



## SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

**NO 10 %;N2 90 %**

Issue Date:	20.12.2012	Version: 1.1	SDS No.: 000010013008
Revision Date:	27.09.2023		1/18
Last revised date :	10.12.2015		

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

#### 1.1 Product identifier

**Product name:** NO 10 %;N2 90 %

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

**Identified uses:** Industrial and professional use for chemical analysis, calibration, (routine) quality control, laboratory use. Under controlled conditions.

**Uses advised against** Contact supplier for more information on uses. Uses other than those listed above are not supported.

#### 1.3 Details of the supplier of the safety data sheet

##### Supplier

Linde Gas GmbH  
Carl-von-Linde-Platz 1  
A-4651 Stadl-Paura

**Telephone:** +43 50 4273

**E-mail:** office@at.linde-gas.com

**1.4 Emergency telephone number:** Emergency number UMCÖ: +49 89 220 61012 (German), +44 1865 407333 (English)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended.

##### Physical Hazards

Gases under pressure	Compressed gas	H280: Contains gas under pressure; may explode if heated.
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##### Health Hazards

Acute toxicity (Inhalation - gas)	Category 3	H331: Toxic if inhaled.
Skin corrosion	Category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage	Category 1	H318: Causes serious eye damage.
Specific Target Organ Toxicity - Single Exposure	Category 3	H335: May cause respiratory irritation.

#### 2.2 Label Elements

**Contains:** Nitrogen monoxide



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**Signal Word:** Danger

**Hazard Statement(s):**  
H280: Contains gas under pressure; may explode if heated.  
H331: Toxic if inhaled.  
H314: Causes severe skin burns and eye damage.

## Precautionary Statements

**General** None.

**Prevention:**  
P260: Do not breathe gas/vapors.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**  
P303+P361+P353+P315: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. Get immediate medical advice/attention.  
P304+P340+P315: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get immediate medical advice/attention.  
P305+P351+P338+P315: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

**Storage:** P403: Store in a well-ventilated place.

**Disposal** None.

## Hazardous ingredients which must be listed on the label:

Nitrogen monoxide

## Supplemental information

EUH071: Corrosive to the respiratory tract.

## Unknown toxicity - Health

Acute toxicity, inhalation, gas 0 %

## Unknown toxicity - Environment

Acute hazards to the aquatic environment 100 %

Chronic hazards to the aquatic environment 100 %



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## 2.3 Other hazards

**Endocrine disrupting properties-Toxicity**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Endocrine disrupting properties-Ecotoxicity**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

## 3.2 Mixtures

Chemical name	Chemical formula	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Nitrogen monoxide	NO	10%	10102-43-9	233-271-0	01-2120766630-54	-	#
Nitrogen	N2	90%	7727-37-9	231-783-9	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.	-	

The concentrations of the components in the SDS header, product name on page one and in section 3.2 are in mol due to regulatory requirements.

All concentrations are nominal.

# This substance has workplace exposure limit(s).

## This substance is listed as SVHC.PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.



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## Classification

Chemical name	Classification	Notes
Nitrogen monoxide	CLP: Classification: Press. Gas: Compr. Gas: H280; Eye Dam.: 1: H318; Skin Corr.: 1B: H314; Acute Tox.: 1: H330; Supplemental label information: EUH071; Specific concentration limit: Skin corrosion Category 1B, $\geq 5\%$ ; Serious eye irritation Category 2, $\geq 1\%$ ; Specific target organ toxicity - single exposure Category 3, $\geq 0,5\%$ ; Serious eye damage Category 1, $\geq 3\%$ ; Skin irritation Category 2, $\geq 1\%$ ; Acute toxicity, oral: None known. Acute toxicity, inhalation: LC 50: 115 ppm Acute toxicity, dermal: None known.	
Nitrogen	CLP: Classification: Press. Gas: Compr. Gas: H280; Supplemental label information: EIGA0357; Specific concentration limit: None known. Acute toxicity, oral: None known. Acute toxicity, inhalation: None known. Acute toxicity, dermal: None known.	

CLP: Regulation No. 1272/2008.

The full text for all H-statements is displayed in section 16.

