SAFETY DATA SHEET

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 1/43

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

1.1 Product identifier

Product name: Natural Gas, compressed.

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.
Calibration gas.

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 UMCO: +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

Flammable gas	Category 1A	H220: Extremely flammable gas.
Gases under pressure	Compressed gas	H280: Contains gas under pressure; may explode if heated.

2.2 Label Elements

Signal Word: Danger

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 2/43

Hazard Statement(s): H220: Extremely flammable gas.
H280: Contains gas under pressure; may explode if heated.

Precautionary Statements

General None.

Prevention: P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response: P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381: In case of leakage, eliminate all ignition sources.

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

Disposal None.

Supplemental information
Restricted to professional users.

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
Ethane	C2H6	3,5%	74-84-0	200-814-8	01-2119486765-21	-	
Propane	C3H8	7.000PPM	74-98-6	200-827-9	01-2119486944-	-	#

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: 10.07.2013 Revision Date: 11.10.2023 Last revised date : 11.10.2023		Version: 2.1	SDS No.: 000010021935 3/43

					21		
Butane	C4H10	1.200PPM	106-97-8	203-448-7	01-2119474691-32	-	#
Isobutane	C4H10	1.000PPM	75-28-5	200-857-2	01-2119485395-27	-	#
Pentane	C5H12	350PPM	109-66-0	203-692-4	01-2119459286-30	-	#
2-Methylbutane	C5H12	350PPM	78-78-4	201-142-8	01-2119475602-38	-	#
n-Hexane	C6H14	300PPM	110-54-3	203-777-6	01-2119480412-44	-	#
Heptane	C7H16	200PPM	142-82-5	205-563-8	01-2119457603-38	-	#
Octane	C8H18	100PPM	111-65-9	203-892-1	01-2119463939-19	-	#
Nonane	C9H20	50PPM	111-84-2	203-913-4	01-2119463259-31	-	
Benzene	C6H6	200PPM	71-43-2	200-753-7	01-2119447106-44	-	#
Toluene	C7H8	70PPM	108-88-3	203-625-9	01-2119471310-51	Aquatic Toxicity (Acute): 1; Aquatic Toxicity (Chronic): 1	#
Nitrogen	N2	1,5%	7727-37-9	231-783-9	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.	-	
Carbon dioxide	CO2	5.000PPM	124-38-9	204-696-9	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted	-	#

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 4/43

					from registration.		
Helium	He	300PPM	7440-59-7	231-168-5	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.	-	
methane	CH4	93,3880%	74-82-8	200-812-7	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.

SAFETY DATA SHEET

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 5/43

Classification

Chemical name	Classification		Notes
Ethane	CLP:	Classification: Flam. Gas: 1A: H220; Press. Gas: Liquef. Gas: H280; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: None known. Acute toxicity, inhalation: LC 50: > 800000 ppm Acute toxicity, dermal: None known.	
Propane	CLP:	Classification: Press. Gas: Liquef. Gas: H280; Flam. Gas: 1A: H220; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: None known. Acute toxicity, inhalation: None known. Acute toxicity, dermal: None known.	
Butane	CLP:	Classification: Flam. Gas: 1A: H220; Press. Gas: Liquef. Gas: H280; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: None known. Acute toxicity, inhalation: LC 50: > 800000 ppm Acute toxicity, dermal: None known.	
Isobutane	CLP:	Classification: Press. Gas: Liquef. Gas: H280; Flam. Gas: 1A: H220; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: None known.	

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 6/43

		Acute toxicity, inhalation: LC 50: > 800000 ppm Acute toxicity, dermal: None known.	

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 7/43

Pentane	CLP:	Classification: Flam. Liq.: 1: H224; Asp. Tox.: 1: H304; STOT SE: 3: H336; Aquatic Chronic: 2: H411; Supplemental label information: EUH066; Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 2.000 mg/kg Acute toxicity, inhalation: LC 50: > 25,3 mg/l Acute toxicity, dermal: None known.	Note C
2-Methylbutane	CLP:	Classification: Flam. Liq.: 1: H224; STOT SE: 3: H336; Asp. Tox.: 1: H304; Aquatic Chronic: 2: H411; Supplemental label information: EUH066; Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 2.000 mg/kg Acute toxicity, inhalation: LC 50: > 25,3 mg/l Acute toxicity, dermal: None known.	
n-Hexane	CLP:	Classification: Flam. Liq.: 2: H225; Repr.: 2: H361f; Asp. Tox.: 1: H304; STOT RE: 1: H372; Skin Irrit.: 2: H315; STOT SE: 3: H336; Aquatic Chronic: 2: H411; Supplemental label information: None known. Specific concentration limit: Specific target organ toxicity - repeated exposure Category 2, >= 5 %; Acute toxicity, oral: LD 50: 16 g/kg Acute toxicity, inhalation: LC 50: 73860 ppm Acute toxicity, dermal: LD 50: > 2.000 mg/kg	
Heptane	CLP:	Classification: Flam. Liq.: 2: H225; Asp. Tox.: 1: H304; Skin Irrit.: 2: H315; STOT SE: 3: H336; Aquatic Acute: 1: H400; Aquatic Chronic: 1: H410; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 5.000 mg/kg	Note C

