Version 1.05 Date of revision: 03.02.2017

Date of report: 24.06.2005

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

1.1. Product identifier **Comperssed Air**

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

Identified use: High blast pressure ensures dust and other dirt removal from difficult to reach places. Excelent for: computers, copiers, printers, and all of the office equipment, as well as photographical, fine mechanics and telecommunication appliances.

Use advised against: not specified

1.3. Details of the supplier of the safety data sheet:

Manufacturer: Esperanza sp.j. Poterek
Poznańska 129/133, 05-850 Ożarów Mazowiecki
tel/fax (0 22) 7562278

E-mail address of person responsible for the sheet:
info@esperanza.pl

1.4. Emergency telephone number: +48 22-7213571 from 9 a.m. to 5 p.m.

Toxicological Information +48 22 618 77 10, National Toxicological Information Centre +48 42 631 47 24

SECTION 2: Hazards identification

2.1. Classification:

Classification according to 1272/2008:

Aerosol 1; H222, H229

Risks posed to human health

Correctly applied does not pose hazards.

Environmental hazards

Not classified as dangerous for environment.

Physical/chemical hazards

Extremely flammable aerosol. Contains gas under pressure. May explode if heated.

2.2. Label elements:

Hazard symbols:

Signal word: Danger

Hazard statements:
H222 - Extremely flammable aerosol
H229 - container under pressure. May explode if heated

Safety phrases:
P102 – Keep out of reach of children
P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P251 – container under pressure. Do not pierce or burn, even after use.
P271 – Use only outdoors or in a well-ventilated area.
P403 – Store in a well-ventilated place.
P410+412 – Protect from sunlight and do not expose to temperatures exceeding 50°C/122°F.

2.3. Other hazards:
No information as to the compliance with PBT or vPvB criteria, as per Annex XIII to the REACH regulation. Appropriate tests were not conducted.

SECTION 3: Composition/information on ingredients

3.1. Substances:
Not applicable.
3.2. Mixtures:
Hazardous ingredients:

Product identifier	Content %	CLP Classification	
		Hazard class and category codes	Phrase codes indicating hazard type
Mixture of propane and butane CAS No.: 106-97-8/74-98-6 EC No.: 203-448-7/200-827-9 Index No.: 601-003-00-5/601-004-00-0 REACH No.: substances are subject to transitional period regulations	60/40	Flam. Gas 1 Press. Gas	H220 H280

Full text of R and H phrases in section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures
After contact with skin:
Remove contaminated clothing. If on skin, wash immediately with plenty of water. Do not use any solvents. Cover the frostbite area using a sterilized bandage. Get medical attention if irritation persists.

In the case of eye contact:
Flush with a large amount of fresh water for approx. 15 minutes, consult a doctor. Avoid strong water jet due to the risk of corneal damage. If irritation persists, seek medical attention.
Inhalatory exposure:
Move the affected person to fresh air. In the absence of immediate improvement, provide medical care.
If swallowed:
Exposure by this route is very unlikely - a product in the form of a spray. Drink plenty of water, do not induce vomiting. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed:
Eye contact: Contamination of eyes with liquid substance may cause pain, redness and possibly damage to the cornea.

4.3. Indication of any immediate medical attention and special treatment needed:
Decision on how to proceed shall be taken by a doctor following examination of victim's condition.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media
Suitable extinguishing media
Water, alcohol-resistant foam, carbon dioxide, fire extinguishing powders.
Unsuitable extinguishing media:
Do not use hard water jets.

5.2. Special hazards arising from the substance or mixture:
Extremely flammable aerosol. Containers exposed to fire or high temperature shall be cooled with water from a safe distance (threat of explosion), until the fire is extinguished; if possible, remove them from the danger zone. Note: no liquid is allowed to contact the inside of the cooled containers. Do not allow fire-fighting wastewater to reach drains or water.

5.3. Advice for fire-fighters
Do not allow extinguishing agents to reach drains or water. Inform the neighbourhood about the fire. Keep all persons not involved in the emergency action away from the hazardous area. Notify the National Fire Service and the State Police, if necessary, as well as the closest local authorities and the nearest Chemical Rescue Unit.
Put on gas-tight protective clothing and an apparatus isolating the respiratory tract (oxygen apparatus completed with a mask).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:
Advice for non-emergency personnel: notify the appropriate services about the emergency. Keep all persons not involved in the emergency action away from the hazardous area.
Advice for emergency responders: ensure adequate ventilation, use personal protective equipment.

6.2. Environmental precautions
In the event of failure, avoid release to environment. Prevent the product from entering the sewage systems, both surface and ground water. Try to collect as much as possible to suitable containers for further disposal.

