Safety data sheet according to Regulation (EC) as amended by Reg 830/2015

Creation date	12/12/2011	version 1.0
Revision date	29/05/2017	version 1.5

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

1.1. Product identifier

Name	**Natural gas** this safety data sheet covers natural gas in transmission and distribution networks at pressure of at least 200 kPa as well as compressed natural gas (CNG)
CAS Number	8006-14-2
EC Number	232-343-9
Registration number	The substance is not subject to registration Registration number (exempt according to Article 2(7)(b); Annex V item 7)

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

Use	For heating purposes, as motor fuel, feedstock
Scope of use	Product available for industrial use or as a fuel for vehicles

1.3. Details of the supplier of the safety data sheet

Name	Polskie Górnictwo Naftowe i Gazownictwo SA
Address	25 Kasprzaka St. 01-224 Warsaw, Poland
email of person responsible for the safety data sheet	grzegorz.maciejewski@pgnig.pl

1.4. Emergency telephone number

992	- Gas Emergency Service (24 h)
(+4842) 253 84 00	- Inspector for Chemical Substances
(+4842) 253 84 01	
112	- General emergency number (24h)
998	- Fire Brigade (24h)
999	- Ambulance (24h)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

The substance is classified as hazardous according to Regulation (EC) No 1272/2008

Flam. Gas 1 H220
Press. Gas H280
For the explanation of symbols and H statements – see section 16

The substance is classified as hazardous according to the classification criteria set out in Directive 1999/45/EC

F+; R12
For the explanation of symbols and R statements – see section 16

Hazards to humans resulting from toxic properties and the analysis of effects specific to human health

Not applicable.

Environmental hazards

Not applicable.

Hazards to humans and the environment resulting from physiochemical properties

Flammable gas (hazard category 1). Extremely flammable gas.
Pressurised gas (compressed natural gas). Contains gas under pressure; may explode if heated.

2.2. Label elements

The substance requires labelling according to Regulation (EC) No 1272/2008
Pictograms: GHS02

Signal word: Danger.
Hazard statements
H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.
Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 Eliminate all ignition sources if safe to do so.
P403 Store in a well-ventilated place.
Labelling elements according to Article 25 and Article 32(6) of Regulation (EC) No 1272/2008: not applicable

2.3. Other hazards

- PBT and vPvB assessment according to Annex XIII of the REACH – not assessed.
- Natural gas forms explosive and flammable mixtures with air (for approximate gas explosion limits see Section 10), is lighter than air, it concentrates in the upper part of confined spaces.
- The gas has a suffocating effect on humans by displacing atmospheric oxygen from the air. Insufficient concentration of the oxygen in the air may cause unconsciousness and death (see Section 11).
- Permeating through the soil, natural gas displaces oxygen and thus damages the plant cover.
- It is an aggressive greenhouse gas.
- A rapid decompression of gas leads to a major temperature decrease and may cause thermal damage to skin and eyes.

Section 3: Composition/information on ingredients

3.1. Components

Name	Natural gas
CAS number	8006-14-2
EC number	232-343-9
Index number	not specified

Natural gas is a multi-component substance with varying composition. It is a complex gaseous mixture of hydrocarbons mainly composed of methane, and generally also containing ethane, propane and some higher hydrocarbons in much lower concentrations (each group, i.e. C5, C6, C7, C8, etc. <0,1% vol.) as well as some non-flammable gases such as nitrogen, carbon dioxide and, potentially, helium. Trace amounts of benzene up to 0.0012% vol. are present. No buta-1,3-diene is present. May contain other impurities in trace amounts (mercury, hydrogen sulphide)
Natural gas classification (p > 200 kPa):
according to Regulation (EC) No. 1272/2008:
according to the criteria of Directive 1999/45/EC:

Flam. Gas 1	H220	F+; R12
Press. Gas	H280	

For the explanation of the abbreviations, symbols and R and H statements – see section 16

Section 4: First aid measures

4.1. Description of first aid measures

Inhalation
Move the victim away from source of natural gas leakage into fresh air. If breathing is difficult, administer artificial respiration and call a doctor. In case of other symptoms (e.g. headache or dizziness) call a doctor. In both cases, oxygen should be administered to the victim by a trained person. Ensure that the victim is kept warm and rests.