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 8/43

		Acute toxicity, inhalation: LC 50: > 73,5 mg/l Acute toxicity, dermal: LD 50: > 2.000 mg/kg	

Octane	CLP:	Classification: Flam. Liq.: 2: H225; Skin Irrit.: 2: H315; STOT SE: 3: H336; Asp. Tox.: 1: H304; Aquatic Acute: 1: H400; Aquatic Chronic: 1: H410; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 5.000 mg/kg Acute toxicity, inhalation: LC 50: > 24,88 mg/l Acute toxicity, dermal: LD 50: > 2.000 mg/kg	Note C
Nonane	CLP:	Classification: Flam. Liq.: 3: ; Skin Corr.: 2: ; Asp. Tox.: 1: ; STOT SE: 3: ; Aquatic Chronic: 1: ; Aquatic Acute: 1: ; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 5.000 mg/kg Acute toxicity, inhalation: LC 50: 3200 ppm Acute toxicity, dermal: LD 50: > 2.000 mg/kg	
Benzene	CLP:	Classification: Flam. Liq.: 2: H225; Carc.: 1A: H350; Muta.: 1B: H340; STOT RE: 1: H372; Asp. Tox.: 1: H304; Eye Irrit.: 2: H319; Skin Irrit.: 2: H315; Aquatic Chronic: 3: H412; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: 5.970 mg/kg Acute toxicity, inhalation: LC 50: 13700 ppm Acute toxicity, dermal: None known.	
Toluene	CLP:	Classification: Flam. Liq.: 2: H225; Repr.: 2: H361d; STOT RE: 2: H373; Skin Irrit.: 2: H315; Asp. Tox.: 1: H304; STOT SE: 3: H336; Aquatic Chronic: 3: H412; Supplemental label information: None known. Specific concentration limit: None known.	

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 10/43

		Acute toxicity, oral: LD 50: 5.580 mg/kg Acute toxicity, inhalation: LC 50: 25,7 mg/l Acute toxicity, dermal: LD 50: > 5.000 mg/kg	

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

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.	
Carbon dioxide	CLP:	Classification: Press. Gas: Liquef. 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.	
Helium	CLP:	Classification: Press. Gas: Compr. Gas: H280; Supplemental label information: EIGA0357, EIGA0983; Specific concentration limit: None known. Acute toxicity, oral: None known. Acute toxicity, inhalation: None known. Acute toxicity, dermal: None known.	
methane	CLP:	Classification: Flam. Gas: 1A: H220; Press. Gas: Compr. Gas: H280; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: None known. Acute toxicity, inhalation: LC 50: > 800000 ppm Acute toxicity, dermal: None known.	

CLP: Regulation No. 1272/2008.

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 12/43

Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

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

SECTION 4: First aid measures

General: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. 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: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Low concentrations of CO2 cause increased respiration and headache.

Eye contact: Adverse effects not expected from this product.

Skin 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: Respiratory arrest.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: None.

Treatment: None.

SECTION 5: Firefighting measures

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

5.1 Extinguishing media

Suitable extinguishing media: Water. Dry powder. Foam.

Unsuitable extinguishing media: Carbon Dioxide.

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 13/43

5.2 Special hazards arising from the substance or mixture: Incomplete combustion may form carbon monoxide

5.3 Advice for firefighters

Special fire-fighting procedures: In case of fire: Stop leak if safe to do so. Do not extinguish flames at leak because possibility of uncontrolled explosive reignition exists. 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: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Guideline: EN 469 Protective clothing for firefighters. Performance requirements for protective clothing for firefighting. EN 15090 Footwear for firefighters. EN 659 Protective gloves for firefighters. EN 443 Helmets for fire fighting in buildings and other structures. EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Evacuate area. Provide adequate ventilation. Consider the risk of potentially explosive atmospheres . In case of leakage, eliminate all ignition sources. 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.

6.2 Environmental Precautions: Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up: Provide adequate ventilation. Eliminate sources of ignition.

6.4 Reference to other sections: Refer to sections 8 and 13.

SAFETY DATA SHEET

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 14/43

SECTION 7: Handling and storage:

7.1 Precautions for safe handling:

Only experienced and properly instructed persons should handle gases under pressure. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Purge system with dry inert gas (e.g. helium or nitrogen) before gas is introduced and when system is placed out of service. Purge air from system before introducing gas. Containers, which contain or have contained flammable or explosive substances, must not be inerted with liquid carbon dioxide. Assess the risk of a potentially explosive atmosphere and the need for suitable equipment i.e. explosion-proof. Take precautionary measures against static discharges. Keep away from ignition sources (including static discharges). Provide electrical earthing of equipment and electrical equipment usable in explosive atmospheres. Use non-sparking tools. Refer to supplier's handling instructions. The substance must be handled in accordance with good industrial hygiene and safety procedures. Ensure the complete system has been (or is regularly) checked for leaks before use. 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 contaminates 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:

All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere. Segregate from oxidant gases and other oxidants being stored. Containers should not be stored in conditions likely to encourage corrosion. 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.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 15/43