6.3. Methods and material for containment and cleaning up
The product is in hermetically sealed aerosol cans – leakage is unlikely. In cases where a container has been damaged, remove fire sources from the danger area and ensure adequate ventilation. Collect the spill using neutral absorbers, e.g. sand. Place in a suitable container and transfer for utilization.

6.4. Reference to other sections
Product waste management – see section 13 of the sheet
Personal protective measures – see section 8 of the sheet

SECTION 7: Handling and storage

7.1. Precautions for safe handling:
Avoid contact with skin and eyes. Keep away from fire sources and glowing materials. Do not spray on an open flame or other incandescent material. Keep away from heat and fire sources. Both liquid and vapours are extremely flammable.

7.2. Conditions for safe storage, including any incompatibilities:
Store in a well-ventilated, cool place. Keep away from children. Protect from sunlight and do not expose to temperatures exceeding 50°C. Professional use: store in original, properly labelled, sealed containers in a cool, dry and well-ventilated storage room (in a fireproof building). Keep away from heat sources. Keep away from children. Protect from sunlight and do not expose to temperatures exceeding 50°C. Always store in original containers. Do not use contaminated, empty containers for other purposes.

7.3. Specific end use(s):
High blast pressure ensures dust and other dirt removal from difficult to reach places. Excelent for: computers, copiers, printers, and all of the office equipment, as well as photographical, fine mechanics and telecommunication appliances.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters:

Regulation of the Minister of Labour and Social Policy of 29 November 2002 on maximum permissible concentration and intensity of harmful factors in the work environment (Journal of Laws No. 217/2002, item 1833, as amended; Journal of Laws No. 2012/2005, item 1769; Journal of Laws No. 161/2007, item 1142; Journal of Laws No. 105/2009, item 873).

Substances for which exposure standards shall apply:

	Substance name	CAS No.	NDS	NDSCh	NDSP
1.	propane	74-98-6	1800 mg/m^3	not specified	not specified
2.	n-butane	106-97-8	1900 mg/m^3	3000 mg/m^3	not specified

Determination in the air at working positions

Regulation of the Minister of Health of 20 April *2005 on tests and measurements of harmful factors in the working environment* (Journal of Laws No. 73/2005, item 645, as amended).

PN:EN 1540:2004 Workplace atmospheres – Terminology; PN-Z-04008-7:2002 Air purity protection. Measurements of the concentration of chemical substances and industrial dusts in workplace air. Principles for air sampling in the working environment and interpretation of results; PN-Z-04008-7:2002/Az1:2004 Amendment to the standard Air purity protection. Measurements of the concentration of chemical substances and industrial dusts in workplace air. Principles for air sampling in the working environment and interpretation of results

Butan: PN-Z-04252-1:1997;

Propan: PN-Z-04252-1:1997;

8.2. Exposure controls:

Appropriate engineering controls:

Effective local exhaust ventilation and general ventilation are necessary.

For professional use: effective local exhaust ventilation and general ventilation of the room are necessary to reduce the exposure of employees. The work environment should be monitored to ensure adequate ventilation. If exhaust ventilation is insufficient, use appropriate respiratory protection.

Individual protection measures, such as personal protection equipment:

Eye or face protection:

Avoid eye contact. When handling the product, if there is a possibility of exposure, wear safety glasses with side shields or non-fogging protective goggles (according to EN166).

Skin protection

Hand protection: wear protective gloves of nitrile or butyl rubber or PVA. When using the product in a professional activity, assuming frequent or long-term exposure, use hand protection appropriate to the working conditions. To do this, use chemical resistant protective gloves (in accordance with EN 374).

Other:
Use protective clothing - clean regularly.

Material from which the glover are made
Selection of suitable gloves depends not only on the material, but also on the brand and quality resulting from differences between manufacturers. Resistance of the material from which the gloves are made may be determined as a result of tests. The exact time of the destruction of the gloves must be determined by the manufacturer.
Others:
In emergency situations, wear suitable protective clothing made of coated materials.
Respiratory protection
Avoid breathing in vapours. When the concentration of the substances is determined and known, personal protection measures shall be selected taking into account the concentration of substances occurring at a given workplace, time of exposure, activities performed by an employee as well as the instructions given by the manufacturer of personal protective equipment. In emergency situations, use steam trap together with a mask or a half mask.

Thermal hazards:
Not applicable.
Biological monitoring:
Not determined.