Skin contact

Not applicable

Eye contact

In case of irritation, protect the eyes from exposure to light and ensure that the victim consults an ophthalmologist. In case of an eye damage caused by rapidly decompressing gas, apply a sterile dressing and immediately contact an ophthalmologist – ensure specialist medical care for the victim.

Ingestion

Not applicable.

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

The gas is suffocating, inhalation may cause somnolence, breathlessness, accelerated breathing, breathing difficulties, headaches and dizziness, and in case of high gas concentrations – loss of coordination, vomiting, loss of consciousness or death. A rapid decompression of gas leads to a major temperature decrease and may cause thermal damage to skin and eyes.

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

WARNING! An unconscious patient should be put in the recovery position, a calm shelter should be provided to the poisoned person and they should be protected from heat loss, with their breath and pulse controlled. Never provoke vomiting nor administer anything orally to an unconscious or dazed person.
In case of any serious symptoms immediately call a doctor or take the victim to a hospital.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: dry chemicals, carbon dioxide, foam, water – spray.
Unsuitable extinguishing media: none.

5.2. Special hazards arising from the substance or mixture

The gas forms explosive mixtures with air. It is lighter than air and concentrates in the upper part of the room. The ignition or explosion may be caused by sparks or static electricity. Containers and installations exposed to fire or high temperature may explode. In fire environment toxic gases and fumes containing carbon monoxide are emitted.

5.3. Advice for firefighters

Shut off gas inflow. Cool the installation containing gas with water from a protected position. Extinguish from behind shields protecting against explosion impacts.
In case of a leaking gas fire, do not extinguish unless the leak can be safely stopped.
Special protective equipment for fire fighters: antistatic gas-tight clothing, gloves and boots, goggles, self-contained breathing apparatus with independent air source.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Remove all ignition sources, extinguish the fire, switch off any equipment which may cause sparking, do not smoke. Outsiders and unauthorised persons as well as animals should be removed from the spill site and put in a safe, well-ventilated shelter. The site should be marked with warning boards. Individuals assigned to the failure removal operations should be trained and provided with personal protection equipment. Adequate ventilation should be ensured. Avoid breathing in the gas or thermal decomposition products. Avoid direct contact with the released product.
WARNING! The gas forms flammable and explosive mixtures with air. It is lighter than air and concentrates in the upper part of room. An ignition or explosion may be caused by e.g. sparks.

6.2. Environmental precautions

In case of release of large quantities of the product or environmental contamination, the competent authorities and chemical rescue services should be notified.

6.3. Methods and material for containment and cleaning up

If possible, the leak should be stopped (gas inflow shut off). Utilization through controlled combustion. Ensure sufficient ventilation of the spillage area.

6.4. Reference to other sections

Personal protection measures – see Section 8.
Wastes should be removed according to the recommendations set out in Section 13.

Section 7: Handling and storage

7.1. Precautions for safe handling

General health and safety precautions should be applied when handling the product (see section 15). Prior to undertaking the work, employees should be thoroughly introduced to specific safety precautions and manual. Avoid release of gas to the environment.

Gas may form explosive and flammable mixtures with air. Vapours are lighter than the air and concentrate in the upper part of a room. Effective ventilation should be ensured. Concentrations of hazardous components in the air should be kept below the permissible exposure levels and explosion limits. Do not use open fire. Do not use any sparking equipment or tools, ventilation and electric installations must conform to the conditions predefined taking into account the risk of fire and explosion. Provide protection against electrostatic discharge (grounding, bonding). Do not inhale the product. Observe general principles of hygiene. Smoking is strictly prohibited while handling the product, except for specifically designated areas. Use the recommended personal protection equipment.