7.3 Specific end use(s): None.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Form of exposure	Exposure Limit Values		Source
propane	MAK		1.000 ppm	1.800 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	MAK CEIL 3x60 minutes/shift		2.000 ppm	3.600 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
Carbon dioxide	MAK		5.000 ppm	9.000 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	MAK CEIL 3x60 minutes/shift		10.000 ppm	18.000 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	TWA		5.000 ppm	9.000 mg/m3	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 (12 2009)
	TWA		5.000 ppm	9.000 mg/m3	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 (12 2009)
Butane	MAK		800 ppm	1.900 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	MAK CEIL 3x60 minutes/shift		1.600 ppm	3.800 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
Isobutane	MAK		800 ppm	1.900 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	MAK CEIL 3x60 minutes/shift		1.600 ppm	3.800 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
pentane	MAK		600 ppm	1.800 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	MAK CEIL 3x60 minutes/shift		1.200 ppm	3.600 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	TWA		1.000 ppm	3.000 mg/m3	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 (12 2009)
isopentane; 2-methylbutane	MAK CEIL 3x60 minutes/shift		1.200 ppm	3.600 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	TWA		1.000 ppm	3.000 mg/m3	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 (12 2009)
	MAK		600 ppm	1.800 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
n-hexane	TWA		20 ppm	72 mg/m3	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 (12 2009)
	MAK STEL 4x15 minutes/shift		80 ppm	288 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	MAK		20 ppm	72 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
heptane; n-heptane	TWA		500 ppm	2.085 mg/m3	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 (12 2009)
	MAK		500 ppm	2.000 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	MAK STEL 4x15 minutes/shift		2.000 ppm	8.000 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
benzene	TRK		1 ppm	3,2 mg/m3	Austria. OELs. TRK List, OEL Ordinance (GwV), BGBl. II, no. 429/2011, as amended (04 2021)
	TRK STEL		4 ppm	12,8 mg/m3	Austria. OELs. TRK List, OEL Ordinance (GwV), BGBl. II, no. 429/2011, as amended (04 2021)
	TWA		1 ppm	3,25 mg/m3	EU. OELs, Directive 2004/37/EC on carcinogen and mutagens from Annex III, Part A, as amended (08 2007)
octane; n-octane	MAK		300 ppm	1.400 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	MAK STEL 4x15 minutes/shift		1.200 ppm	5.600 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
toluene	STEL		100 ppm	384 mg/m3	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 (12 2009)
	MAK STEL		100 ppm	380 mg/m3	Austria. MAK List, OEL Ordinance (GwV),

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 17/43

	4x15 minutes/shift				BGBl. II, no. 184/2001, as amended (04 2021)
	MAK		50 ppm	190 mg/m3	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended (04 2021)
	TWA		50 ppm	192 mg/m3	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 (12 2009)

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

Chemical Identity	Parameters / Sampling Time	Exposure Limit Values	Source
benzene	t,t-Muconic Acid	1,6 mg/l (Urine)	AT VGU (02 2014)
toluene	Toluene	25 µg/100 mL (Blood)	AT VGU (02 2014)
	o-Cresol	0,8 mg/l (Urine)	AT VGU (02 2014)

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

DNEL-Values

Critical component	Type	Value	Remarks
Pentane	Workers - Dermal, Systemic, long-term	432 mg/kg bw/day	Repeated dose toxicity
	Workers - Inhalation, Systemic, long-term	3000 mg/m3	Repeated dose toxicity
2-Methylbutane	Workers - Dermal, Systemic, long-term	432 mg/kg bw/day	Repeated dose toxicity
	Workers - Inhalation, Systemic, long-term	3000 mg/m3	Repeated dose toxicity
n-Hexane	Workers - Dermal, Systemic, long-term	11 mg/kg bw/day	Neurotoxicity
	Workers - Eyes, Local effect		No data available
	Workers - Inhalation, Systemic, long-term	75 mg/m3	Neurotoxicity
Toluene	Workers - Dermal, Systemic, long-term	384 mg/kg bw/day	-
	Workers - Inhalation, Systemic, short-term	384 mg/m3	-
	Workers - Inhalation, Local, long-term	192 mg/m3	respiratory tract irritation
	Workers - Inhalation, Systemic, long-term	192 mg/m3	Neurotoxicity
	Workers - Inhalation, Local, short-term	384 mg/m3	-

