

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

Section 1. IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND OF THE COMPANY

1.1 Product identifier:

Trade name: **LPG, Technical propane- butane**
Name from the list: *Hydrocarbons, C₃₋₄; Petroleum gas*
Index No.: 649-199-00-1
CAS No.: 68476-40-4
EC No.: 270-681-9
Registration No.: 01-2119486557-22-XXXX

1.2 Relevant identified uses of the substance ~~or mixture~~ as well as uses advised against:

- 1.2.1 Identified use: motor fuel
1.2.2 Use advised against: none

1.3 Details of the supplier of the safety data sheet:

Grupa Lotos S.A., 80-718 GDAŃSK, ul. Elbląska 135
Telephone: 058-308-84-06, fax: 058-308-84-09
reach@grupalotos.pl
www.lotos.pl

1.4 Emergency telephone number:

LOTOS Fire Brigade and Company Alarm Centre: 058-308-81-99; 058-308-81-09 (24-hour)

Section 2. HAZRADS IDENTIFICATION

2.1 Classification of the substance ~~or mixture~~:

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

Flam. Gas 1	H220	Extremely flammable gas
Liquefied gas	H280	Contains gas under pressure, may explode if heated

According to Note U the product is classified to the group of liquefied gases.

The product contains <0.1% 1.3 butadiene, and therefore is not classified as mutagenic category 1B and carcinogenic category 1B. (Note K).

The product does not require extension of classification under Note H.

2.1.2 Classification according to Directive 67/548/EEC:

F + R12 Extremely flammable
Product name: LPG, Technical propane- butane

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

According to Note U the product is classified to the group of liquefied gases.

The product contains <0.1% 1.3 butadiene, and therefore is not classified as mutagenic category 1B and carcinogenic category 1B. (Note K).

The product does not require extension of classification under Note H.

2.2 Label elements:

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



Danger

- H220 Extremely flammable gas
- H280 Contains gas under pressure, may explode if heated
- P102 Keep away from children
- P210 Keep away from heat / sparks/ open flames/ hot surfaces. No smoking
- P243 Take precautionary measures against static discharge
- P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely
- P381 Eliminate all ignition sources, if safe to do
- P410 + P403 Protect from sunlight. Store in a well-ventilated area

2.3 Other hazards

The substance does not meet the criteria for PBT or vPvB.

Section 3 COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances: See Section 1.1

3.2 Mixtures:

Section 4. FIRST AID MEASURES

4.1 Description of first aid measures:

Inhalation:

Symptoms: Exposure to high concentrations of the substance may cause asphyxiation.

Product name: LPG, Technical propane- butane

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

Move the victim to fresh air.

Do not leave the victim unattended.

Keep the victim in a quiet place and keep him warm. If unconscious, place in the recovery position.

In the case of difficult breathing, if possible, give oxygen or apply artificial respiration.

In the case of cardiac arrest (no pulse), begin cardiopulmonary resuscitation. Immediately seek medical advice.

In case of contact with skin:

Symptoms: Contact with the products in a liquid form may cause frostbite.

Do not remove clothing adhering to the frostbitten places. Immediately rinse the contaminated area with large amounts of water- continue rinsing for 15 minutes. If symptoms of frostbite occurred (skin whitening or redness, burning or tingling sensation), do not rub, massage or press the frostbitten places. Immediately send the victim to the hospital.

After contact with eyes:

Symptoms: Contact with the products in a liquid form may cause frostbite.

Remove contact lenses.

Rinse the eyes with water thoroughly and continuously for at least 15 minutes. Keep the eyes wide open when rinsing. If the symptoms of frostbite, pain, swelling, tearing or photophobia persist, immediately place the patient in a specialised medical facility.

Ingestion/ aspiration:

It is not considered the most likely route of exposure- frostbite of the lips and oral cavity may occur in the event of contact with the product in a liquid form.

4.2 Most important symptoms and effects of exposure, both acute and delayed:

Higher concentrations can cause coughing, headache, dizziness, nausea, breathing problems, sometimes psychomotor impairment, weakness, pain behind the breast bone, drowsiness, memory problems, nervousness, at high concentrations there may be loss of consciousness, convulsions, paralysis of the respiratory centre.

