. Protect the flask against the ingress of water. Flush the equipment before supplying gas to ensure the absence of air. 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. 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.

According to EU regulation 1907/2006 (REACH)

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Occupational exposure limits:

Substance	Long-term exposure limit	Short-term exposure limit	Note
Dinitrogen oxide	100 ppm – 183 mg/m <sup>3</sup>	-	-

### DNEL and PNEC values:

DNEL – Dinitrogen oxide:

Inhalation Long Term Systemic effects Workers 183 mg/m<sup>3</sup>

### 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.

#### Personal protective equipment:



Breathing equipment:	In case of insufficient ventilation, wear respiratory protective equipment with filter NO-P3.
Hand protection:	Recommended: Leather gloves.
Eye protection:	Wear safety goggles/ face protection.
Body and skin protection:	Use safety shoes 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:	Weak - sweet
pH:	-
Melting point/ Freezing Point (°C):	-
Initial boiling point(°C):	- 88,5
Decomposition temperature (°C):	-
Flash point (°C):	-
Evaporation speed:	-
Ignition (°C):	-
Upper / lower Flammability or Explosion limits (vol-%):	-
Vapour pressure (bar, 20 °C):	50
Vapour density (air=1)	1,53
Density (g/ml):	-
Solubility in water (mg/l):	0,61
Partition coefficient [n-octanol/water], Log K <sub>ow</sub> :	-
Critical temperature (°C):	36,5
Evaporation rate (nBuAc=1):	-
Viscosity:	-
Flammability:	-
Oxidizing properties:	-

### 9.2. Other information

Molecular weight:	44 g/mol
Surface tension (mN/m, 25 °C):	-

## 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

May cause or intensify fire; oxidiser. Keep valves and fittings free from oil and grease.

### 10.4. Conditions to avoid

Avoid heating and contact with ignition sources.

### 10.5. Incompatible materials

Avoid contact with strong oxidising agents, strong reducing agents, ethers and metals.

### 10.6. Hazardous decomposition products

No special precautions regarding contact with other materials at the recommended storage conditions.

According to EU regulation 1907/2006 (REACH)

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Substance	Route of exposure	Species	Test	Result
Dinitrogenoxid	Inhalation	Dog	LC50 / 4 h	> 250 ppm

Symptoms:

**Inhalation:** May cause drowsiness or dizziness.

**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	-	-	-

### 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**

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According to EU regulation 1907/2006 (REACH)

#### 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
1070	NITROUS OXIDE	2.2 + 5.1  	-

##### IMDG

UN-no.:	Proper shipping name	Transport hazard class(es)	Packing group
1070	NITROUS OXIDE	2.2 + 5.1  	-

#### 14.5. Environmental hazards

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#### 14.6. Special precautions for user

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

Not relevant.

### SECTION 15: Regulatory information

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

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#### Restrictions for application:

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#### Demands for specific education:

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#### 15.2. Chemical safety assessment

Chemical safety assessment has not been performed.

According to EU regulation 1907/2006 (REACH)

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## SECTION 16: Other information

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### 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:

H270 - May cause or intensify fire; oxidiser.

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

H336 - May cause drowsiness or dizziness.

#### Other

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#### Minor changes have been made in following sections:

1 - -16.

#### This material safety data sheet replaces version:

1.0 (24-02-2015)

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