PNEC-Values

Critical component	Type	Value	Remarks

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Pentane	Soil	0,55 mg/kg	-
Pentane	Aquatic (freshwater)	230 µg/l	-
Pentane	Sediment (marine water)	1,2 mg/kg	-
Pentane	Aquatic (marine water)	230 µg/l	-
Pentane	Sediment (freshwater)	1,2 mg/kg	-
Pentane	Sewage treatment plant	3600 µg/l	-
Octane	Aquatic (intermit. releases)	40 µg/l	-
Octane	Sewage treatment plant	160 µg/l	-
Octane	Soil	1,6 mg/kg	-
Octane	Aquatic (marine water)	10 µg/l	-
Octane	Sediment (marine water)	4 mg/kg	-
Octane	Aquatic (freshwater)	10 µg/l	-
Octane	Sediment (freshwater)	4 mg/kg	-
Nonane	Aquatic (marine water)	3,6 µg/l	-
Nonane	Sediment (marine water)	0,62 mg/kg	-
Nonane	Aquatic (intermit. releases)	14 µg/l	-
Nonane	Aquatic (freshwater)	3,6 µg/l	-
Nonane	Sewage treatment plant	54 µg/l	-
Nonane	Sediment (freshwater)	0,62 mg/kg	-
Nonane	Soil	0,25 mg/kg	-
Benzene	Sewage treatment plant	39 mg/l	-
Benzene	Aquatic (freshwater)	80 µg/l	-
Benzene	Aquatic (marine water)	8 µg/l	-

Benzene	Sediment (freshwater)	1,36 mg/kg	-
Benzene	Sediment (marine water)	0,136 mg/kg	-
Benzene	Soil	0,225 mg/kg	-
Toluene	Sewage treatment plant	13,61 mg/l	-
Toluene	Soil	2,89 mg/kg	-
Toluene	Aquatic (freshwater)	0,68 mg/l	-
Toluene	Sediment (freshwater)	16,39 mg/kg	-
Toluene	Aquatic (marine water)	0,68 mg/l	-
Toluene	Sediment (marine water)	16,39 mg/kg	-

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 lower explosion limits. Gas detectors should be used when quantities of flammable gases or vapours may be released. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Systems under pressure should be regularly checked for leakages. Product to be handled in a closed system. Only use permanent leak tight installations (e.g. welded pipes). Take precautionary measures against static discharges.

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. Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment. Do not eat, drink or smoke when using the product.

Eye/face protection:

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

Skin protection

Hand Protection: Guideline: EN 388 Protective gloves against mechanical risks.
Additional Information: Wear working gloves while handling containers

Body protection: Wear fire resistant or flame retardant clothing.
Guideline: ISO/TR 2801:2007 Clothing for protection against heat and flame -- General recommendations for selection, care and use of protective clothing.

Other: Wear safety shoes while handling containers
Guideline: ISO 20345 Personal protective equipment - Safety footwear.

Respiratory Protection: 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: 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: C2H6: Colorless
C3H8: Colorless
C4H10: Colorless
C6H14: Colorless
C7H16: Colorless
C8H18: Clear
C9H20: Colorless
C7H8: Colorless
N2: Colorless
CO2: Colorless
He: Colorless

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 22/43

	CH4: Colorless C4H10: Colorless C5H12: Colorless C5H12: Colorless C6H6: Clear and colorless
Odor:	C2H6: Odorless C3H8: Odorless C6H14: Gasoline-like odor C7H16: Gasoline-like odor C8H18: Gasoline-like odor C9H20: Gasoline-like odor N2: Odorless gas CO2: Odorless He: Odorless CH4: Odorless C4H10: Gasoline-like or natural gas odor C5H12: Gasoline-like odor C5H12: Faint C4H10: Very slight odor C6H6: characteristic of aromatic compounds C7H8: characteristic of aromatic compounds
Odor Threshold:	Odor threshold is subjective and is inadequate to warn of over exposure.
Melting Point:	No data available.
Boiling Point:	No data available.
Flammability:	Flammable Gas
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	Not known.
Explosive limit - lower:	Not known. (Calculated value) 4,27 %(V)
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 reliable 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.

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 23/43

Relative density:	No data available.
Density:	No data available.
Relative vapor density:	1
Particle characteristics:	Not applicable

9.2 Other information

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:	Can form a potentially explosive atmosphere in air. May react violently with oxidants.
10.4 Conditions to avoid:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
10.5 Incompatible Materials:	Air and oxidizers. For material compatibility see latest version of ISO-11114.
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.

Component Information

Pentane	LD 50 (Rat): > 2.000 mg/kg Remarks: Experimental result, Key study
2-Methylbutane	LD 50 (Rat): > 2.000 mg/kg Remarks: Read-across based on grouping of substances (category approach), Key study
n-Hexane	LD 50 (Rat): 16 g/kg
Heptane	LD 50 (Rat): > 5.000 mg/kg Remarks: Read-across based on grouping of substances (category approach), Key study
Octane	LD 50 (Rat): > 5.000 mg/kg Remarks: Read-across based on grouping of

	substances (category approach), Key study
Nonane	LD 50 (Rat): > 5.000 mg/kg
Benzene	LD 50 (Rat): 5.970 mg/kg Remarks: Experimental result, Supporting study
Toluene	LD 50 (Rat): 5.580 mg/kg Remarks: Experimental result, Key study

Acute toxicity - Dermal

Product

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

Component Information

n-Hexane	LD 50 (Rabbit): > 2.000 mg/kg Remarks: Experimental result, Supporting study
Heptane	LD 50 (Rabbit): > 2.000 mg/kg Remarks: Read-across based on grouping of substances (category approach), Key study
Octane	LD 50 (Rabbit): > 2.000 mg/kg Remarks: Read-across based on grouping of substances (category approach), Key study
Nonane	LD 50 (Rabbit): > 2.000 mg/kg
Toluene	LD 50 (Rabbit): > 5.000 mg/kg Remarks: Experimental result, Key study

Acute toxicity - Inhalation

Product

Gas: ATEmix (4 h): > 20000 ppm Based on available data, the classification criteria are not met.