4.3 Indication of any immediate medical attention and special treatment of the victim:

In each of the above instances of conduct, when disorders persist, call a physician **immediately** or take the victim to the hospital, show the product packaging or label.

Simple asphyxiant gas at normal temperature and pressure- there is no specific antidote.

In case of contact with the product in a liquid form proceed as in the case of frostbite.

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

Section 5 FIRE FIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

LARGE FIRE: Use water, water mist or foam spraying.

SMALL FIRE: Dry chemical extinguisher or carbon dioxide (CO₂), dry sand or fire foam.

Unsuitable extinguishing media:

Do not use direct jets on the burning product. Avoid using foam and water simultaneously on the same area, since water destroys foam.

5.2 Special hazards arising from the substance or mixture:

Combustion products: carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

5.3 Advice for fire-fighters:

In case of an extensive fire or a fire in confined or poorly ventilated areas, it is necessary to use complete fire-resistant protective clothing and an overpressure-operated self-contained breathing apparatus with a complete mask.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

General information:

The product spill can generate very large quantities of flammable gas which is heavier than air and accumulates in low or confined areas.

Stop the leak, if it is safe to do so. Avoid direct contact with the released material and inhalation of vapours.

Stand downwind. Keep the personnel not participating in the action away from the leak area.

Alert the emergency personnel. Enter the area only when it is absolutely necessary. A special detector can be used for the detection of flammable gas or vapours. Eliminate all sources of ignition (e.g. electricity, sparks, fire, torches), if it is safe to do so.

If necessary, notify relevant authorities in accordance with applicable regulations.

6.1.1 For non-emergency personnel:

Wear personal protective equipment, including a self-contained breathing apparatus unless the atmosphere is considered safe.

6.1.2 For emergency responders:

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

Small spills: standard antistatic working clothing normally is usually appropriate. Large spills: wear personal protective equipment, including a self contained breathing apparatus unless the atmosphere is considered safe.

Working gloves providing effective protection against chemical agents. The gloves should be thermally insulated, if contact with the liquid product is possible or expected.

Working helmet. Antistatic, slip-resistant safety shoes (long or short) if necessary, heat-resistant.

Protective goggles or face protection, if eye splash or other type of eye exposure to the spill is possible or expected.

Respiratory tract protection: depending on the size of the substance spill and the estimated range of exposure, a half-mask, a full respiratory mask with dust filters/ organic vapours filters or a self-contained breathing apparatus may be applied. If the situation cannot be fully estimated or if there is a risk of oxygen deficiency, a self-contained breathing apparatus should be applied exclusively.

6.2 Environmental precautions:

Prevent further leakage or spillage, if safe to do so.

Prevent entry of the spillage into sewers or places where accumulation may occur.

Ensure adequate ventilation, especially in confined areas.

6.3 Methods and materials for containment and cleaning up:

6.3.1 Recommendations for containment techniques:

Prevent further leakage or spillage, if safe to do so. Spillage of the product liquid is likely to result in rapid and complete evaporation of the product. Isolate the spill area and avoid fire/ explosion hazard, taking into account the wind direction and speed until completely dissolved. If the spillage pollutes rivers or lakes notify the relevant authorities.

6.3.2 Recommendations for cleaning-up procedures:

Spillage- ventilate and allow to evaporate.

6.3.3 Information on inappropriate containment techniques: not determined.

6.4 Reference to other sections:

Additional information and personal protective equipment and control parameters are presented in Section 8. For information on disposal, see Section 13.

Section 7. HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

Note: Risk of formation of vapour and air explosive mixtures.

7.1 Precautions for safe handling:

General information:

Product name: LPG, Technical propane- butane

Page 5 of 14

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

In order to exclude the release of the substance consider technical improvements and streamlining of the process (including automation). Minimise exposure using such measures as closed systems, dedicated installations or facilities and adequate (general and local) exhaust ventilation. Empty the systems and clean transfer lines prior to the opening of the protective housing. As far as possible, before the start of maintenance wash/ rinse the equipment. Consider the need for health checks depending on the risk. Ensure implementation of safe systems of work or similar arrangements regarding risk management. Carry out regular inspections, tests and maintenance of all control measures. No smoking, eating and drinking in the application area. Dispose of water after rinsing in accordance with local and national regulations. Ensure compliance with all applicable laws relating to explosive atmospheres and facilities for handling and storage of flammable products.