7.2. Conditions for safe storage, including any incompatibilities

Not applicable

7.3. Specific end use(s)

None

Section 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Domestic limit values, including legal basis (see Section 15)

8.1.1.1. Domestic maximum acceptable concentration levels in the working environment

The substance is a complex mixture of hydrocarbons. No maximum acceptable concentration levels in the working environment are defined for methane and ethane, but limits are defined for the following heavier hydrocarbon fractions:

propane	MPC = 1800 mg/m^3;	MPIC n/a;
butane	MPC = 1900 mg/m^3;	MPIC = 3000 mg/m^3;
pentane	MPC = 3000 mg/m^3;	MPIC n/a;
iso-pentane	MPC = 3000 mg/m^3;	MPIC n/a;
hexane (n-hexane)	MPC = 72 mg/m^3;	MPIC n/a;
hexane (other isomers)	MPC = 400 mg/m^3;	MPIC = 1200 mg/m^3;
heptane	MPC = 1200 mg/m^3;	MPIC = 2000 mg/m^3;
octane	MPC = 1000 mg/m^3;	MPIC = 1800 mg/m^3;

It should be underlined that the content of these hydrocarbons in natural gas is very low with only propane content exceeding 0.1% vol.

8.1.1.2. Domestic permissible concentrations in biological material: PCB for hexane (n-hexane) 0.2 mg/l of hexane-2,5-dione in urine

8.1.2. Currently recommended monitoring procedures for key substances

Methods of testing and measuring noxious agents in the working environment are set out in the applicable Polish Standards as well as international standards, or their equivalents.

propane	PN-Z-04252-1:1997;	PIMOŚP 2010, No. 1(63)
butane	PN-Z-04252-1:1997;	PIMOŚP 2010, No. 1(63)
pentane	PN-Z-04318:2005;	PIMOŚP 2000, No. 3 (25)
iso-pentane	PN-Z-04376:2010;	PIMOŚP 2003, No. 4(38)
hexane (n-hexane)	PN-Z-04136-3:2003	PIMOŚP 1999, vol. 22
hexane (other isomers)		PIMOŚP 1997, vol.17
heptane	PN-Z-04138-02:1984;	PIMOŚP2001, No. 4(30)
octane		PIMOŚP 1997 vol. 17

8.2. Exposure controls

8.2.1. Technical exposure controls

Ensure good ventilation, in case of insufficient ventilation, use respiratory tract protection equipment. Periodic checks should be performed with respect to the container tightness as well as the technical condition of facilities, ventilation systems and protections against the release of substances to the environment.

8.2.2. Personal protection measures such as personal protection equipment (PPE)

Maintain general caution when working with chemicals.

Do not inhale the gas or combustion products.

Avoid contact of decompressing product with the skin or eyes.

Perform periodic medical examinations according to the recommended frequency.

a) Eye / face protection: For operations which may result in contact, wear glasses or face visors.

b) Skin protection:

(i) Hand protection: in case of prolonged and recurrent exposure use protective gloves,

(ii) Other: antistatic protective clothing.

c) Respiratory protection: in case of prolonged exposure or in case of insufficient ventilation use self-contained breathing apparatus (A-type canister). In case of emergency use apparatus with independent air source

d) Thermal exposure: not available

8.2.3. Environmental exposure controls

Emissions from ventilation systems and process equipment should be checked in order to assess their compliance with the requirements of the environmental law. Tightness of natural gas installations should be checked from time to time.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) appearance	colourless gas
b) odour	treated gas is odourless, for municipal use it is artificially odorised with THT
c) odour threshold	-
d) pH	not applicable
e) melting/freezing point	-183°C
f) boiling point / boiling range	-161 °C for methane
g) flash point	-188°C
h) evaporation rate	not available
i) combustibility (of a solid, gas)	extremely flammable gas
j) upper/lower flammability limit or upper/lower explosion limit	lower limit 4.4-5.3% vol. for methane upper limit 14.8 % vol. for methane (grade E - 4.5-18%, sub-grade Lw - 5-22%, Ls - 6-24%, Ln - 7-29%, Lm - 8-32% V/V)
k) vapour pressure	-
l) vapour density	0.72 □ 0.76 kg/m3 (normal conditions)
m) relative vapour density	relative to air 0.5-0.7 – gas lighter than air
n) solubility description	- in water less than 3.5% vol.
o) partition coefficient (n-octanol/water) (log)	- soluble in organic solvents (e.g. benzene, carbon tetrachloride, trichloromethane)
p) auto-ignition temperature	1.09 for methane
q) decomposition temperature	from approx. 480°C to approx. 630°C, not tested
r) viscosity, kinematic	-
s) explosive properties	the product itself is not explosive but its mixtures with air may be explosive (see explosive limits)
t) oxidising properties	not tested – based on the chemical structure, no oxidising properties are expected