Component Information

Ethane	LC 50 (Rat, 10 min): > 800000 ppm Remarks: Inhalation Experimental result, Key study
Butane	LC 50 (Rat, 10 min): > 800000 ppm Remarks: Inhalation Experimental result, Key study
Isobutane	LC 50 (Rat, 10 min): > 800000 ppm Remarks: Inhalation Experimental result, Key study
Pentane	LC 50 (Rat, 4 h): > 25,3 mg/l Remarks: Vapor Read-across based on grouping of substances (category approach), Key study
2-Methylbutane	LC 50 (Rat, 4 h): > 25,3 mg/l Remarks: Vapor Read-across based on grouping of substances (category approach), Key study
n-Hexane	LC 50 (Rat, 4 h): 73860 ppm Remarks: Vapor Read-across based on grouping of substances (category approach), Key study

Heptane	LC 50 (Rat, 4 h): > 73,5 mg/l Remarks: Vapor Experimental result, Key study
Octane	LC 50 (Rat, 4 h): > 24,88 mg/l Remarks: Vapor Experimental result, Key study
Nonane	LC 50 (Rat, 4 h): 3200 ppm
Benzene	LC 50 (Rat, 4 h): 13700 ppm Remarks: Vapor Experimental result, Key study
Toluene	LC 50 (Rat, 4 h): 25,7 mg/l Remarks: Vapor Experimental result, Key study
methane	LC 50 (Rat, 10 min): > 800000 ppm Remarks: Inhalation Experimental result, Key study

Repeated dose toxicity

Component Information

Ethane	NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4.000 ppm(m) Inhalation Experimental result, Key study NOAEC (Rat, Inhalation): 19678 mg/m³
Propane	LOAEL (Rat(Female, Male), Inhalation): 21.641 mg/m3 Inhalation Experimental result, Key study
Butane	NOAEL (Rat(Female, Male), Inhalation, 13 Weeks): 10.000 ppm(m) Inhalation Read-across based on grouping of substances (category approach), Key study
Isobutane	NOAEL (Rat(Female, Male), Inhalation, 13 Weeks): 10.000 ppm(m) Inhalation Read-across based on grouping of substances (category approach), Key study
Pentane	NOAEL (Rat, Inhalation): 30 mg/l Inhalation Read-across based on grouping of substances (category approach), Key study
2-Methylbutane	NOAEL (Rat(Female, Male), Inhalation, 13 Weeks): > 2.220 ppm(m) Inhalation Experimental result, Key study
n-Hexane	NOAEL (Mouse(Male), Inhalation, 13 Weeks): 500 ppm(m) Inhalation Experimental result, Key study LOAEL (Mouse(Male), Inhalation, 13 Weeks): 1.000 ppm(m) Inhalation Experimental result, Key study
Heptane	NOAEL (Rat(Male), Inhalation): 12.470 mg/m3 Inhalation Experimental result, Key study
Octane	NOAEL (Rat(Female, Male), Inhalation): 24.300 mg/m3 Inhalation Read-across from supporting substance (structural analogue or surrogate), Key study
Nonane	NOAEL (Rat(Female, Male), Inhalation): 24.300 mg/m3
Benzene	NOAEL (Rat(Male), Oral, 120 d): 100 mg/kg Oral Experimental result, Key study NOAEL (Mouse(Female, Male), Inhalation, 2 - 16 Weeks): 10 ppm(m) Inhalation Experimental result, Key study

Toluene	NOAEL (Mouse(Female, Male), Oral, 13 Weeks): 625 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation): 300 ppm(m) Inhalation Experimental result, Key study
methane	NOAEL (Rat(Female, Male), Inhalation, 13 Weeks): 10.000 ppm(m) Inhalation Read-across based on grouping of substances (category approach), Key study

Skin Corrosion/Irritation

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

Component Information

Pentane	in vivo (Rabbit): Not classified as an Irritant Experimental result, Key study
2-Methylbutane	in vivo (Rabbit): Not classified as an Irritant Read-across based on grouping of substances (category approach), Key study
Heptane	in vivo (Rabbit): Irritating Read-across based on grouping of substances (category approach), Key study
Octane	in vivo (Rabbit): Irritating Read-across based on grouping of substances (category approach), Key study
Nonane	Irritating
Benzene	in vivo (Rabbit): Irritating Experimental result, Key study
Toluene	in vivo (Rabbit): Irritating Experimental result, Key study

Serious Eye Damage/Eye Irritation

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

Component Information

Pentane	in vivo (Rabbit, 48 hrs): Not irritatingOECD GHS
2-Methylbutane	in vivo (Rabbit, 24 hrs): Not irritatingOECD GHS
n-Hexane	in vivo (Rabbit, 24 - 72 hrs): Not irritatingEU
Heptane	in vivo (Rabbit, 24 - 72 hrs): Not irritatingGHS, EU, 2007
Octane	in vivo (Rabbit, 24 - 72 hrs): Not irritatingGHS, EU, 2007