## SECTION 4: First aid measures

## General:

Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

## 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.



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**Eye contact:** Make sure to remove any contact lenses from the eyes before rinsing. Flush thoroughly with water for at least 15 minutes. Get immediate medical assistance. If medical assistance is not immediately available, flush an additional 15 minutes.

**Skin Contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.

**Ingestion:** Ingestion is not considered a potential route of exposure.

**4.2 Most important symptoms and effects, both acute and delayed:** Causes severe skin burns and eye damage. May be fatal if inhaled.

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

**Hazards:** Causes severe skin burns and eye damage. May be fatal if inhaled.

**Treatment:** Treat with a corticosteroid spray as soon as possible after inhalation.

## SECTION 5: Firefighting measures

**General Fire Hazards:** Heat may cause the containers to explode.

### 5.1 Extinguishing media

**Suitable extinguishing media:** Use water spray to reduce vapors or divert vapor cloud drift. Water. Dry powder. Foam. Carbon Dioxide.

**Unsuitable extinguishing media:** None.

**5.2 Special hazards arising from the substance or mixture:** Fire or excessive heat may produce hazardous decomposition products.

### 5.3 Advice for firefighters

**Special fire-fighting procedures:** In case of fire: Stop leak if safe to do so. Use of water may result in the formation of very toxic aqueous solutions. Keep run-off water out of sewers and water sources. Dike for water control. Continue water spray from protected position until container stays cool. Use extinguishants to contain the fire. Isolate the source of the fire or let it burn out.

**Special protective equipment for fire-fighters:** Gas tight chemically protective clothing (Type 1) in combination with self contained breathing apparatus.  
Guideline: EN 943-2 Protective clothing against liquid and gaseous chemicals, aerosols and solid particles. Performance requirements for gas-tight (Type 1) chemical protective suits for emergency teams (ET)



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## SECTION 6: Accidental release measures

- |   |   |
|---|---|
| <b>6.1 Personal precautions, protective equipment and emergency procedures:</b> | Evacuate area. Provide adequate ventilation. Monitor the concentration of the released product. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking. |
| <b>6.2 Environmental Precautions:</b>   | Prevent further leakage or spillage if safe to do so. Reduce vapour with fog or fine water spray. Keep run-off water out of sewers and water sources. Dike for water control.   |
| <b>6.3 Methods and material for containment and cleaning up:</b>                | Provide adequate ventilation. Wash contaminated equipment or sites of leaks with copious quantities of water.   |
| <b>6.4 Reference to other sections:</b>   | Refer to sections 8 and 13.   |

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**SECTION 7: Handling and storage:**

- 7.1 Precautions for safe handling:** Only experienced and properly instructed persons should handle gases under pressure. Avoid exposure - obtain special instructions before use. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Installation of a cross purge assembly between the container and the regulator is recommended. Excess pressure must be vented through an appropriate scrubber system. Refer to supplier's handling instructions. The substance must be handled in accordance with good industrial hygiene and safety procedures. Protect containers from physical damage; do not drag, roll, slide or drop. Do not remove or deface labels provided by the supplier for the identification of the container contents. When moving containers, even for short distances, use appropriate equipment eg. trolley, hand truck, fork truck etc. Secure cylinders in an upright position at all times, close all valves when not in use. Provide adequate ventilation. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Avoid suckback of water, acid and alkalis. Keep container below 50°C in a well ventilated place. Observe all regulations and local requirements regarding storage of containers. When using do not eat, drink or smoke. Store in accordance with local/regional/national/international regulations. Never use direct flame or electrical heating devices to raise the pressure of a container. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. Damaged valves should be reported immediately to the supplier. Close container valve after each use and when empty, even if still connected to equipment. Never attempt to repair or modify container valves or safety relief devices. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Keep container valve outlets clean and free from contaminants particularly oil and water. If user experiences any difficulty operating container valve discontinue use and contact supplier. Never attempt to transfer gases from one container to another. Container valve guards or caps should be in place.
- 7.2 Conditions for safe storage, including any incompatibilities:** Containers should not be stored in conditions likely to encourage corrosion. Keep away from food, drink and animal feeding stuffs. Stored containers should be periodically checked for general conditions and leakage. Container valve guards or caps should be in place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible material.
- 7.3 Specific end use(s):** None.



