

SAFETY DATA SHEET

SPIROMECC AB

In accordance with 1907/2006 annex II 2015/830 and 1272/2008

(All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 2021-03-17

Version number 1.0

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

1.1. Product identifier

Trade name	IG100 (Nitrogen)
CAS No	7727-37-9
EC No	231-783-9

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

Identified uses	For professional use
	For industrial use

1.3. Details of the supplier of the safety data sheet

Company	Spiromec AB
	Moljins väg 11
	589 41 Linköping
	Sweden
Telephone	013-36 26 70
E-mail	www.spiromec.se

1.4. Emergency telephone number

Acute cases: Call 112, request poison information.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Press. Gas (Comp.), H280
(See section 16)

2.2. Label elements

Hazard pictogram



Signal word	Warning
Hazard statement	
H280	Contains gas under pressure; may explode if heated
Precautionary statement	
P410+P403	Protect from sunlight. Store in a well-ventilated place

2.3. Other hazards

High concentrations can displace the normal air and cause suffocation from lack of oxygen.

SECTION 3: Composition/information on ingredients

3.1. Substances

Constituent	Classification	Concentration
NITROGEN GAS		
CAS No: 7727-37-9 EC No: 231-783-9	Press. Gas (Comp.); H280	100 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

SECTION 4: First aid measures

4.1. Description of first aid measures

Generally

In case of concern, or if symptoms persist, call a doctor/physician.

Never attempt to administer liquid, or anything else, to an unconscious person via the mouth.

Case of respiratory arrest give artificial respiration.

Upon breathing in

Bring the injured person out into fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult let trained personnel administer oxygen. Let the injured person rest in a warm place with fresh air and seek medical advice immediately.

Upon eye contact

For safety reasons, flush eyes with water; If symptoms occur, seek medical advice.

Upon skin contact

Wash the skin with soap and water.

If symptoms occur, contact a physician.

Upon ingestion

Rinse nose, mouth and throat with water.

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

Upon breathing in

High concentrations can displace the normal air and cause suffocation from lack of oxygen.

Upon skin contact

Contact with rapidly expanding gas may cause frostbite.

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

Symptomatic treatment.

Upon contact with a doctor, make sure to have the label or this safety data sheet with you.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing agents

Extinguish with materials intended for the surrounding fire.

Unsuitable extinguishing agents

May not be extinguished with water dispersed under high pressure.

5.2. Special hazards arising from the substance or mixture

The product is not hazardous in the flammable sense.

In case of fire, high pressure may build up causing the packaging to explode.

5.3. Advice for fire-fighters

Protective measures should be taken regarding other material at the site of the fire.

In case of fire use proper breathing apparatus.

Wear full protective clothing.

Cool closed containers that were exposed to fire with water.

The containers should be moved away from the place of fire, if this can take place without risks.

If the gas cylinder cannot be removed, cool it with water as long as the fire persists and then at least 10 minutes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- Use recommended safety equipment, see section 8.
- Do not inhale the product and avoid exposure to skin and eyes.
- Ensure good ventilation.
- Oxygen detector should be used where suffocating gas can be released.
- Keep unauthorized and unprotected people at a safe distance.
- Area should be evacuated and gases removed with ventilation.
- Use breathing apparatus when oxygen levels are low or unknown.

6.2. Environmental precautions

- Avoid release to drains, soil or watercourses.

6.3. Methods and material for containment and cleaning up

- Evacuate the area and ventilate the gas.
- Let the gas from the leaking gas cylinders evaporate outdoors.

6.4. Reference to other sections

- See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Read and follow the manufacturer's instructions.
- Implement appropriate engineering controls if necessary, see Section 8.
- Use recommended safety equipment, see section 8.
- Handle and open container with care.
- Check pipes and shut-off valves regularly for gas leakages.
- Use only with compatible and approved equipment.
- Do not inhale fumes and avoid contact with skin and eyes.
- Store this product separately from food items and keep it out of the reach of children and pets.
- Do not eat, drink or smoke in premises where this product is handled.
- Avoid open fire, hot items, sparks or other ignition sources.
- See the supplier's instructions for handling gas cylinders. Protect gas cylinders from physical damage; you must not pull, roll, slip or overturn gas cylinder. Use trolleys that are intended for gas cylinders even if the gas cylinder is only moved for short distances. Leave the valve cover and protective nut until the bottle is secured to a wall or bench or placed in a bottle rack ready for use. If users experience difficulties in handling the gas cylinder, stop using it and contact the supplier.
- Never attempt to repair or modify container valves or pressure relief devices yourself. Damaged valves should be reported to the supplier immediately. Keep container valves free of contaminants such as water and oil. As soon as the container is released from the equipment, replace the protective nuts and protective cover. After each use, close the container valve even when it is empty and still connected to an instrument. Never attempt to transfer gases from one bottle/container to another. Never use open flame or electric heating systems to increase the pressure in the container. You must not remove or distort the supplier's labels that exist to tell you about the contents of the gas cylinders.

7.2. Conditions for safe storage, including any incompatibilities

- Store separately from food and animal fodder, incl. utensils or surfaces which have been in contact with these things.
- The product should be stored in a manner which prevents hazards to health and the environment. Avoid exposure to humans and animals and do not discharge the product in a sensitive environment.
- Store tightly, in original packaging.
- Store in a well-ventilated space.
- Store at maximum 50 °C.

7.3. Specific end uses

- See identified uses in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National limit values

All ingredients (cf. Section 3) lack occupational exposure limit values.

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

The risks posed by the product or its constituents must be considered in the task specific risk assessment, in accordance with current working environment legislation. The risk assessment should be reviewed regularly and updated if necessary.