Nonane	in vivo (Rabbit, 24 - 72 hrs): Not irritatingGHS, EU, 2007
Benzene	in vivo (Rabbit): IrritatingEU
Toluene	in vivo (Rabbit, 24 - 72 hrs): Not irritatingEU

Respiratory or Skin Sensitization

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

Component Information

Toluene	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Germ Cell Mutagenicity

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

In vitro

Component Information

Ethane	Ames test in vitro: (OECD Guideline 471 (Bacterial Reverse Mutation Test)): Negative.
methane	Chromosome aberration (OECD Guideline 473 (In Vitro Mammalian Chromosome Aberration Test)): Negative.

In vivo

Component Information

Ethane	Drosophila Sex-Linked Recessive Lethal Assay (SLRL) test: Negative.
Benzene	(Mouse)Positive.
methane	Drosophila Sex-Linked Recessive Lethal Assay (SLRL) test: Negative.

Carcinogenicity

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

Component Information

Benzene	Rat (, Female); LOAEL - Lowest Observable Adverse Effect Level: 25 mg/kg bw/day

Reproductive toxicity

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

Reproductive toxicity (Fertility)

Component Information

n-Hexane	LC50: 5.000 ppm
methane	Gestation: Rat Inhalation (OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)) NOAEC: 9.000 ppm Fertility: Rat Inhalation (OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)) NOAEC: 3.000 ppm

Developmental toxicity (Teratogenicity)

Component Information

methane	Rat Inhalation (OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)) NOAEC: 9.000 ppm

Specific Target Organ Toxicity - Single Exposure

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

Specific Target Organ Toxicity - Repeated Exposure

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

Component Information

Benzene	Route of Exposure: Oral Target Organ(s): Blood Route of Exposure: Inhalation Target Organ(s): Blood

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:	
Ethane	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.;

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 29/43

Propane	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.;
Butane	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.;
Isobutane	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.;
Pentane	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.;
2-Methylbutane	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.;
n-Hexane	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.;
Heptane	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.;
Octane	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.;
Nonane	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.;
Benzene	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.;
Toluene	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.;

Carbon dioxide	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.;
Helium	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.;
methane	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.

Acute toxicity - Fish

Component Information

Pentane	LL 50 (Oncorhynchus mykiss, 96 h): 27,55 mg/l (QSAR) Remarks: QSAR QSAR, Key study
2-Methylbutane	LL 50 (Oncorhynchus mykiss, 96 h): 34,05 mg/l (QSAR) Remarks: QSAR QSAR, Key study
n-Hexane	LL 50 (Oncorhynchus mykiss, 96 h): 12,51 mg/l (QSAR) Remarks: QSAR QSAR, Key study
Octane	LL 50 (Oncorhynchus mykiss, 96 h): 2,587 mg/l (QSAR) Remarks: QSAR QSAR, Key study
Nonane	LL 50 (Oncorhynchus mykiss, 96 h): 1,125 mg/l (QSAR) Remarks: QSAR
Benzene	LC 50 (Oncorhynchus mykiss, 96 h): 5,3 mg/l (flow-through) Remarks: Experimental result, Key study NOEC (Pimephales promelas, 32 d): 0,8 mg/l
Toluene	LC 50 (Oncorhynchus kisutch, 96 h): 5,5 mg/l (flow-through) Remarks: Experimental result, Key study

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 31/43

Acute toxicity - Aquatic Invertebrates
Component Information

Pentane	EC 50 (Daphnia magna, 48 h): 48,11 mg/l (QSAR) Remarks: QSAR QSAR, Key study
2-Methylbutane	EC 50 (Daphnia magna, 48 h): 59,44 mg/l (QSAR) Remarks: QSAR QSAR, Key study
n-Hexane	EC 50 (Daphnia magna, 48 h): 21,85 mg/l (QSAR) Remarks: QSAR QSAR, Key study
Octane	EC 50 (Daphnia magna, 48 h): 0,3 mg/l (Static) Remarks: Experimental result, Key study
Benzene	EC 50 (Daphnia magna, 48 h): 10 mg/l (Static) Remarks: Experimental result, Key study
Toluene	LC 50 (Ceriodaphnia dubia, 2 d): 3,78 mg/l (Static renewal) Remarks: Experimental result, Key study
methane	LC 50 (Daphnia sp., 48 h): 69,43 mg/l Remarks: QSAR QSAR, Key study

Toxicity to microorganisms
Component Information

Ethane	EC50 (Alga, 96 h): 16,5 mg/l
methane	EC 50 (Alga, 96 h): 8,57 mg/l

Chronic Toxicity - Fish
Component Information

Pentane	NOAEL (Oncorhynchus mykiss): 6,165 mg/l (QSAR) QSAR QSAR, Key study
2-Methylbutane	NOAEL (Oncorhynchus mykiss): 7,618 mg/l (QSAR) QSAR QSAR, Key study
Toluene	LOAEL (Oncorhynchus kisutch): 2,77 mg/l (flow-through) Experimental result, Key study NOAEL (Oncorhynchus kisutch): 1,39 mg/l (flow-through) Experimental result, Key study