9.2. Other information

minimum ignition energy E_{min} = 0.25 mJ for methane

Section 10: Stability and reactivity

10.1. Reactivity: reacts with powerful oxidants

10.2. Chemical stability: substance is stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions: exposure of containers with the substance to high temperatures (possibility of explosion);
container leakage – gas release (flammable and explosive mixtures may form).

10.4. Conditions to avoid: sources of ignition (open flame, installations and equipment which may cause sparks, static electricity), heating, high temperature

10.5. Incompatible materials: powerful oxidants, e.g. chloranes (V) and (VII) and halogens.

10.6. Hazardous decomposition products none (organic substance – in case of a fire, carbon monoxide is produced, among other things).

Section 11: Toxicological information

11.1. Information on toxicological effects

a) acute toxicity

No data available for natural gas, information available for methane, which is the basic component of natural gas, and for other components do not indicate the need for classification into the acute toxicity category. Natural gas has a suffocating effect (by displacing atmospheric oxygen from the air), inhalation exposure may cause somnolence, breathlessness, accelerated breathing, breathing difficulties, headaches and dizziness, accelerated heartbeat, and in case of high gas concentrations (when oxygen concentration level falls to 18% and below) loss of coordination, nausea, vomiting and loss of consciousness.

Lethal and toxic doses and concentration levels for humans: not available

Odour detection threshold: not available

b) caustic/irritating effect on the skin

No irritating effect of the gas on the skin has been observed. A rapid decompression of compressed gas leads to a major temperature decrease and may cause thermal damage to the skin.

c) serious eye damage/irritation

No irritating effect of the gas on the eyes has been observed. A rapid decompression of liquefied gas leads to a major temperature decrease and may cause thermal damage to the eyes.

d) respiratory or skin sensitization

Not classified as sensitizer. In some cases exposure may cause increased allergic reactions to other chemicals as well as asthmatic troubles.

e) germ cell mutagenicity

Based on the existing research on natural gas and the knowledge of the properties of its components, it was concluded that natural gas does not exhibit mutagenicity.

f) carcinogenicity

Based on the existing research on natural gas and the knowledge of the properties of its components, it was concluded that natural gas does not exhibit carcinogenicity.

g) reproductive toxicity

Based on the existing research on natural gas and the knowledge of the properties of its components, it was concluded that natural gas does not exhibit reproductive toxicity.

h) specific target organ toxicity – single exposure

No data available for the product, the analysis of the content and component properties does not indicate the need for classification to this hazard class.

i) specific target organ toxicity – repeated exposure

No data available for the product, the analysis of the content and component properties does not indicate the need for classification to this hazard class.

j) aspiration hazard

not applicable (gas).

Section 12: Ecological information

12.1. Toxicity

No tests have been performed on the substance. The assessment of toxicity to the aquatic environment is based on the data for the maximum determined content of aliphatic hydrocarbons C7 and C8 in the gas (substances hazardous to the aquatic environment - chronic hazard, category 1) and C5 and C6 (substances hazardous to the aquatic environment - chronic hazard, category 2). On this basis, it was assessed that the product does not require to be classified as a substance hazardous to the aquatic environment. It should be noted that water contamination is highly unlikely due to the gaseous state of the product.

12.2. Persistence and degradability

Methane is considered to be an environmentally persistent substance, in the air it is prone to photochemical decomposition (half-life period approx. 6 years), in soil it is decomposed with the aid of soil bacteria.

12.3. Bioaccumulative potential

Methane is not accumulated in living organisms nor the thropic chain

12.4. Mobility in soil

Volatile substance – when released to the atmosphere, natural gas quickly propagates in the air, and easily permeates to the air from soil or water.

12.5. Results of PBT and vPvB assessment

Not assessed.

