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 MSDS version 3.2
 Additional information about the update: The MSDS was updated based on the provisions of Annex II to the Commission Regulation (EU) no. 453/2010

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Commercial name Butane C₄H₁₀
 Other names/identifiers -
 Product type Gas from petrol, liquefied. A liquefied mix of aliphatic hydrocarbons, under the pressure produced by its own vapors, consisting mostly of butane.
 Chemical name Gas from petrol, liquefied
 CAS no. 68476-85-7
 EC no. 270-704-2
 Index no. 649-202-00-6
 Registration no. Substance exempted from the registration requirement pursuant to Art. 2 (7) (b) of the Regulation no. 1907/2006 (REACH) and to Annex V to that Regulation.

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

Use: *The product is most often mixed with gaseous propane in order to create a fuel mix with reduced vapor pressure. Such fuel is widely used in the industry, in heating, and as a fuel in combustion engines.*
 Uses advised against: *Use of the product in equipment that is not modified for operation with pure butane. Use without taking into account the identified hazards related to the product.*

1.3. Details of the supplier of the safety data sheet

Distributor
 Name/first name and last name **AmeriGas Polska Sp. z o.o.**
 Address **03-152 Warszawa, ul. Modlińska 344, Poland**
22 519 19 19- Emergency Telephone Number
 Telephone number **19 200 lub 22 16 17 017- Cylinders**
801 11 77 11 lub 22 16 17 000- Tanks
 Statistical no. (REGON) 470073638
 Email address kontakt@amerigas.pl
 Website www.amerigas.pl
 Unit providing information about the material safety data sheet *Tomasz Masztakowski*
 tomasz.masztakowski@amerigas.pl
 Tel. + 48 697 101 503

1.4. Emergency telephone number

+48 22 519 19 59 (24 h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:

The substance is classified as hazardous pursuant to the Regulation (EC) no. 1272/2008.

- Hazard class and category codes:
Flam. Gas 1 – flammable gas
Press. Gas – pressurized gas.
- Hazard phrases:
H220 Extremely flammable gas.

2.2. Label elements

The substance meets the label criteria pursuant to the Regulation (EC) no. 1272/2008.

GHS04



GHS02



Signal word: Danger

Phrases indicating the type of hazard

H220 Extremely flammable gas.

Precautionary phrases

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. - No smoking.
- P377 In the event of a fire of leaking gas: Do not extinguish if the leak cannot be safely stopped.
- P381 Eliminate all ignition sources if safe to do so.
- P403 Store in a well ventilated place.

Reusable cylinders and cartridges containing propane, butane, or liquefied petroleum gas (LPG) are labeled only with a warning sign and phrases that concern only their flammability (R and S according to the present Act)*

Pursuant to Art. 16 of the Regulation of the Minister of Health of 20 April 2012 concerning labeling of packaging of hazardous substances and hazardous mixtures, and their certain mixtures (Journal of Laws of 2012, no. 0, item 445).

2.3. Other hazards

Fire hazard

Extremely flammable gas. Forms explosive mixtures with air. In the gaseous phase, it is heavier than air and may gather in depressions in the ground.

Health hazards

In high concentrations, causes irritation and asphyxiation. Direct contact with liquefied gas may result in frost bites.

Health hazards not resulting from the specification

No data

Environmental hazards

Not classified as hazardous to the environment

SECTION 3: Composition/information on ingredients

The product (substance with multiple ingredients) is a complex mix of hydrocarbons produced during distillation of petrol. Consists of hydrocarbons with the number of carbon atoms mostly in the range of C₃ to C₇. The main ingredients of the product are: propane (C₃) (CAS 74-98-6) and butane (C₄) (CAS 106-97-8); the balance consists of: methane, ethane, ethene, propene, butenes, and butadienes. May contain trace quantities of mercaptans used as odorizing agents (usually ethyl mercaptan, ind. no. 016-022-00-9) and sulfur.