Environmental exposure controls:
Acceptable values of pollutants in industrial sewage discharged into sewerage systems – Regulation of the Minister of Construction of 14 July 2006 *on the manner of executing the obligations by providers of industrial sewage as well as terms of discharging sewage to sewerage systems* (Journal of Laws of 2006, No. 136, item 964): not determined.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	aerosol gas, colourless
Odour:	odourless
Odor threshold:	9022-36088 mg/m^3 (Propan)
	6240 mg/m^3 (Butan)
pH:	neutral
Melting point:	not specified
Flash point:	not specified
Autoignition temperature:	not specified
Explosion limits:	not applicable
Vapour pressure:	not specified
Specific gravity:	not specified
Density:	not specified
Vapour density:	4.4 bar

Relative vapour density:	not specified
Gas pressure:	not specified
Solubility in water:	not specified
Evaporation rate:	not specified
Volatile compounds:	not applicable
Viscosity:	not specified

9.2. Other information:
No additional test results.

SECTION 10: Stability and reactivity

10.1. Reactivity
Unknown
10.2. Chemical stability
Stable under appropriate conditions of storage and use.
10.3. Possibility of hazardous reactions
Hazardous polymerization is not expected.
10.4. Conditions to avoid
Avoid high temperature, direct sunlight, hot surfaces and open flames.
10.5. Incompatible materials:
No data.
10.6. Hazardous decomposition products:
Carbon oxides, toxic gases and fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects:
a) acute toxicity:
propane, odour detection threshold: 9022-36088 mg/m^3
butane, odour detection threshold: 6240 mg/m^3
LC_{50} (rat, Inhalation): 658000 mg/m^3 (4 h)
b) irritation: does not show
c) corrosion: does not show
d) sensitisation: does not show
e) repeated dose toxicity: no data
f) carcinogenicity: does not show
g) mutagenicity: does not show
h) reproductive toxicity:

Information on likely routes of exposure:
Inhalation exposure
May cause irritation of the mucous membranes of the upper respiratory tract.

Skin contact
Skin irritation is possible, prolonged contact may lead to burns.
Eye contact
Avoid eye contact. Irritating to eyes. May cause pain, redness and damage to the cornea.
Swallowing
Exposure is not likely when handling the product properly.

Delayed, direct and chronic effects resulting from short- and long-term exposure:
No data.
Interactive effects:
No data.

SECTION 12: Ecological information

Detailed tests have not been conducted. In the view of the above, there are not further data. Do not allow the preparation to enter and spread in soil, sewerage system, groundwater and watercourses.

12.1. Toxicity:
Propan:
Invertebrates: 9,3-19mg/1, 48h; Daphnia Magna
Algae: 12-13mg/l, 72h
Butan:
Invertebrates: 10,6mg/l, 48h; Daphnia Magna
Algae:7,15mg/l, 72h

12.2. Persistence and degradability:
Propane:
Biodegradation of propane may occur in water and soil, however, the most significant is volatilization in air. The value of 7.07x1 / 10atmm3 / mole of Constant Henry suggests a fast evaporation of propane from the aquatic environment, the estimated half-life is 1.9-2.3 days (for the model of the river and lake
respectively). Photochemical dissociation occurs in the air, hydroxyl radicals are produced.
The half-life is 13 days.
Butane:
Degradation processes and their scale is similar to propane. All components have a high evaporation capacity.

12.3. Bioaccumulative potential:
Propane/butane:
Log Po / w values 2.36 and BCF 1.6 and 1.76 indicate that the bioaccumulation in the aquatic environment is negligible.

12.4. Mobility in soil:
Propane:
The Koc factor is 450-460 and shows the average propane mobility in the soil.

12.5. Results of PBT and vPvB assessment:
No data.
12.6. Other adverse effects:
No data.

SECTION 13: Disposal considerations

13.1. Waste treatment methods:
Waste treatment should be undertaken by specialized companies, the waste disposal method should be agreed with the competent regional environmental protection department.
Store the remainder in original containers. Dispose of in accordance with applicable regulations.
Empty packaging should be disposed of or recycled in accordance with applicable regulations.

Regulation of the Minister of the Environment of 9 December 2014 regarding the waste catalog (Journal of Laws, item 1923).
Waste code:
16 05 04 - gases in containers (including halons) containing dangerous substances.
Waste packaging code:
15 01 11 - Metallic packaging containing dangerous porous elements of structural reinforcement (eg asbestos), including empty pressure containers

Community legislation on waste
Council Directive No. 75/442/EEC on waste, Council Directive No. 91/689/EEC on hazardous waste, Commission Decision No. 2000/532/EC of 3 May 2000 stating the list of waste, OJ No. L 226/3 of 6 September 2000, along with decisions amending decisions.