8.2.1. Appropriate engineering controls

The ventilation in the workplace must ensure an air quality that meets the requirements of the current working environment legislation. Local exhaust ventilation should be used to remove airborne contaminants at the source.

Oxygen monitors should be used since suffocating gases may be released.

Eye/face protection

Eye protection should be worn if there is any danger of direct exposure or splashing.

Skin protection

Use suitable protective clothing.

Use suitable protective gloves.

Release of gas can cause strong cold. Gloves protecting against cold is recommended.

Respiratory protection

Use appropriate respiratory protective equipment in case of insufficient ventilation.

Breathing apparatus may be required.

Note that a breathing mask with a filter does not protect against lack of oxygen in the air.

8.2.3. Environmental exposure controls

Work with the product should take place in such a way that the product does not get into drains, waterways, soil and air.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance	Form: The product is or contains gas. Colour: colourless.
b) Odour	scentless
c) Odour threshold	Not indicated
d) pH	Not indicated
e) Melting point/freezing point	-210 °C
f) Initial boiling point and boiling range	-196 °C
g) Flash point	Not indicated
h) Evaporation rate	Not indicated
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Not indicated
k) Vapour pressure	Not indicated
l) Vapour density	Not indicated
m) Relative density	0.97 Air = 1
n) Solubility	Not indicated
o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	Not indicated
q) Decomposition temperature	Not indicated
r) Viscosity	Not indicated
s) Explosive properties	Not applicable
t) Oxidising properties	Not applicable

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product contains no substances which can lead to hazardous reactions at normal use.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

At normal handling and use, hazardous reactions will not occur.

10.4. Conditions to avoid

Protect from heat and direct sunlight.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Note that in case of inhalation of large quantities, there is risk of suffocation due to lack of oxygen.

Acute toxicity

High concentrations can displace the normal air and cause suffocation from lack of oxygen.

Skin corrosion/irritation

Contact with compressed gas may cause frostbites.

The criteria for classification cannot be considered fulfilled based on available data.

Serious eye damage/irritation

Contact with compressed gas may cause frostbites.

The criteria for classification cannot be considered fulfilled based on available data.

Respiratory or skin sensitisation

The product is not classified as sensitising.

Germ cell mutagenicity

The product is not classified as mutagen.

Carcinogenicity

The product is not classified as carcinogenic.

Reproductive toxicity

The product is not classified as a reproductive toxicant.

STOT-single exposure

High concentrations can displace the normal air and cause suffocation from lack of oxygen.

The criteria for classification cannot be considered fulfilled based on available data.

STOT-repeated exposure

The criteria for classification cannot be considered fulfilled based on available data.

Aspiration hazard

The product is not classified as being toxic for aspiration.

SECTION 12: Ecological information

12.1. Toxicity

The product is not to be labelled as an environmental hazard. However, it is not inconceivable that large emissions, or repeated small emissions, can have a harmful effect on the environment.

Prevent release on land, in water and drains.

12.2. Persistence and degradability

There is no information regarding persistence or degradability.

12.3. Bioaccumulative potential

There is no information regarding bioaccumulation.

12.4. Mobility in soil

Information about mobility in nature is not available.

12.5. Results of PBT and vPvB assessment

No chemical safety report has been prepared.

12.6. Other adverse effects

Data lacking.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste handling of the product

The product is not classified as hazardous waste.

Pressurized container: Do not pierce or burn, even after use.

See directive 2008/98/EC on waste. Observe national or regional provisions on waste management.

SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

14.1. UN number

1066

14.2. UN proper shipping name

NITROGEN, COMPRESSED

14.3. Transport hazard class(es)

Class

2: Gases

Classification code (ADR/RID)

1A: Compressed gas: asphyxiant

Subsidiary risk (IMDG)

No subsidiary risk according to IMDG

Labels



14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Tunnel restrictions

Tunnel category: E

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

14.8 Other transport information

Transport category: 3; Maximum total quantity per transport unit: 1000 kgs or litres (ADR 1.1.3.6)

Stowage category A (IMDG)

Emergency Schedule (EmS) for FIRE (IMDG) F-C

Emergency Schedule (EmS) for SPILLAGE (IMDG) S-V

SECTION 15: Regulatory information

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

Not indicated.

15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

SECTION 16: Other information

16a. Indication of where changes have been made to the previous version of the safety data sheet

Revisions of this document

This is the first version

16b. Legend to abbreviations and acronyms used in the safety data sheet

Full texts for Hazard Class and Category Code mentioned in section 3

Press. Gas (Comp.) Gases under pressure: Compressed gas - Press. Gas (Comp.), H280 - Contains gas under pressure; may explode if heated

Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road

RID Regulations concerning the International Transport of Dangerous Goods by Rail

IMDG International Maritime Dangerous Goods Code

ICAO International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)

IATA The International Air Transport Association

Tunnel restriction code: E; Passage through category E tunnels is strictly forbidden

Transport category: 3; Maximum total quantity per transport unit: 1000 kgs or litres (ADR 1.1.3.6)

16c. Key literature references and sources for data

Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I, as updated to 2021-03-17.

Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

- 1907/2006 REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
- 2015/830 COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- 1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- 2008/98/EC DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I, where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI.

16e. List of relevant hazard statements and/or precautionary statements

Full texts for hazard statements mentioned in section 3

H280 Contains gas under pressure; may explode if heated

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment

Warning for misuse

This product can cause injuries if not used properly. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with its intended use.

Other relevant information

Not indicated

Editorial information



This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se