The ingredients may also include, in a concentration below 0.1% (by weight), buta-1,3-diene, classified as carcinogenic (Carc 1A) and mutagenic (Muta. 1B) (ind. no. 601-013-00-X).

Composition (% by weight) C4 > 95 , the remaining 5 are C1, C2, C3, C5

Gas from petrol, liquefied:

Composition:	> 99%
CAS no.:	68476-85-7
EC no.:	270-704-2
Index no.:	649-202-00-6
Registration no.:	Not subject to registration
Classification of substance pursuant to Regulation (WE) no. 1272/2008	Flam. Gas 1 Press. Gas

Substance not classified as carcinogenic or mutagenic [cf. tabl. 3.1 of Annex VI to the Regulation of the European Parliament and of the Council (EC) no. 1272/2008 of 16 December 2008) - note (d. nota) K] - according to the information provided by the manufacturer, contains less than 0.1% by weight of buta-1,3-diene.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation poisoning

Symptoms

Possible sense of fatigue, headache and dizziness, orientation disturbance, difficulty in breathing, raised respiratory rate and heart rate, loss of conscience, convulsions, cardiac arrest.

First aid (the patient is conscious)

Take the victim out of the place of exposure. Keep the victim calm in any position. Prevent loss of body heat. Give breathing oxygen to the victim. Call a doctor

First aid (the patient is unconscious)

Carry the victim out of the place of exposure. Put the victim in the recovery position, remove any moving dentures and other foreign bodies from the victim's mouth. If the victim is breathing, give breathing oxygen through a mask. If the victim is not breathing, perform mouth-to-mouth resuscitation or ventilation using an AMBU type apparatus with supply of oxygen. Call a doctor.

Contamination of eyes

Symptoms

Longer presence in an atmosphere contaminated with gas vapors may cause irritation of the eyes.

First aid

Wash the eyes immediately with a continuous stream of water, keeping the eye lids wide open, for about 15 minutes. Get medical help immediately.

Contamination of skin

Symptoms

Reddening of skin and frostbites (cold burns).

First aid

Take off contaminated clothes. Wash the contaminated skin thoroughly with lukewarm water. In the event of any frostbites, apply a sterile dressing. Get medical help.

Exposure through the digestive tract

Not applicable.

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

A sense of fatigue, headache and dizziness, orientation disturbance, difficulty in breathing, raised respiratory rate and heart rate, loss of conscience, convulsions, cardiac arrest, reddened skin, and frostbites (cold burns). Longer presence in an atmosphere contaminated with gas vapors may cause irritation of the eyes.

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

Immediate professional medical help or transport of the victim to a hospital are recommended. Show the doctor/paramedic the product packaging or label.

Recommendations for paramedics: Take actions to prevent ignition, fire, explosion, and inhalation of gas.

Antidotes: oxygen

Treatment: symptomatic treatment

SECTION 5: Firefighting measures

5.1. Extinguishing media

General recommendations: Inform persons present in the vicinity about the failure. Make all persons not involved in the elimination of the failure to leave the danger area; if necessary, announce evacuation. Call the fire brigade and the police.

Suitable extinguishing media: carbon dioxide, water spray.

Suitable isolation media (for the volatile phase): a water curtain - water spray.

Unsuitable extinguishing media: water jets. Do not use halon extinguishers due to environmental pollution.

5.2. Special hazards arising from the substance or mixture:

Extremely flammable gas. Forms explosive mixtures with air. Heavier than air and gathers near the surface of the ground and in lower parts of spaces. Reacts with oxidants in a dangerous manner. Tanks exposed to fire or high temperature may explode.

Combustion products: carbon dioxide, water, unburned hydrocarbons.

5.3. Advice for firefighters

Small fires: In an open space, let the product burn completely, control the situation from a safe distance, and cool down the tank with water (tanks exposed to fire or high temperature may explode as a result of increased internal pressure). In a closed space, extinguish the fire with a dry powder or carbon dioxide extinguisher, or introduce gaseous carbon dioxide.