Recommended and inappropriate materials for storage:

Recommended materials for the production of containers or their liners are mild steel, including stainless steel.

Inappropriate materials: Avoid all ignition sources, oxidizers, chlorine, hydrogen chloride or hydrogen fluoride.

Advice regarding containers:

If the product is supplied in containers: Keep only in the original package or container suitable for this type of product. Keep containers tightly closed and properly labelled, away from direct sunlight. It can cause flammability/ explosion hazard. Handle empty containers with care because residual vapours can be flammable. Do not cut, weld, puncture, burn or incinerate empty containers.

Hygiene measures:

Ensure implementation of suitable cleaning operations. Do not eat, drink or smoke during the use of the product. Wash hands thoroughly after the work with the substance. Remove the contaminated clothing after a work shift.

7.2 Conditions for safe storage, including any incompatibilities:

Procedure:

Use only in well-ventilated areas. Take precautionary measures against electrostatic discharges, use proper connecting and/ or grounding. Use piping and equipment adapted to the planned pressure values. Use a check valve or other protection against backflow. Cleaning, inspection and maintenance of the interior of storage tanks can only be performed by properly equipped and qualified persons, in accordance with national, local or intra-company regulations. Ensure compliance with all applicable laws relating to explosive atmospheres and facilities for handling and storage of flammable products.

Storage:

Store only in the supplied tanks or suitable containers. Do not smoke. Store in a special, cool and well-ventilated place. Tanks must be secured in an upright position and transported only in such a secure position in a well-ventilated vehicle or a hand truck. Open containers should be carefully resealed and stored in an upright position. Clean and cover empty containers with an inert gas (i.e. nitrogen) before maintenance.

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

7.3 Specific end-use(s):

No special uses. Proceed as described in Subsections 7.1, 7.2.

Section 8. EXPOSURE CONTROL/ PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 NDS exposure limit values (legal basis- Section 15.1.10)

	NDS [mg/m ³]	NDSch [mg/m ³]	NDSP [mg/m ³]	Comments
Propane	1800	-	-	-
n-Butane	1900	3000	-	-

8.1.2 Information on currently recommended monitoring procedures:

Act according to the regulations concerning air purity monitoring and in compliance with the following Polish standards:

PN-Z-04008-7:2001 "Principles of air sampling in the workplace and interpretation of results"; Prevent the creation of concentrations of the preparation ingredients in the air exceeding the values of hygienic standards.

8.1.3 DNEL values:

In accordance with par. 2 of Annex XI of REACH, the test need not to be performed for flammable gases at room temperature.

8.2 Exposure controls:

8.2.1 Appropriate engineering control:

Apply general room ventilation and local exhaust ventilation to remove vapours from the places of emission. General ventilation air holes should be located just at the floor and in the upper part of the room, whereas the local ventilation should be placed at the working surface or below it. Local ventilation is necessary if vapours are formed.

a) eyes and face protection:

Safety goggles and face protection, if eye splash or other type of contact with the eyes is probable or expected.

b) skin protection:

Working gloves provide effective protection against chemical agents. Note: gloves made of polyvinyl acetate are not waterproof and therefore not suitable for use in emergency. Working helmet. Antistatic, slip-resistant safety shoes (long or short) if necessary, heat-resistant.

c) respiratory tract protection:

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

Depending on the amount of the released substance and the estimated range of exposure, a half-mask, a full respiratory mask with dust filters/ organic vapours filters or a self-contained breathing apparatus may be applied.

If the situation cannot be fully estimated or if there is a risk of oxygen deficiency, a self-contained breathing apparatus should be applied exclusively.

d) thermal hazards:

Gloves should be heat-resistant and thermally insulated, if contact with the product in a liquefied form is possible or expected.