SECTION 14: Transport information

14.1. UN number: ADR/RID/IMDG/IATA: 1950
14.2. UN proper hipping name:
ADR/RID: AEROSOLS flamable
IMDG: AEROSOLS
IATA: Aerosols, flammable
14.3. Transport hazard class:
ADR/RID: 2
IMDG/IATA: 2.1
14.4. Packing group: -
14.5. Environmental hazards: No
14.6. Special precautions for user: No data.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: no data

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SECTION 15: Regulatory information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 on the Registration, Evaluation, Authorization, Restriction of Chemicals (REACH), as amended d.
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, authorization and restriction of chemicals (REACH)
Regulation of the European Parliament and of the Council of 16 December 2008 No. 1272/2008 (CLP), as amended d.
The Act of February 25, 2011 on chemical substances and mixtures thereof (Journal of Laws No. 63, item 322 with later amendments).
Regulation of the Minister of Health of 10 October 2013 amending the regulation on the category of dangerous substances and dangerous mixtures, the packaging of which is fitted with closures making it difficult for children to open and tactile warning of danger (Journal of Laws of 2013 No. 0 item 1225)
The Act of 14 December 2012 on waste (Journal of Laws of 2013 No. 0, item 21).
Act of 13 June 2013 on the management of packaging and packaging waste (Journal of Laws of 2013, item 888).
Regulation of the Minister of the Environment of 9 December 2014 regarding the waste catalog (Journal of Laws, item 1923).
Council Directive No. 75/442 / EEC on waste, Council Directive No. 91/689 / EEC on hazardous waste, Commission Decision No. 2000/532 / EC of May 3, 2000 providing a list of waste, OJ No. L 226/3 of September 6, 2000, along with amending decisions.
Act of 19 August 2011 on the transport of dangerous goods (Journal of Laws No. 227, item 1367 with later amendments)
Government Statement of March 23, 2015 on the entry into force of amendments to Annexes A and B to the European Agreement concerning the international carriage of dangerous goods by road (ADR), done at Geneva on September 30, 1957 (Journal of Laws 2015, item 882).
Regulation of the Minister of Labor and Social Policy of June 6, 2014 on the highest permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws, item 817, as amended).
Regulation of the Minister of Health of December 30, 2004 on health and safety at work related to the presence of chemical agents at work (Journal of Laws from 2005 No. 11, item 86, as amended).
Regulation of the Minister of the Environment of 9 December 2003 on substances posing a particular threat to the environment (Journal of Laws No. 217, item 2141).

15.2. Chemical safety assessment:

No chemical safety assessment for substances contained in the mixture as well as for the mixture.

SECTION 16: Other information

All data is based on the current state of our knowledge. The card was developed on the basis of a safety data sheet and data obtained from the manufacturer. Recipients of our product must take into account existing legal regulations and other regulations.

Product classification based on the product's form.

Other sources of basic data for updating the safety data sheet:

• Legal provisions quoted in section 15 of the card

• Annex to Regulation (EU) 2015/830 of 28 May 2015.

• Information from the Bureau for Chemical Substances, Chief Sanitary Inspector, Institute of Occupational Medicine prof. J. Nofera, Institute of Occupational Medicine and Environmental Health.

R- and H-phrases:

H220 – extremely flammable gas

H222 – extremely flammable aerosol

H229 - container under pressure: heating may cause an explosion

H280 – contains gas under pressure; may explode if heated.

Description of abbreviations, acronyms and symbols used:

Flam. Gas 1 – flammable gas, category 1

Press. Gas – pressurised gas

Aerosol 1 – Aerosol cat .1

NDS – threshold limit value

NDSCh – short-term exposure limit

NDSP – ceiling exposure limit

LC50 - (lethal concentration) - median lethal concentration, statistically determined concentration of a substance, after exposure to which it can be expected that during exposition or during a specified, contractual period after exposure, 50% of organisms exposed to this substance will be killed.

BCF - Bioconcentration factor

PBT - Persistent with bioaccumulation and toxic

vPvB - very persistent and very bioaccumulative

ADR - European agreement on the transport of dangerous goods by road

RID - Regulation on the transport of dangerous goods by international railways

IMDG - International Maritime Code for the transport of dangerous goods

IATA - Regulation on the transport of dangerous goods issued by the International Air Transport Association

Changes in sections: 2, 3, 8, 11, 15

Training:

Prior to working with the product, personnel should a mandatory health and safety at work training due to the presence of chemical agents in the work environment. Conduct, record and familiarize personnel with the results of assessment of occupational hazards at a workplace connected with the presence of chemical agents.