12.6. Other adverse effects

Natural gas (and specifically its main component - methane) is one of the greenhouse gasses (e.g. as a result of the evaporation from leaking installations).

Permeating through the soil, natural gas displaces oxygen and thus damages the plant cover.

Section 13: Disposal considerations

13.1. Waste treatment methods

No waste is produced as a result of the use of natural gas as a fuel. Waste may be produced during the purification and further processing of natural gas.

Disposal of collected waste takes place according to the applicable regulations (see Section 15). The utilisation of the product or its derivative products should in any case conform to the applicable environmental requirements and the relevant legislation as well as the requirements of local authorities.

Product utilize through controlled combustion.

Uncleaned packaging: recovery, recycling or disposal of waste packaging produced in the course of industrial use should be done according to the applicable regulations. Utilisation of transportation containers or other contaminated containers or equipment should be carried out by authorised persons in a manner which does not present an environmental hazard.

References to community / national regulations

1. Act on Waste of 14 December 2012 (Dz.U. 2013, item 21);
2. Regulation of the Minister of Environment of 9 December 2014 on the catalogue of waste (Dz.U. 2014, item 1923).

Waste classification according to the European Waste Catalogue (EWC)

Waste is classified according to the source of their origination, therefore the wast code may change depending on how and where the waste is produced. Detailed waste code should be assigned taking into account how and where the waste was produced and its composition (contamination with mercury, sulphur).

Wastes from natural gas purification and transportation - group 05, subgroup 05 07.

Section 14: Transport information

14.1. UN number 1971

14.2. UN proper shipping name: COMPRESSED NATURAL GAS

14.3. Transport hazard class(es): 2 (classification code 1F, label 2.1)

14.4. Packing group not applicable

14.5. Environmental hazards: no

14.6. Special precautions for user:

- do not smoke, do not use open fire or any sparking objects due to fire hazard and the possibility of explosion;
- transport in tight, sealed containers,
- do not ship with other substances.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: not applicable

Section 15: Regulatory information

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

Regulation of the Minister of Development of 29 January 2016 concerning the types and quantities of hazardous substances present in industrial plants which determine the recognition of the plant as a plant with an increased or high risk of serious industrial failure (Dz.U. 2016, item 138)

Regulation of the Minister of Economy of 28 December 2009 concerning the occupational safety and hygiene in the construction and operation of gas networks and in the commissioning of natural gas installations.

Other legislation:

1. *Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (corrigendum in OJ L 136, 29.05.2007, p. 3, as amended).*
2. *Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (OJ L 133, 31.05.2010., p. 1)*