Large fires: Extinguish the fire after the supply of gas has been cut off with water spray. If the fire involves a large quantity of the product, announce evacuation of all persons outside of the danger area. Cool down tanks exposed to fire or high temperature from a safe distance (tanks exposed to fire or high temperature may explode due to increase of internal pressure); if possible, remove them from the danger area.

Equipment for firefighters: Respiratory protective equipment, full protective clothing - preferably fire-proof Nomex type or heat-proof clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

General recommendations - see section 5. Remove all sources of ignition from the hazard area. Prevent

contact with skin and eyes and prevent inhalation.

Personal protective equipment: Only properly trained personnel provided with personal protective equipment (protective glasses, gloves, shoes, electrostatic and work proof work clothes) may be present at the site of the event. Ensure proper ventilation and avoid contact of the gas with the body.

Uncontrolled release of the volatile phase: **Ventilate the room. Remove the cylinder with the escaping gas from the room into open air.**

Leak: Caution! An area with an explosion hazard is formed. Absolutely remove sources of ignition (remove open fire, announce a smoking ban, use tools that do not produce sparkles); avoid direct contact with escaping gas; dilute the escaping gas with water spray; if possible, eliminate the leak (close the flow of the gas, seal the leak). Secure sewer chambers and prevent infiltration of the product. Leave small quantities of gas in open areas until they evaporate. Notify the fire brigade and the police.

6.2. Environmental precautions

Prevent infiltration of the gas into the sewer system (secure the drains). If gas infiltrates into the sewer system or is released into the environment, immediately notify the competent authorities.

6.3. Methods and material for containment and cleaning up:

If possible, eliminate the leak (close the flow of the gas, seal the leak). Dilute the released gas with water spray. When eliminating the leak, use appropriate personal protective equipment. Leave small quantities of gas in open areas until they evaporate. Call the fire brigade and the police.

6.4. Reference to other sections

Personal protective equipment - see section 8

Dispose waste in accordance with the recommendations presented in section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not eat, do not drink, do not smoke at the place of use, avoid inhaling the gas, work in well ventilated rooms, do not use tools that produce sparks, use appropriate means to prevent electrostatic discharges, avoid action of open fire and high temperatures on the product. Observe occupational health and safety rules and use appropriate personal protective equipment (as specified in section 8).

7.2. Conditions for safe storage, including any incompatibilities:

Store only in tanks and cylinders designed for specific pressure and properly labeled. Store outdoor or in well ventilated rooms. Place tanks or cylinders away from sources of heat and ignition. Do not store in the vicinity of cylinders containing compressed oxygen or other strong oxidants. All storage spaces should be equipped with an appropriate quantity of fire protection media. Keep out of reach of children. Do not leave in the vicinity of sources of heat and fire. Do not store together with food, beverages, and animal feed.

Product transfer

Electric systems/equipment must comply with the technical safety standards because of electrostatic charges that may be present during pumping. Ensure electric conductivity by connecting all elements. Avoid direct contact with equipment as it may cause frostbites. Do not avoid compressed air for filling, emptying, and transfer.

Recommended materials:

Use tanks made of appropriate low-alloy steel of improved strength. For sealing, use thickened asbestos-free gaskets with spiral inserts or other gaskets approved for use.

Not recommended materials:

As for metals, do not use aluminum if there is a risk of alkaline contamination of the product. Cast iron is not recommended, either. As for non-metallic materials, do not use natural rubber. It is not recommended to use nitrile rubber or other plastics.

Storage of large quantities:

Make sure that the domestic regulations related to handling and storage of the product are observed (see section 16). If large quantities of gas are stored (> 50 t or >200 t), additional safety procedures related to the hazard of a serious breakdown must be implemented.

Cleaning of tanks:

Cleaning, inspections, and maintenance of tanks are a specialized operation that requires implementation of strict procedures and preparations. Those include a work permit, venting of the tank, use of safety harnesses with ropes, and breathing apparatuses. When entering and staying inside of tanks, the concentration of the gas in the air must be monitored at all times using oxygen meters and/or explosimeters.