8.2.3 Environmental exposure control:

The employer is obliged to read and apply in practice the provisions of the Acts on environmental protection, water law and the principles of collective water supply and sewage disposal and apply legal provisions contained in appropriate Regulations relating to these Acts. Legal provisions relating to waste disposal are specified in Section 15.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	Colourless liquid
Odour:	Characteristic, in case of odorising-unpleasant.
Odour threshold:	Noticeable in the air with the content corresponding to 20% of the lower explosive limit.
pH:	Not applicable
Melting point/ freezing point [°C]:	-187,6 to -138,3
Initial boiling point and boiling range [°C]:	-42; -42 to -1
Flash point [°C]:	< -60
Evaporation rate:	No data
Flammability (solids, gases):	Extremely flammable gas
Upper/ lower explosive limits:	9,6/ 1,9
Vapour pressure: - at -15°C [MPa] - at 70°C [MPa]	>0,1 <2,55
Vapour density:	>2
Relative density at 15 °C [g/cm³]:	0,50 – 0,56
Solubility:	- in water: insoluble - in organic solvents: soluble in most organic solvents
Partition coefficient n-octanol/ water (log Ko/w):	The substance is a UVCB substance. Standard methods for water-solubility are dedicated to single component substances.

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

Auto-ignition temperature [°C]:	>287
Decomposition temperature:	No data
Kinematic viscosity at 40 °C [mm²/s]:	Not applicable
Explosive properties:	According to column 2 of Annex VII of REACH the test need not to be carried out because there are no chemical groups associated with explosive properties in the molecule.
Oxidising properties:	According to column 2 of Annex VII of REACH the test need not to be carried out because, based on the chemical structure of the substance, it does not interact exothermally with flammable materials.

9.2 Other information: no data available

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity: Does not reveal increased reactivity in normal conditions of use.

10.2 Chemical stability: The product is stable when used in recommended conditions.

10.3 Possibility of hazardous reactions: The product creates no hazardous chemical reactions in normal conditions of use.

10.4 Conditions to avoid: Avoid ignition sources and heat in conditions of an explosive atmosphere.

10.5 Incompatible materials: Avoid contact with strong oxidants.

10.6 Hazardous decomposition products: At high temperatures, thermal decomposition of the substances which are the product components may occur; the characteristic of the obtained products will depend on the conditions of decomposition. Gases and vapours: carbon oxides and hydrocarbons may be emitted.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

11.1.1 Substances:

Acute toxicity:

LD₅₀ rat, oral:

According to par. 2 of Annex XI of REACH the test need not to be carried out for flammable gases at room temperature.

Material Safety Data Sheet	
in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

LC₅₀ rat, inhalation: According to par. 2 of Annex XI of REACH the test need not to be carried out for flammable gases at room temperature.

LD₅₀ rat, dermal: According to par. 2 of Annex XI of REACH the test need not to be carried out for flammable gases at room temperature.

Based on the assessment of all acute toxicity data discussed above, the product does not meet the classification criteria of acute oral, inhalation and dermal toxicity.

Skin corrosion/ irritation

The product does not meet the classification criteria as irritating to skin. Direct contact with liquefied gas can cause frostbite.

Serious eye damage/ irritation

The product does not meet the classification criteria as irritating to eyes, but contact with liquid gas can cause irritation to eyes and frostbite.

Respiratory or skin sensitisation

The product does not meet the classification criteria as a sensitizer.

Germ cell mutagenicity

The product contains <0.1% 1.3 butadiene, and therefore is not classified as mutagenic category 1B. It may cause genetic changes.

Carcinogenicity

The product contains <0.1% 1.3 butadiene, and therefore is not classified as carcinogenic category 1B. It may cause cancer.

Reproductive toxicity

The product does not meet the classification criteria as toxic for reproduction.

Specific target organ toxicity - Single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity- Repeated exposure

The product does not meet the classification criteria as toxic to specific target organs-repeated exposure. It may cause changes in the nervous system as a result of prolonged exposure to high levels of vapours.

Aspiration hazard

The product is a gas; it does not create aspiration hazard.