Chronic Toxicity - Aquatic Invertebrates
Component Information

Pentane	NOAEL (Daphnia magna): 10,76 mg/l (QSAR) QSAR QSAR, Key study
2-Methylbutane	NOAEL (Daphnia magna): 13,29 mg/l (QSAR) QSAR QSAR, Key study

n-Hexane	NOAEL (Daphnia magna, 21 d): 4,888 mg/l (QSAR) QSAR QSAR, Key study
Octane	NOAEL (Daphnia magna, 21 d): 1 mg/l (Static) Read-across based on grouping of substances (category approach), Key study
Benzene	NOEC (Ceriodaphnia dubia, 7 d): 3 mg/l
Toluene	NOAEL (Ceriodaphnia dubia): 0,74 mg/l (daily renewal, closed) Experimental result, Key study

Toxicity to Aquatic Plants
Component Information

Butane	LC50 (Alga, 72 h): 7,7 mg/l
Pentane	EC 50 (Green algae (Selenastrum capricornutum), 72 h): 10,7 mg/l NOEC (Green algae (Selenastrum capricornutum), 72 h): 2,04 mg/l
2-Methylbutane	NOEC (Algae (Pseudokirchneriella subcapitata), 72 h): 7,51 mg/l EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): 10,7 mg/l

12.2 Persistence and Degradability
Product

Not applicable to gases and gas mixtures..

Biodegradation
Component Information

Propane	100 % (385,5 h) Detected in water. Experimental result, Key study
Butane	50 % (3 d) Detected in water. QSAR, Weight of Evidence study
Isobutane	100 % (385,5 h) Detected in water. Experimental result, Key study
Pentane	87 % Detected in water. Experimental result, Key study
2-Methylbutane	71,43 % (28 d) Detected in water. Experimental result, Key study
n-Hexane	98 % Detected in water. Read-across based on grouping of substances (category approach), Key study
Octane	70,3 % Detected in water. Experimental result, Key study
Benzene	81 % Detected in water. Experimental result, Key study Readily biodegradable
Toluene	69 % (5 d) Detected in water. Experimental result, Weight of Evidence study

methane	50 % (3,19 d) Detected in water. QSAR, Weight of Evidence study

Photodegradation

Component Information

Pentane	Non-significant photolysis

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.

Bioconcentration Factor (BCF)

Component Information

Pentane	Pimephales promelas, Bioconcentration Factor (BCF): 171 Aquatic sediment QSAR, Key study
2-Methylbutane	Pimephales promelas, Bioconcentration Factor (BCF): 171 Aquatic sediment Read-across based on grouping of substances (category approach), Key study
n-Hexane	Pimephales promelas, Bioconcentration Factor (BCF): 501,19 Aquatic sediment QSAR, Key study
Octane	Mytilus edulis, Bioconcentration Factor (BCF): 198,7 Aquatic sediment Experimental result, Key study
Benzene	Leuciscus idus, Bioconcentration Factor (BCF): < 10 Aquatic sediment Experimental result, Supporting study
Toluene	Leuciscus idus, Bioconcentration Factor (BCF): 90 Aquatic sediment Experimental result, Key study

12.4 Mobility in soil

Product

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

12.5 Results of PBT and vPvB assessment

Product

Not classified as PBT or vPvB.

Global Warming Potential

Global warming potential: 22,2
Contains greenhouse gas(es). When discharged in large quantities may contribute to the greenhouse effect.

Component Information

Ethane	EU. Non-Fluorinated Substance GWPs (Annex IV), Regulation 517/2014/EU on fluorinated greenhouse gases - Global warming potential: 6

Propane	EU. Non-Fluorinated Substance GWPs (Annex IV), Regulation 517/2014/EU on fluorinated greenhouse gases - Global warming potential: 3
Butane	EU. Non-Fluorinated Substance GWPs (Annex IV), Regulation 517/2014/EU on fluorinated greenhouse gases - Global warming potential: 4
Isobutane	EU. Non-Fluorinated Substance GWPs (Annex IV), Regulation 517/2014/EU on fluorinated greenhouse gases - Global warming potential: 3
Pentane	EU. Non-Fluorinated Substance GWPs (Annex IV), Regulation 517/2014/EU on fluorinated greenhouse gases - Global warming potential: 5
2-Methylbutane	EU. Non-Fluorinated Substance GWPs (Annex IV), Regulation 517/2014/EU on fluorinated greenhouse gases - Global warming potential: 5
methane	EU. Non-Fluorinated Substance GWPs (Annex IV), Regulation 517/2014/EU on fluorinated greenhouse gases - Global warming potential: 25

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:	
Ethane	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.
Propane	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.
Butane	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.

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 35/43

Isobutane	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.
Pentane	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.
2-Methylbutane	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.
n-Hexane	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.
Heptane	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.
Octane	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.
Nonane	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.
Benzene	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.
Toluene	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.
Carbon dioxide	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.
Helium	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.

methane	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:

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: Do not discharge into any place where its accumulation could be dangerous. Consult supplier for specific recommendations. Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor.