7.3. Specific end use(s):

The gas is used mostly for mixing with propane in order to reduce the pressure of pure propane vapors.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

According to the Regulation of the Minister of Labor and Social Policy of 6 June 2014 concerning the highest permitted concentrations and intensities of factors that are harmful to health in work environments (Journal of Laws of 2014, no. 0, item 817).

Highest permitted concentrations	
TLV-TWA	Butane: 1,900 mg/m³
TLV-STEL	Butane: 3,000 mg/m³
TLV-CL	Butane: not determined

DNEL: according to item 2 of Annex XI to the REACH regulation, testing does not have to be performed for flammable gases at room temperatures.

PNEC: It is unlikely that the product can be present in water or in soil

Measurement methods: use the mode, methods, type, and frequency of performance of tests and measurements of factors that are harmful to health that are present in the work environment in compliance with the applicable law (see item 15). The methods of tests and measurements of factors that are harmful to health in the work environment are defined in the Polish Standards and in international standards or their equivalents. Examples:

- **PN-Z-04252-1:2012 Protection of air purity -- Testing of content of components of liquefied gas -- Determination of propane and n-butane at work stations using the gas chromatography method.**
- **ASTM D 5305:1997 Standard Test Method for Determination of Ethyl Mercaptan in LP-Gas Vapor.**

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Local ventilation must be ensured to remove gases from their emission sites, as well as general ventilation in the room. Suction openings of local ventilation at the work surface or below. Exhausts of general ventilation in the upper part of the room and at the floor. The ventilation systems must comply with the conditions defined due to the fire or explosion hazard. See also section 7.

8.2.2. Individual protection measures, such as personal protective equipment:

Observe general precautions when working with chemicals. Do not eat, drink, or smoke during use. Store the product away from food, beverage, and animal feed. Avoid contact of the product with skin and eyes. Wash hands before each break and after work. Take off clothes contaminated with the product immediately and wash the skin with a large quantity of water. Do not inhale the vapors or the aerosol.

- a) **Eye/face protection:** *It is recommended to use protective glasses that protect against mist, liquid droplets, and spray, or to use a visor compliant with the PN-EN 166:2005 standard.*
 - (i) **Hand protection:** protective gloves, made of neoprene, nitrile rubber, or leather, chrome-plated, compliant with the PN-EN 374-1:2005 standard and the PN-EN 420+A1:2012 standard. The gloves should remain flexible at temperatures below the boiling point of the gas at atmospheric pressure. The gloves may need to be changed more often if they are immersed in or are in longer

contact with the product. When selecting the material of the protective gloves, consider the time of piercing and the speed of penetration and degradation.

(ii) **Other:** Protective clothes, shoes, and equipment made of a material that meets the requirements specified in the Polish regulations for facilities where there are work stations at which an explosive atmosphere may be present. If cylinders are carried, use antistatic shoes with steel toes complying with the PN-EN ISO 20345:2012 standard.

b) **Respiratory protection:** Not necessary if the room is well ventilated. Inhalation of LPG vapors should be minimized. In the case of exposure to elevated gas concentrations, e.g. in emergencies, use a breathing apparatus with an independent source of air.

c) **Thermal hazards:** see above

8.2.3. Environmental exposure controls

No special measures are needed. Due to their high volatility, liquefied petrol gas does not cause contamination of soil or water. The highest permissible values of pollutants in the air are specified in the relevant laws - see item 15. Emission from ventilation systems and process equipment should be checked for compliance with environmental protection laws.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	A colorless liquid
Odor:	An odorized product, the odor is noticeable and unpleasant
Odor threshold;	Noticeable at 20% LEL
pH	Not applicable
Melting point/freezing point;	-138.3 °C (butane)
Initial boiling point and boiling range;	-1 °C (butane)
Flash point;	-60 °C (butane)
Evaporation rate;	No data
Flammability (solid, gas);	Extremely flammable
Upper/lower flammability or explosive limits;	8.5 % / 1.5%
Saturated vapor pressure;	For -40°C, not less than 0.47 MPa; for 70°C, not more than 1.08 MPa
Relative density;	Butane 0.573 g/cm ³ at 25°C
Relative vapor density; (air=1)	2,8
Solubility;	– 150 cm ³ in 1 liter of water at the temperature of 17 °C and in alcohol and ether.
Partition coefficient: n-octanol/water;	No data
Auto-ignition temperature;	365 °C (butane)
Decomposition temperature;	No data
Kinetic viscosity;	Not determined
Explosive properties;	Not applicable
Oxidizing properties.	Not applicable

