

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 according to Guideline 75/324/EWG with its amendment Guideline 2013/10/EU

Nitrogen (CANgas)

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SDS reference: D-N2-089A-DD

Warning



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : Nitrogen (CANgas)
SDS no : D-N2-089A-DD
Chemical description : Nitrogen
CAS No : 7727-37-9
EC No : 231-783-9
EC Index No : ---
Registration-No. : Listed in Annex IV / V REACH, exempted from registration.
Chemical formula : N₂

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

Relevant identified uses : Industrial and professional. Perform risk assessment prior to use
Test gas/Calibration gas
Laboratory use
Contact supplier for more information on uses
Uses advised against : Consumer use

1.3. Details of the supplier of the safety data sheet

Company identification : Messer Industriegase GmbH
Messer- Platz 1
D - 65812 Bad Soden a. Ts., Germany
0049-(0)-6196 7760-200
www.messer.de
info.de@messergroup.com

1.4. Emergency telephone number

Emergency telephone number : Messer Industriegase GmbH +49 (0) 5341 21-9333

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Physical hazards Press. Gas (Comp.) H229

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS04

Signal word (CLP) : Warning

Hazard statements (CLP) : H229 - Pressurised container: May burst if heated.

Precautionary statements (CLP)

- Prevention : P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P251 - Pressurized container: Do not pierce or burn, even after use
- Storage : P403 - Store in a well-ventilated place
P410 - Protect from sunlight
P412 - Do not expose to temperatures exceeding 50 °C/ 122 °F

2.3. Other hazards

: Asphyxiant in high concentrations

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Nitrogen	(CAS No) 7727-37-9 (EC No) 231-783-9 (EC Index No) --- (Registration-No.) *1	100	Press. Gas (Comp.), H280

Contains no other components or impurities which will influence the classification of the product.

*1: Listed in Annex IV / V REACH, exempted from registration.

Full text of H-statements see section 16.

3.2. Mixtures : Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- 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
- Skin contact : Adverse effects not expected from this product
- Eye contact : Adverse effects not expected from this product
- Ingestion : Ingestion is not considered a potential route of exposure

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

: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation
Refer to section 11

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

: None

SECTION 5: Fire-fighting measures**5.1. Extinguishing media**

- Suitable extinguishing media : Water spray or fog

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : None

5.3. Advice for firefighters

Special protective equipment for fire fighters : Use self-contained breathing apparatus

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

: Try to stop release
Evacuate area
Monitor concentration of released product
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe
Ensure adequate air ventilation
Act in accordance with local emergency plan
Stay upwind

6.2. Environmental precautions

: Try to stop release

6.3. Methods and material for containment and cleaning up

: Ventilate area

6.4. Reference to other sections

: See also sections 8 and 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Safe use of the product : The product must be handled in accordance with good industrial hygiene and safety procedures
Only experienced and properly instructed persons should handle gases under pressure
Consider pressure relief device(s) in gas installations
Ensure the complete gas system was (or is regularly) checked for leaks before use
Do not smoke while handling product
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt
Do not breathe gas
Avoid release of product into atmosphere.

7.2. Conditions for safe storage, including any incompatibilities

- : Observe all regulations and local requirements regarding storage of containers
- Containers should not be stored in conditions likely to encourage corrosion
- Container valve guards or caps should be in place
- Containers should be stored in the vertical position and properly secured to prevent them from falling over
- Stored containers should be periodically checked for general condition and leakage
- Keep container below 50°C in a well ventilated place
- Store containers in location free from fire risk and away from sources of heat and ignition
- Keep away from combustible materials.

7.3. Specific end use(s)

: None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OEL (Occupational Exposure Limits) : No data available.

DNEL (Derived-No Effect Level) : No data available.

PNEC (Predicted No-Effect Concentration) : No data available.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

- : Provide adequate general and local exhaust ventilation
- Systems under pressure should be regularly checked for leakages
- Ensure exposure is below occupational exposure limits (where available)
- Oxygen detectors should be used when asphyxiating gases may be released
- Consider the use of a work permit system e.g. for maintenance activities

8.2.2. Individual protection measures, e.g. personal protective equipment

- : A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered:
- PPE compliant to the recommended EN/ISO standards should be selected

• Eye/face protection

- : Wear safety glasses with side shields
- Standard EN 166 - Personal eye-protection - specifications

• Skin protection

- Hand protection

- : Wear working gloves when handling gas containers
- Standard EN 388 - Protective gloves against mechanical risk

- Other

- : Wear safety shoes while handling containers
- Standard EN ISO 20345 - Personal protective equipment - Safety footwear

• Respiratory protection

- : Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres
- Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask

• Thermal hazards

- : None necessary

8.2.3. Environmental exposure controls

- : None necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

- Physical state at 20°C / 101.3kPa : Gas.
- Colour : Colourless.

Odour : No odour warning properties.

Odour threshold : Odour threshold is subjective and inadequate to warn of overexposure.

pH value : Not applicable.

Molar mass : 28 g/mol

Melting point : -210 °C

Boiling point : -196 °C

Flash point : Not applicable for gases and gas mixtures.

Critical temperature [°C] : -147 °C

Evaporation rate (ether=1) : Not applicable for gases and gas mixtures.