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.

SECTION 14: Transport information

ADR

14.1 UN number or ID number:	UN 1971
14.2 UN Proper Shipping Name:	NATURAL GAS, COMPRESSED
14.3 Transport Hazard Class(es)	
Class:	2
Label(s):	2.1
Hazard No. (ADR):	23
Tunnel restriction code:	(B/D)
14.4 Packing Group:	–
Limited quantity	None.
Excepted quantity	None.
14.5 Environmental hazards:	Not applicable

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

14.6 Special precautions for user: –

RID

14.1 UN number or ID number: UN 1971
14.2 UN Proper Shipping Name: NATURAL GAS, COMPRESSED
14.3 Transport Hazard Class(es)
Class: 2
Label(s): 2.1
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 1971
14.2 UN Proper Shipping Name: NATURAL GAS, COMPRESSED
14.3 Transport Hazard Class(es)
Class: 2.1
Label(s): 2.1
EmS No.: F-D, S-U
14.4 Packing Group: –
Limited quantity: None.
Excepted quantity: None.
14.5 Environmental hazards: Not applicable
14.6 Special precautions for user: –

IATA

14.1 UN number or ID number: UN 1971
14.2 Proper Shipping Name: Natural gas, compressed
14.3 Transport Hazard Class(es):
Class: 2.1
Label(s): 2.1
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: Allowed.

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:

Chemical name	CAS-No.
Benzene	71-43-2

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

Regulation (EC) No. 649/2012 Import and export of dangerous chemicals:

Chemical name	CAS-No.	Concentration
Benzene	71-43-2	0 - <0,1%

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

The packaging shall be visibly, legibly and indelibly marked as follows:
Restricted to professional users.

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Chemical name	CAS-No.
Propane	74-98-6
Butane	106-97-8
Pentane	109-66-0
2-Methylbutane	78-78-4
Heptane	142-82-5
Octane	111-65-9
Benzene	71-43-2
Toluene	108-88-3
methane	74-82-8

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.:

Chemical name	CAS-No.	Concentration
Propane	74-98-6	0,1 - 1,0%
Pentane	109-66-0	0 - <0,1%
Benzene	71-43-2	0 - <0,1%

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.:

Chemical name	CAS-No.	Concentration
Propane	74-98-6	0,1 - 1,0%
Pentane	109-66-0	0 - <0,1%
2-Methylbutane	78-78-4	0 - <0,1%
Benzene	71-43-2	0 - <0,1%
Toluene	108-88-3	0 - <0,1%

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

SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended
Natural Gas, compressed.

Classification	Lower-tier Requirements	Upper-tier Requirements
P2: Flammable gas, Categorie 1 or 2	10 t	50 t

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
methane	74-82-8	90 - 100%
Butane	106-97-8	0,1 - 1,0%
Isobutane	75-28-5	0,1 - 1,0%
Pentane	109-66-0	0 - <0,1%
2-Methylbutane	78-78-4	0 - <0,1%
n-Hexane	110-54-3	0 - <0,1%
Heptane	142-82-5	0 - <0,1%
Octane	111-65-9	0 - <0,1%
Benzene	71-43-2	0 - <0,1%
Toluene	108-88-3	0 - <0,1%

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 Directive 2014/34/EU on equipment and protective systems intended for use in potentially explosive atmospheres (ATEX) 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 VGÜ: Austria. Ordinance on Health Monitoring at the Workplace (VGÜ), as amended

SAFETY DATA SHEET

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 41/43

AT/MAK:	Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended
AU/TRK:	Austria. OELs. TRK List, OEL Ordinance (GwV), BGBl. II, no. 429/2011, 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
EU OELIII:	EU. OELs, Directive 2004/37/EC on carcinogen and mutagens from Annex III, Part A, as amended
AT/MAK / MAK:	Maximum allowable concentration:
AT/MAK / MAK STEL:	MAK Short Term Exposure Limit (STEL):
AT/MAK / MAK CEIL:	MAK Ceiling Limit Value:
AU/TRK / TRK:	Technical Reference Concentrations:
AU/TRK / TRK STEL:	TRK Short Term Exposure Limit (STEL):
ECTLV / STEL:	Short Term Exposure Limit (STEL):
ECTLV / TWA:	Time Weighted Average (TWA):
EU OELIII / 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; 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

SAFETY DATA SHEET

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 42/43

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 5 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
Flammable gas, Category 1A	On basis of test data
Gases under pressure, Compressed gas	On basis of test data

Wording of the H-statements in section 2 and 3

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

Training information:

Users of breathing apparatus must be trained. Ensure operators understand the flammability hazard.

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

Flam. Gas 1A, H220

Press. Gas Compr. Gas, H280

SAFETY DATA SHEET

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

Natural Gas, compressed.

Issue Date: Revision Date: Last revised date :	10.07.2013 11.10.2023 11.10.2023	Version: 2.1	SDS No.: 000010021935 43/43

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. Ensure equipment is adequately earthed. 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: 11.10.2023

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.