9.2. Other information -

Heat of vaporization

0°C	Butane 383.46 kJ/kg
10°C	Butane 373.43 kJ/kg
20°C	Butane 361.73 kJ/kg

SECTION 10: Stability and reactivity

10.1. Reactivity:

Not specified.

10.2. Chemical stability:

In normal use and storage conditions, the product is stable.

10.3. Possibility of hazardous reactions:

Avoid formation of mixtures of vapors with air - may be explosive.

10.4. Conditions to avoid:

Heating, flames, sparks, electrostatic discharges.

10.5. Incompatible materials:

Strong oxidants.

10.6. Hazardous decomposition products:

Substances produced as a result of thermal decomposition of the product are strongly dependent on the conditions that cause the decomposition. In normal combustion conditions, the main products of decomposition are carbon dioxide, carbon monoxide, and steam. Trace quantities of polycyclic aromatic hydrocarbons, not combusted hydrocarbons, and unidentified organic and inorganic products may be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

LD ₅₀ Rat, oral	Not required for flammable gases at room temperatures according to item 2 of Annex XI to the REACH regulation.
LD ₅₀ Rat, inhalation	Not required for flammable gases at room temperatures according to item 2 of Annex XI to the REACH regulation.
LD ₅₀ Rat, dermal	Not required for flammable gases at room temperatures according to item 2 of Annex XI to the REACH regulation.

Skin corrosion/irritation

The product is not classified as irritant to skin, although it causes frostbites in contact with skin.

Serious eye damage/irritation

The product is not classified as irritant to eyes, although it may cause frostbites in direct contact.

Respiratory or skin sensitization

The product is not classified as sensitizing.

Germ cell mutagenicity

The product contains < 0.1% of 1,3-butadiene; therefore it is not classified as mutagenic.

Carcinogenicity

The product contains < 0.1% of 1,3-butadiene; therefore it is not classified as mutagenic.

Reproductive toxicity

The product is not classified as toxic for reproduction.

Specific target organ toxicity - single exposure

Low concentration may cause lacrimation, cough. At large concentration, oxygen deficit causes a sense of fatigue, headache and dizziness, orientation disturbance, difficulty breathing, elevated breathing rate and heart rate, loss of conscience, convulsions, cardiac arrest, death. The symptoms subside quickly after the exposure is stopped.

Specific target organ toxicity - repeated exposure

May cause changes in the nervous system as a result of long exposure to a large quantity of the product.

Aspiration hazard

Does not cause an aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

LC50 - acute toxicity test for fish	method: (Q) SAR, Butane: 24.11 mg/L (96h)
LC50 - acute toxicity test for invertebrates	method: (Q) SAR, Butane: 14.22 mg/L (48h)
EC50 - acute toxicity test for algae	method: calculations using the ECOSAR software, version 1.00; butane: 7.71 mg/L (96h)

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

12.2. Persistence and degradability

Degradability in soil - easily degradable product

12.3. Bioaccumulative potential

The product has a low bioaccumulative potential.

12.4. Mobility in soil

Low absorption potential; the product evaporates quickly without causing contamination of the soil.

12.5. Results of PBT and vPvB assessment

The substance does not meet the PBT and vPvB criteria.

12.6. Other adverse effects

A leaking product may cause freezing; hazardous to the water environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Treat collected waste in accordance with the applicable regulations (see section 15). Disposal of this product, its solutions and its derivative products must in each case comply with the requirements related to environmental protection, with the laws related to disposal of waste, and with the requirements imposed by local authorities.