3. *Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Registration of Chemicals (REACH).*
4. *Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/648/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008., p. 1 as amended). Commission Regulation (EC) No. 790/2009 (OJ L 235, 5.9.2009, p. 1) and Commission Regulation (EC) No. 286/2011 (OJ L 83, 30.03.2011, p. 1)*
5. Announcement of the Marshal of the Sejm of the Republic of Poland of 28 July 2015 on the publication of the uniform text of the Act on Chemical Substances and their Mixtures (Dz. U. No. 2015, item 1203) Act of 25 February 2011 on chemical substances and Their mixtures (Dz. U. 2011 No 63, item 322), together with the classification and labeling implementing legislation implementing Directives 67/548 / EEC as amended. And 1999/45 / EC as amended.
6. *Act in accordance with general principles of occupational health and safety applicable to handling chemicals and with good industry practice; strictly adhere to pre-defined operating procedures; while handling the product, follow the general occupational health and safety provisions set out in Regulation of the Minister of Labour and Social Policy of 26 September 1997 concerning general occupational health and safety regulations (consolidated text Dz.U. No. 169/2003, item 1650, as amended)*
7. *Regulation of the Minister of Economy and Labour of 27 July 2004 concerning training in the area occupational health and safety (Dz.U. No 180/2004 item 1860, as amended)*
8. *Regulation of the Minister of Labour and Social Policy of 6 June 2014 on the maximum acceptable concentrations and intensities of noxious agents in the working environment (Dz.U 2014, item 817).*
9. *Regulation of the Minister of Health of 2 February 2011 on testing and measurement of noxious agents in the working environment (Dz.U 33/2011, item 166)*
10. Announcement of the Minister of Health of 4 November 2016 on the publication of the uniform text of the Regulation of the Minister of Health and Social Welfare on medical examinations of workers, the scope of preventive health care for employees and medical certificates issued for the purposes set out in the Labor Code (Dz. U. 2016 Recommended preliminary and periodic testing of workers exposed to chemical substances should be carried out in accordance with the Ordinance of the Minister of Health and Welfare of 30 May 1996 on the medical examination of workers, the scope of preventive healthcare for employees and medical certificates. Issued for the purposes set out in the Labor Code (Journal of Laws No. 69/1996, item 332, as amended)
11. *.Regulation of the Minister of Economy of 21 December 2005 concerning the principal requirements for personal protection measures (Dz.U 259/2005, item 2173).*
12. Announcement of the Marshal of the Sejm of the Republic of Poland of November 7, 2016 on the publication of the uniform text of the Waste Act (Dz. U. 2016, item 0, item 1987) Act of 14 December 2012 on waste 21)
13. Announcement of the Marshal of the Sejm of the Republic of Poland of 19 October 2016 on the publication of the uniform text of the Act on the Management of Packaging and Packaging Waste (dz. U. 2016, No. 0, item 1863) Act of 13 June 2013 on packaging and packaging waste management (Ie, 2016, item 1863)
14. Regulation of the Minister of the Environment of 9 December 2014 on the waste catalog (Dz. U. of 2014, item 1923)
15. *Government Statement of 23 March 2011 concerning the entry into force of amendments to Annexes A and B of the European Agreement concerning the International Carriage of Dangerous Goods by Road done at Geneva on 30 September 1957 (Dz.U. No. 110 of 2011, item 641)*

15.2. Chemical safety assessment:

Chemical safety assessment not available – the substance is exempted from the registration obligation

Section 16: Other information

Changes introduced with respect to version 1.4

Section 15.1: Update of information concerning legal regulations

Explanation of abbreviations and acronyms used in the safety data sheet

MPC	maximum permissible concentration
MPIC	maximum permissible instantaneous concentration
PCB	permissible concentration in biological material
GHS02	Symbol: flame

References to key literature and data sources

1. ESIS (European Chemical Substances Information System)
2. European Chemicals Bureau IUCLID Dataset

3. Haz-Map, Occupational Exposure to Hazardous Agents: http://hazmap.nlm.nih.gov/
4. Integrated Risk Information System (IRIS) U.S. Environmental Protection Agency: http://www.epa.gov/iris/
5. International Labour Organization, International Chemical Safety Cards: http://www.iol.org.public/
6. International Programme on Chemical Safety (IPCS), INCHEM, Chemical Safety Information from Intergovernmental Organizations: http://www.inchem.org/
7. TOXNET Hazardous Substances Data Bank (HSDB): http://toxnet.nlm.nih.gov/
8. U.S. Environmental Protection Agency, Persistent Bioaccumulative and Toxic (PBT) Chemical Program: http://www.epa.gov/pbt/
9. Safety data sheets for hazardous substances, CIOP, Warsaw 2005
10. MSDS Unodourized Natural Gas, Manitoba Hydro, USA, 2004
11. MSDS Natural Gas, GazMetro, Canada, 2007

List of statement indicating the type of hazard and/or precautions

Hazard class and category codes

Flam. Gas 1	Flammable gases (hazard category 1)
Press. Gas	Pressurised gas (compressed gas)

List of relevant H-phrases

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

R symbols and phrases

F+	Extremely flammable product
R12	Extremely flammable product.

Necessary training

Persons involved in the trade in the substance should undergo periodic OHS training.
Vehicle drivers should undergo training and obtain appropriate certification according to the ADR requirements.

Further information

Article 1(2) of Regulation (EU) No 286/2011 has been applied.
The information provided in the safety data sheet is intended to describe the substance exclusively from the safety requirements perspective. It is the user's responsibility to ensure conditions for the safe use of the substance, and the user shall be responsible for any consequences of unappropriate use of the substance.