Flammability range : Non flammable.

Vapour pressure [20°C] : Not applicable.

Vapour pressure [50°C] : Not applicable.

Relative density, gas (air=1) : 0.97

Relative density, liquid (water=1) : Not applicable.

Solubility in water : ≈ 20 mg/l

Partition coefficient n-octanol/water [log Kow] : Not applicable for inorganic gases.

Auto-ignition temperature : Not applicable.

Viscosity [20°C] : Not applicable.

Explosive Properties : Not applicable

Oxidising Properties : None

9.2. Other information

Other data : None

SECTION 10: Stability and reactivity**10.1. Reactivity**

: No reactivity hazard other than the effects described in sub-sections below

10.2. Chemical stability

: Stable under normal conditions

10.3. Possibility of hazardous reactions

: None

10.4. Conditions to avoid

: None under recommended storage and handling conditions (see section 7)

10.5. Incompatible materials

: None
For additional information on compatibility refer to ISO 11114

10.6. Hazardous decomposition products

: None

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity	: No known toxicological effects from this product
Skin corrosion/irritation	: No known effects from this product
Serious eye damage/irritation	: No known effects from this product
Respiratory or skin sensitisation	: No known effects from this product
Germ cell mutagenicity	: No known effects from this product
Carcinogenicity	: No known effects from this product
Toxic for reproduction : Fertility	: No known effects from this product
Toxic for reproduction : unborn child	: No known effects from this product
STOT-single exposure	: No known effects from this product
STOT-repeated exposure	: No known effects from this product
Aspiration hazard	: Not applicable for gases and gas mixtures

SECTION 12: Ecological information**12.1. Toxicity**

Assessment : No ecological damage caused by this product.

12.2. Persistence and degradability

Assessment : No ecological damage caused by this product. No data available.

12.3. Bioaccumulative potential

Assessment : No ecological damage caused by this product.

12.4. Mobility in soil

Assessment : No data available.
Assessment : No ecological damage caused by this product.

12.5. Results of PBT and vPvB assessment

Assessment : Not classified as PBT or vPvB

12.6. Other adverse effects

Effect on the ozone layer : None
Effect on global warming : None

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Consult supplier for specific recommendations
May be vented to atmosphere in a well ventilated place
Refer to the EIGA code of practice Doc.30 "Disposal of Gases", downloadable at <http://www.eiga.org> for more guidance on suitable disposal methods

List of hazardous waste codes (from Commission Decision 2001/118/EC) : 16 05 05 : Gases in pressure containers other than those mentioned in 16 05 04

13.2. Additional information

: None

SECTION 14: Transport information

14.1. UN number

UN-No. : 1950

14.2. UN proper shipping name**Transport by road/rail (ADR/RID)** : AEROSOLS**Transport by air (ICAO-TI / IATA-DGR)** : Aerosols, non-flammable**Transport by sea (IMDG)** : AEROSOLS**14.3. Transport hazard class(es)****Labelling** :

2.2 : Non flammable, non-toxic gases

Transport by road/rail (ADR/RID)

Class : 2

Classification code : 5A

Tunnel Restriction : E - Passage forbidden through tunnels of category E

Transport by air (ICAO-TI / IATA-DGR)

Class / Div. (Sub. risk(s)) : 2.2

Transport by sea (IMDG)

Class / Div. (Sub. risk(s)) : 2.2

Emergency Schedule (EmS) - Fire : F-D

Emergency Schedule (EmS) - Spillage : S-U

14.4. Packing group

Transport by road/rail (ADR/RID) : Not applicable

Transport by air (ICAO-TI / IATA-DGR) : Not applicable

Transport by sea (IMDG) : Not applicable

14.5. Environmental hazards

Transport by road/rail (ADR/RID) : None.

Transport by air (ICAO-TI / IATA-DGR) : None.

Transport by sea (IMDG) : None.

14.6. Special precautions for user**Packing Instruction(s)**

Transport by road/rail (ADR/RID) : P207,LP02

Transport by air (ICAO-TI / IATA-DGR)

Passenger and Cargo Aircraft : 203

Cargo Aircraft only : 203

Transport by sea (IMDG) : P207, LP02

Special transport precautions : 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 there is adequate ventilation
 - 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.

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

: Not applicable.

SECTION 15: Regulatory information

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

EU-Regulations

Restrictions on use : None
 Seveso Directive : 2012/18/EU (Seveso III) : Not covered

National regulations

National legislation : Ensure all national/local regulations are observed.
 Water hazard class (WGK) : nwg - Non-hazardous to water
 Kenn-Nr. : 1351

15.2. Chemical safety assessment

: A CSA does not need to be carried out for this product

SECTION 16: Other information

Training advice : The hazard of asphyxiation is often overlooked and must be stressed during operator training. Receptacle under pressure.
 Further information : This Safety Data Sheet has been established in accordance with the applicable European Union legislation. Classification in accordance with the calculation methods of Regulation (EC) 1272/2008 CLP according to Guideline 75/324/EWG with its amendment Guideline 2013/10/EU.

Full text of H- and EUH-statements

Press. Gas (Comp.)	Gases under pressure : Compressed gas
H229	Pressurised container: May burst if heated.

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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