11.1.2 Mixtures

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

LC₅₀ *Oncorhynchus mykiss* > 24,11 mg/ l (96h)

EC₅₀ *Daphnia magna* > 14,22 mg/ l (48h)

EC₅₀ *Pseudokirchnerella subcapitata* > 7,71 mg/ l (72 h)

The product does not meet the classification criteria as hazardous to the environment.

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

12.2 Persistence and degradability:

The product is easily biodegradable and degradable by photolysis in the air.

Fixed degradation rate for the product:

Degree of degradation in water: $K_{SW} = 0,047 \text{ d}^{-1}$

Degree of degradation in sediment: $K_{sed} = 0,0023 \text{ d}^{-1}$

Degree of degradation in soil: $K_{soil} = 0,023 \text{ d}^{-1}$

12.3 Bioaccumulative potential:

The product has low potential for bioaccumulation.

12.4 Mobility in soil:

After release evaporates quickly without causing contamination of soil and water.

Spills are unlikely to be able to penetrate soil.

12.5 Results of PBT and vPvB assessment

Petrochemical gases are not considered as PBT, they do not meet the eligibility criteria for persistence, bioaccumulation and toxicity.

12.6 Other adverse effects:

Additional information about the degradation of hydrocarbon classes is presented in the Chemical Safety Report. The product does not contain any substances hazardous to the ozone layer.

Section 13. DISPOSAL CONSIDERATIONS

Caution! Remains of the product in empty, not-cleaned packaging may cause explosion hazard or fire hazard.

Do not weld, heat, cut or drill metal containers or packages, both containing the product and emptied.

13.1 Waste treatment methods:

When the product is used as fuel or as an intermediate, the substance is used in its entirety, no waste is generated.

In case of other uses, residues of this product may be subject to national or European legislation. The recovery or disposal of the product should be carried out in accordance with

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

waste management rules and plans and environmental protection requirements only in the designated place, i.e. in installations or devices that meet certain requirements.

Dispose of the waste in compliance with the legal regulations (Section 15.1: points 15.1.6, 15.1.7, 15.1.8, 15.1.9).

Section 14. TRANSPORT INFORMATION

14.1 UN number: 1965

14.2 UN proper shipping name: HYDROCARBON GAS MIXTURE, LIQUEFIED, I.N.O (mixture B)

14.3 Transport hazard class (es): 2/2f

14.4 Packing group: not applicable

14.5 Environmental hazards: NO

14.6 Special precautions for users: proceed as described in Section 7

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

Section 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the substance and mixture:

15.1.1 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), and establishing a European Chemicals Agency* (Official Journal of the European Union L 396 of 30 December 2006, corrigendum: Official Journal of the European Union L 136 of 29 May 2007, as amended)

15.1.2 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)

15.1.3 Act of 11 September 2001 *on chemical substances and preparations* (Dz.U. (Journal of Laws) 09.152.1222, as amended)

15.1.4 Regulation of the Minister of Health of 2 September 2003 *on the criteria and methods of classification of chemical substances and preparations* (Dz.U. (Journal of Laws) 03.171.1666, as amended)

15.1.5 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*,

Product name: LPG, Technical propane- butane

Page **12** of **14**

Material Safety Data Sheet	
in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006 (Official Journal of the EU L 353 of 31 December 2008, as amended).

15.1.6 Directive 2008/98/EC of the European Parliament and of the Council *on waste and repealing some Directives* (OJ of the EU L 312 of 22 November 2008)

15.1.7 Council Directive 91/689/EC *on hazardous waste*, amended by Council Directive 94/31/EEC and extended by Council Decision 94/904 establishing a list of hazardous waste

15.1.8 Act of 27 April 2001 *on waste* (Dz.U. (Journal of Laws) 2010.185.1243, as amended)

15.1.9 Regulation of the Minister of Economy and Labour of 4 August 2004 *on the detailed procedure of waste oil management* (Dz.U. (Journal of Laws) 04.192.1968)

15.1.10 Regulation of the Minister of Labour and Social Policy of 29 November 2002 *on maximum permissible concentration and intensity of agents harmful to health in the work environment* (Dz.U. (Journal of Laws) 02.217.1833 as amended),