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**SECTION 8: Exposure controls/personal protection****8.1 Control Parameters****Occupational Exposure Limits**

Chemical name	Type	Form of exposure	Exposure Limit Values	Source
Nitrogen monoxide	MAK		2 ppm      2,5 mg/m <sup>3</sup>	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	TWA		2 ppm      2,5 mg/m <sup>3</sup>	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (02 2017)

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

**Biological Limit Values**

No biological exposure limits noted for the ingredient(s).

**8.2 Exposure controls****Appropriate engineering controls:**

Consider a work permit system e.g. for maintenance activities. Ensure adequate air ventilation. Provide adequate general and local exhaust ventilation. Keep concentrations well below occupational exposure limits. Gas detectors should be used when toxic quantities may be released. Systems under pressure should be regularly checked for leakages. Product to be handled in a closed system and under strictly controlled conditions. Only use permanent leak tight installations (e.g. welded pipes). Do not eat, drink or smoke when using the product.

**Individual protection measures, such as personal protective equipment****General information:**

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. Keep self contained breathing apparatus readily available for emergency use. Keep suitable chemically resistant protective clothing readily available for emergency use. Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Protect eyes, face and skin from contact with product. Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

**Eye/face protection:**

Wear eye protection to EN 166 when using gases.  
Guideline: EN 166 Personal Eye Protection.



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**Skin protection****Hand Protection:**

Guideline: EN 388 Protective gloves against mechanical risks.

Additional Information: Wear working gloves while handling containers

Guideline: EN 374-1/2/3 Protective gloves against chemicals and micro-organisms.

Additional Information: Chemically resistant gloves complying with EN 374 should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection:**

No special precautions.

**Other:**

Wear safety shoes while handling containers

Guideline: ISO 20345 Personal protective equipment - Safety footwear.

**Respiratory Protection:**

Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances. When allowed by a risk assessment Respiratory Protective Equipment (RPE) may be used. The selection of the Respiratory Protective Device (RPD) must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected RPD. Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.

Guideline: EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.

**Thermal hazards:**

No precautionary measures are necessary.

**Hygiene measures:**

Obtain special instructions before use. Specific risk management measures are not required beyond good industrial hygiene and safety procedures. Do not eat, drink or smoke when using the product.

**Environmental exposure controls:**

For waste disposal, see section 13 of the SDS.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance****Physical state:**

Gas

**Form:**

Compressed gas

**Color:**

NO: Colorless

N2: Colorless

**Odor:**

N2: Odorless gas

NO: Odorless

**Odor Threshold:**

Odor threshold is subjective and is inadequate to warn of over

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	exposure.
Melting Point:	No data available.
Boiling Point:	No data available.
Flammability:	This product is not flammable.
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	Not applicable
Explosive limit - lower:	Not applicable
Flash Point:	Not applicable to gases and gas mixtures.
Autoignition Temperature:	Not applicable.
Decomposition Temperature:	Not known.
pH:	Not applicable
Viscosity	
Dynamic viscosity:	No data available.
Kinematic viscosity:	No data available.
Solubility(ies)	
Solubility in Water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not known.
Dispersion Stability:	No data available.
Vapor pressure:	No reliable data available.
Relative density:	No data available.
Density:	No data available.
Relative vapor density:	0,99 (calculated) 59 °F/15 °C
Particle characteristics:	Not applicable

**SECTION 10: Stability and reactivity**

10.1 Reactivity:	No reactivity hazard other than the effects described in sub-section below.
10.2 Chemical Stability:	Stable under normal conditions.
10.3 Possibility of hazardous reactions:	No data available.
10.4 Conditions to avoid:	Avoid moisture in the installation.
10.5 Incompatible Materials:	Moisture. For material compatibility see latest version of ISO-11114.

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**10.6 Hazardous Decomposition Products:**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information**

General information: None.

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity - Oral Product**

Based on available data, the classification criteria are not met.

**Acute toxicity - Dermal Product**

Based on available data, the classification criteria are not met.