Product: Do not allow large quantities of the product to leak into the sewer system. Do not deposit at municipal landfills.

References to European Community/national regulations:

Classification of waste conforming to the European Waste Catalog:

Waste is classified according to their origin; consequently, the waste code may change depending on the method and location of origin of the waste.

Regulation of the Minister of Environment of 9 December 2014 concerning the waste catalog Waste code: 16 05 04* gases in pressure containers (including halons) containing hazardous substances. The waste is classified as hazardous waste.

Packaging containing residues of or contaminated by dangerous substances (code 15 01 10).*

The specific code of the waste must be assigned considering the location and method of generation of the waste.

Suitable methods of removal of the substance and of the contaminated packaging:

Considering the nature and use of the product, it is rarely necessary to remove the product. If necessary, remove the product by way of controlled burning using a special tool. If such a tool is not available, contact the supplier.

Removal of tanks

Partially used or nominally empty cylinders must be returned to the supplier.

SECTION 14: Transport information

The product is subject to regulations pertaining to transport of dangerous goods. Transport the product in accordance with the shipping document.

Land transport ADR/RID:

UN number:	1011 (Note: for transport purposes, the UN number for the propane-butane mixture may be used, i.e. 1965)
Proper shipping name - ADR:	Hydrocarbon gas mixture, liquefied, N.O.S. (Mixture A, butane)
Proper shipping name - RID:	Hydrocarbon gas mixture, liquefied, N.O.S. (Mixture A, butane)
Class	2
Classification code:	2F
Packing group	Not applicable
Sticker:	2.1



13 (RID only) – Roll carefully



Other information

Transport of gas in passenger aircraft is prohibited.

HAZCHEM code	2/W/E
Road transport	ADR regulations apply
Rail transport	RID regulations apply
Inland waterway transport	ADN regulations apply
Air transport	ICAO regulations apply
Sea transport	IMDG regulations apply

SECTION 15: Regulatory information

- Regulation of the Council of Ministers of 24 August 2004 concerning the list of works prohibited to

be performed minors and conditions for their employment for some of such works (Journal of Laws of 14 September 2004, no. 200, item 2047):

Works with exposure to chemical substances and preparations classified in the regulations based on the criteria and method of classification of chemical substances and preparations as extremely flammable are prohibited to be performed by minors.

- **Regulation of the Minister of Health of 11 June 2012 concerning the categories of dangerous substances and dangerous mixtures whose packaging is equipped with closures that hinder opening by children and a hazard warning sensible by touching. (Journal of Laws of 2012, no. 0, item 688)**

§ 3. 1. Packaging of substances marked in compliance with regulations adopted pursuant to Art. 20 of Act 11 as extremely flammable or sold to consumers shall be provided, regardless of the content of the packaging, with a hazard warning sensible by touching.

Volatile organic compounds (VOC): Directive no. 1999/13/EC: no data

Directive Seveso III (2012/18/EU): Update: 2015

The quantity of a dangerous substance that determines classification as an elevated risk or high risk facility:

Elevated risk: <200 t; 50 t>

High risk: >=200t>

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

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, 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 (in the version corrected in OJ EU L 136 of 29 May 2007, page 3, as amended).
2. COMMISSION REGULATION (EC) NO. 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (OJ EU 235 of 5 September 2009)
3. 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 EU L 133 of 31 May 2010)
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 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ EU L 353 of 31 December 2008, page 1), amended by the Commission Regulation (EC) no. 790/2009 (OJ EU L 235 of 5 September 2009, page 1)
5. Regulation of the Minister of Health of 20 April 2012 concerning labeling of packaging of dangerous substances and dangerous mixtures and certain mixtures. (Journal of Laws of 2012, no. 0, item 445)
6. Regulation of the Minister of Health of 10 August 2012 concerning the criteria and the methods of classification of chemical substances and their mixtures. (Journal of Laws of 14 September 2012, item 1018)
7. Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws of 2011, no. 63, item 322)
8. Regulation of the Minister of Economy of 21 December 2005 concerning the principal requirements for personal protective equipment (Journal of Laws no. 259/2005, item 2173)
9. Regulation of the Minister of Labor and Social Policy of 26 September 1997 concerning general occupational health and safety regulations (consolidated text: Journal of Laws no. 169/2003, item 1650, as amended)
10. Regulation of the Minister of Labor and Social Policy of 6 June 2014 concerning the highest permitted concentrations and intensities of factors that are harmful to health in work environments (Journal of Laws of 2014, no. 0, item 817)
11. Regulation of the Minister of Health of 24 July 2012 concerning chemical substances, their mixtures, or technological processes of carcinogenic or mutagenic effect in work environments (Journal of Laws of 3 August 2012, item 890)
12. The recommended initial and periodic medical examinations of workers exposed to chemical substances must be performed in accordance with the Regulation of the Minister of Health and Social Policy of 30 May 1996 concerning performance of medical examinations of workers, the scope of preventive

healthcare of workers, and medical certificates issued for the purposes provided for in the Labor Code (Journal of Laws of 1996, no. 69, item 332, as amended)

13. Regulation of the Minister of Environment of 9 December 2014 concerning the waste catalog (Journal of Laws of 2014, item 1923)
14. Act of 14 December 2012 on waste (Journal of Laws of 2013, items 21, 888, 1238)
15. Act of 13 June 2013 on management of packaging and packaging waste (Journal of Laws of 2013, item 888)
16. Regulation of the Minister of Environment of 26 January 2010 concerning reference values for certain substances in the air (Journal of Laws of 2010, no. 16, item 87)
17. Regulation of the Minister of Construction of 14 July 2006 concerning the method of performance of the duties of suppliers of industrial wastewater and conditions for drainage of wastewater into sewer facilities (Journal of Laws of 2006, no. 136, item 964)
18. Regulation of the Minister of Development of 8 August 2016 concerning reduction of emission of volatile organic compounds contained in certain paints and varnishes intended for painting buildings and in their finishing and equipment elements, and elements associated with buildings and those elements of the structures, and in mixtures for renovation of vehicles (Journal of Laws of 2016, no. 0, item 1353)

Source used for verification of Polish regulations: <http://isap.sejm.gov.pl/>.

Source used for verification of European regulations: <http://eur-lex.europa.eu>.

15.2. Chemical safety assessment:

An assessment of chemical safety and of an exposure scenario is not required because the product is not subject to full registration and does not meet the PBT and vPvB criteria.

SECTION 16: Other information

A key or legend to abbreviations and acronyms used in the safety data sheet:

LC50/LD50 medial lethal concentration/dose

LDLo lethal dose low

TCLo toxic concentration low

Key literature references and sources for data:

1. Safety Data Sheet: 1.0
2. <http://echa.europa.eu> – European Chemical Agency

List of relevant hazard statements and/or precautionary statements (full text of any statements which are not written out in full under Sections 2 to 15):

H220 Extremely flammable gas.

Identification and information about the classification required from 1 June 2015 before its use for classification and labeling on the packaging:

The substance meets the classification criteria according to the CLP (REGULATION (EC) NO. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006). The substance is classified as a substance that creates a hazard in accordance with the aforementioned criteria.

Revision 2.0, Date of last update: 1 June 2015 The SDS was updated based on the provisions of Annex II to the Commission Regulation (EU) no. 453/2010 (labeling complying with the CLP). Author: Andrzej Duda, Safety and Environmental Protection Specialist, AmeriGas Polska.

Revision 3.1, Date of last update: 29 March 2017 Update of the data contained in items 1.3, 8.1, 8.2.2, 13.1, 15, and 15.1 of the sheet. Updated by M. Malkowski

Revision 3.2, Date of last update: September 2020 Contact data update.

Updated by Tomasz Masztakowski