15.1.11 Regulation of the Minister of Health of 20 April 2005 *on tests and measurements of agents harmful to health in the work environment* (Dz.U. (Journal of Laws) 05.73.645, as amended)

15.01.12 Regulation of the Minister of Health of 30 December 2004 *on occupational health and safety related to the presence of chemical agents at the workplace* (Dz.U. (Journal of Laws) 05.11.86, as amended)

15.1.13 Regulation of the Minister of Environment of 24 July 2006 *on the conditions to be met when releasing waste to waters or ground and on substances particularly harmful to the aquatic environment* (Dz.U. (Journal of Laws) 06.137.984, as amended)

15.1.14 Regulation (EC) No. 2037/2000 of the European Parliament and of the Council of 29 June 2000 *on substances that deplete the ozone layer* (OJ EC L No. 244 of 29 September 2000)

15.1.15 Regulation of the Minister of Building and Construction of 14 July 2006 *on the ways of accomplishment of the duties of industrial waste suppliers and on conditions of pouring waste in sewage systems* (Dz.U. (Journal of Laws) 06.136.964)

15.1.16 The European Agreement *concerning the International Carriage of Dangerous Goods by Road (ADR)* (Journal of Laws 09.27.162)

15.1.17 Act of 20 June 1997- *Road Traffic Law* (Dz.U. (Journal of Laws) 05.108.908, as amended)

15.1.18 Council Directive 94/55/EC of 21 November 1994 on the approximation of the laws of the Member States with regard to the transport of dangerous goods by road (OJ L 319 of 12 December 1994), amended by Commission Directive 2004/111/EC (OJ L 365 of 10 December 2004)

15.1.19 Act of 28 October 2002 *on transporting hazardous goods by road* (Dz.U. (Journal of Laws) 02.199.1671, as amended)

15.2 Chemical safety assessment: A chemical safety assessment has been made. The product does not pose a threat to human health, it is not a CMR, PBT, vPvB- an exposure scenario is not required.

Material Safety Data Sheet in accordance with Regulation (EU) No. 453/2010	
GL 51	
Date of issue: 27.01.2006 Updated on: 03.02.2011	Edition No. 5

Section 16. OTHER INFORMATION

Scope of updating:

Compared to the previous edition of the MSDS, the timely availability of emergency calls has been clearly defined and the provisions in Section 7 and 8 have been specified.

This edition of the MSDS cancels all previous editions.

References:

- [1] Regulations concerning chemical substances and mixtures applicable in Poland.
- [2] Technical specifications.
- [3] Chemical Safety Report.
- [4] Carrillo J.-C, Djemel N., Hedelin A., Hovius H., Moore, N., Report no. 11/10: Hazard classification and labelling of petroleum substances in the European Economic Area- 2010; CONACAWE - December, 2010.

List of abbreviations:

Flam. Gas 1- Flammable gas; Liquefied gas - gas under pressure; F+ - Extremely flammable substances and mixtures; DSD - Directive 67/548/EEC; CLP- Regulation (EC) No. 1272/2008; DNEL- Derived No Effect Level; PBT - Persistent Bioaccumulable Toxic; UVCB- substances of Unknown or Variable composition; vPvB- very Persistent very Bioaccumulable; CMR- Carcinogenic, Mutagenic or Toxic to Reproduction.

STATEMENT

The information presented in this Material Safety Data Sheet reflects our best knowledge as of the issue day of the Data Sheet. We hereby notify the Downstream Users and Distributors that we do not assume responsibility for inappropriate use of our product in a manner other than recommended. Health and safety precautions, as well as advice regarding environmental protection, included in the present Data Sheet, are not guaranteed to be suitable to all individuals or particular situations. The User's obligation is to evaluate and use the described product safely and in accordance with the entire law and regulations in force. The regulations mentioned in the Data Sheet do not exempt the Users from any regulations whatsoever concerning their activity.

The present document has been prepared in Grupa LOTOS S.A.

**THE MATERIAL SAFETY DATA SHEET SHOULD BE SENT DOWN
THE SUPPLY CHAIN**