**Acute toxicity - Inhalation Product**

Gas: ATEmix (4 h): 575 ppm Toxic if inhaled.

**Component Information**  
Nitrogen monoxide

LC 50 (Rat, 1 h): 115 ppm

**Skin Corrosion/Irritation Product**

Causes severe burns.

**Serious Eye Damage/Eye Irritation Product**

Causes serious eye damage.

**Respiratory or Skin Sensitization Product**

Based on available data, the classification criteria are not met.

**Germ Cell Mutagenicity Product**

Based on available data, the classification criteria are not met.

**Carcinogenicity Product**

Based on available data, the classification criteria are not met.

**Reproductive toxicity Product**

Based on available data, the classification criteria are not met.

**Specific Target Organ Toxicity - Single Exposure Product**

May cause respiratory irritation.

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**Specific Target Organ Toxicity - Repeated Exposure**

**Product** Based on available data, the classification criteria are not met.

**Aspiration Hazard**

**Product** Not applicable to gases and gas mixtures..

**11.2 Information on other hazards****Endocrine disrupting properties**

**Product:** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.;

**Components:**

Nitrogen monoxide The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.;

Nitrogen The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.;

**Other information**

**Product:** No data available.

**SECTION 12: Ecological information**

**General information:** Not applicable

**12.1 Toxicity****Acute toxicity**

**Product** No ecological damage caused by this product.

**12.2 Persistence and Degradability**

**Product** Not applicable to gases and gas mixtures..

**12.3 Bioaccumulative potential**

**Product** The subject product is expected to biodegrade and is not expected to persist for long periods in an aquatic environment.

**12.4 Mobility in soil**

**Product** Because of its high volatility, the product is unlikely to cause ground or water pollution.



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### 12.5 Results of PBT and vPvB assessment

**Product** Not classified as PBT or vPvB.

### 12.6 Endocrine disrupting properties:

**Product:** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Components:**  
Nitrogen monoxide The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Nitrogen The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects:

**Other hazards**  
**Product:** No data available.

**Other effects:** No ecological damage caused by this product.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**General information:** Must not be discharged to atmosphere. Consult supplier for specific recommendations.

**Disposal methods:** 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. Dispose of container via supplier only. Discharge, treatment, or disposal may be subject to national, state, or local laws.

#### European Waste Codes

**Container:** 16 05 04\*: Gases in pressure containers (including halons) containing hazardous substances.

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**SECTION 14: Transport information****ADR**

14.1 UN number or ID number:	UN 3304
14.2 UN Proper Shipping Name:	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.(Nitric oxide, Nitrogen)
14.3 Transport Hazard Class(es)	
Class:	2
Label(s):	2.3, 8
Hazard No. (ADR):	268
Tunnel restriction code:	(C/D)
14.4 Packing Group:	–
Limited quantity	None.
Excepted quantity	None.
14.5 Environmental hazards:	Not applicable
14.6 Special precautions for user:	–

**RID**

14.1 UN number or ID number:	UN 3304
14.2 UN Proper Shipping Name	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.(Nitric oxide, Nitrogen)
14.3 Transport Hazard Class(es)	
Class:	2
Label(s):	2.3, 8
14.4 Packing Group:	–
Limited quantity	None.
Excepted quantity	None.
14.5 Environmental hazards:	Not applicable
14.6 Special precautions for user:	–

**IMDG**

14.1 UN number or ID number:	UN 3304
14.2 UN Proper Shipping Name:	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.(Nitric Oxide, Nitrogen)
14.3 Transport Hazard Class(es)	
Class:	2.3
Label(s):	2.3, 8
EmS No.:	F-C, S-U
14.4 Packing Group:	–
Limited quantity	None.
Excepted quantity	None.



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14.5 Environmental hazards: Not applicable

14.6 Special precautions for user: -

## IATA

14.1 UN number or ID number: UN 3304

14.2 Proper Shipping Name: Compressed gas, toxic, corrosive, n.o.s.(Nitric Oxide, Nitrogen)

14.3 Transport Hazard Class(es):

Class: 2.3

Label(s): -

14.4 Packing Group: -

Limited quantity None.

Excepted quantity None.

14.5 Environmental hazards: Not applicable

14.6 Special precautions for user: -

Other information

Passenger and cargo aircraft: Forbidden.

Cargo aircraft only: Forbidden.

## 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

### Additional identification:

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 that they are firmly secured. Ensure that the container valve is closed and not leaking. Container valve guards or caps should be in place. Ensure adequate air ventilation.

## SECTION 15: Regulatory information

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

#### EU Regulations

EU. REACH Annex XIV, Substances Subject to Authorization as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as





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**amended:** None present or none present in regulated quantities.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as**

**amended:** None present or none present in regulated quantities.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended:**

None present or none present in regulated quantities.

**EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I:**

Classification	Lower-tier Requirements	Upper-tier Requirements
H2. Acute toxic	50 t	200 t

### National Regulations

Council Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work Directive 2016/425/EEC on personal protective equipment Only products that comply with the food regulations (EC) No. 1333/2008 and (EU) No. 231/2012 and are labelled as such may be used as food additives.

This Safety Data Sheet has been produced to comply with Regulation (EU) 2020/878.

**15.2 Chemical safety assessment:** No Chemical Safety Assessment has been carried out.

### SECTION 16: Other information

**Revision Information:** Not relevant.

### Abbreviations and acronyms:

AT/MAK: Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended  
 ECTLV: EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended  
 AT/MAK / MAK: Maximum allowable concentration:  
 ECTLV / TWA: Time Weighted Average (TWA):

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC - Number - European Community number; ECx - Concentration associated with x% response; EIGA - European Industrial Gases Association; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; SDS\_AT - 000010013008



## SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

NO 10 %;N2 90 %

Issue Date:	20.12.2012	Version: 1.1	SDS No.: 000010013008
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ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

## Key literature references and sources for data:

Various sources of data have been used in the compilation of this SDS, they include but are not exclusive to:

Agency for Toxic Substances and Diseases Registry (ATSDR)  
(<http://www.atsdr.cdc.gov/>).

European Chemical Agency: Guidance on the Compilation of Safety Data Sheets.

European Chemical Agency: Information on Registered Substances

<http://apps.echa.europa.eu/registered/registered-sub.aspx#search>

European Industrial Gases Association (EIGA) Doc. 169 "Classification and Labelling guide", as amended.

International Programme on Chemical Safety (<http://www.inchem.org/>)

ISO 10156:2010 Gases and gas mixtures - Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets.

Matheson Gas Data Book, 7th Edition.

National Institute for Standards and Technology (NIST) Standard Reference Database Number 69.

The ESIS (European chemical Substances Information System) platform of the former European Chemicals Bureau (ECB) ESIS (<http://ecb.jrc.ec.europa.eu/esis/>).

The European Chemical Industry Council (CEFIC) ERICards.

United States of America's National Library of Medicine's toxicology data network TOXNET (<http://toxnet.nlm.nih.gov/index.html>)

Threshold Limit Values (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH).

Substance specific information from suppliers.

Details given in this document are believed to be correct at the time of publication.

## Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 as amended.	Classification procedure
Gases under pressure, Compressed gas	On basis of test data
Acute toxicity, Category 3	Calculation method
Skin corrosion, Category 1B	Calculation method



# **SAFETY DATA SHEET**

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

**NO 10 %;N2 90 %**

Issue Date:	20.12.2012	Version: 1.1	SDS No.: 000010013008
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Serious eye damage, Category 1	On basis of test data
Specific Target Organ Toxicity - Single Exposure, Category 3	Calculation method

## **Wording of the H-statements in section 2 and 3**

H270	May cause or intensify fire; oxidizer.
H280	Contains gas under pressure; may explode if heated.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

**Training information:** Users of breathing apparatus must be trained. Ensure operators understand the toxicity hazard.

## **Classification according to Regulation (EC) No 1272/2008 as amended.**

Acute Tox. 3, H331  
Skin Corr. 1B, H314  
Eye Dam. 1, H318  
STOT SE 3, H335  
Press. Gas Compr. Gas, H280

**Other information:** Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Ensure adequate air ventilation. Ensure all national/local regulations are observed. 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.

**Last revised date:** 27.09.2023

**Disclaimer:** This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.