



MATERIAL SAFETY DATA SHEET
Compressed Gas (Compressed Air)

Version 3.00
Date of card preparation: 20.05.2008
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SECTION 1: Substance/mixture identification and company identification

1.1 Product identification **Compressed Gas (Compressed Air)**

1.2 Significant substance or mixture uses identified and uses non-recommended:

Identified uses: Compressed Gas blown under high pressure allows to remove dust and other dirt from hardly accessible places. Used in electronics, photooptics, precision engineering, electromechanics, telecommunications.

Non-recommended uses: no data available

1.3 Data concerning the material safety data sheet provider:

Manufacturer PLATINET S.A.
Ul. Christo Botewa 48
30-798 Kraków

Contact person e-mail address: firma@platinet.pl

1.4 Emergency call: +48 12 65 10 580 within working hours 8.00 – 17.00
Toxicological Information 22 618 77 10, National Toxicological Information Centre 42 631 47 24

SECTION 2: Safety hazard recognition

2.1 Substance or mixture classification
F+; R12

Health hazard recognition

When applied properly, it does not cause any hazard.

Environmental hazard recognition

Not classified as hazardous for the environment.

Physical/chemical hazard recognition

The product is extremely flammable.

Container under pressure: avoid direct sunlight and temperatures above 50 °C. Do not puncture or burn, even when empty.



2.2 Labelling elements:

The product is subject to mandatory labelling.

Labelling a package with the capacity of 300 cm³, 400 cm³ or 600 cm³ includes:



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Hazard symbols:



F+- extremely flammable

Phrases indicating hazard types (R-phrases)

None.

Phrases determining conditions of safe use:

S2 – Keep out of the reach of children

S9 – Keep container in a well-ventilated place

S16 – Keep away from sources of ignition - No smoking

S23 – Do not breathe spray

S46 – If swallowed, seek medical advice immediately and show this container or label.

S51 – Use only in well-ventilated places.

Additional information:

Container under pressure: avoid direct sunlight and temperatures above 50 °C. Do not puncture or burn, even when empty. Do not spray on naked flame or any incandescent material. Protect from the sources of fire - do not use open fire while spraying.

2.3 Other hazards:

None.

No information on meeting the PBT or vPvB criteria in accordance with the annex XIII of the REACH regulation. Suitable tests were not carried out.

SECTION 3: Composition/information on ingredients

3.1 Substances:

Not applicable.

3.2 Mixtures:

Hazardous ingredients:

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Product identification	Content %	Classification acc. to 67/548/EWG	CLP Classification	
			Hazard class and category codes	Codes of phrases indicating hazard type
Butane and propane mixture <u>CAS No.:</u> 106-97-8/74-98-6 <u>EC No.:</u> 203-448-7/200-827-9 <u>Index No.:</u> 601-003-00-5/601-004-00-0 <u>REACH No.:</u> the substance is subject to transition period regulations	60/40	 F+; R12	Flam. Gas 1 Press. Gas	H220

A list of symbols showing the danger category as well as R- and H-phrases presented in the section 3 of this material safety data sheet, including their full description, has been specified in the section 16. R- and H-phrases are related to the mixture ingredients.

SECTION 4: First aid measures

4.1 First aid measures description

Skin contact:

In the event of contamination with condensed gas, remove clothing, wash skin with plenty of cool water. Put sterile dressing on frostbites. If symptoms of skin chafes occur, contact a physician. Clean contaminated clothing and shoes before reuse.

Eye contact:

Immediately rinse with plenty of water, for at least 15 minutes. Avoid strong water jet stream owing to the risk of mechanical damages to the cornea. If symptoms of irritation persist, contact a physician.

Inhalation:

Take the sufferer outdoor. If the sufferer is not breathing, use artificial respiration. In the event of difficulties in breathing, call medical assistance immediately.

Swallowing:

Seek medical help.

4.2 Most important acute and delayed symptoms and hazard effects:

Eye contact: Eye contamination by liquid substance may cause pain, redness, and possibly may damage the cornea.

4.3 Indication of any immediate medical attention and special treatment needed

A decision on treatment is made by a doctor after evaluating a patient's condition.



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SECTION 5: Fire fighting measures

5.1 Fire extinguishing means

Appropriate fire extinguishing means

Water – dispersed water streams, fire foam resistant to alcohol influence, carbon dioxide, extinguishing powders.

Inappropriate fire extinguishing means:

Do not use water jets.

5.2 Special hazards arising from the substance or mixture:

Extremely flammable liquid. Water can be an ineffective fire extinguishing means. It should be used in order to cool containers with the preparation to prevent explosion. Cool the containers exposed to fire and high temperatures with water from a safe distance, if possible, remove them from the hazard zone (explosion hazard).

Under the influence of heat or fire it decays with emission of highly toxic gas products: halide hydrides, trace quantities of carbonylhalides

5.3 Information for fire department

Prevent extinguishers from entering sewage main and water reservoirs. Give information about the fire. Evacuate from the hazard zone all persons not involved in the rescue operation. Call the State Fire Service and, if necessary, the State Police, appropriate local authorities and the nearest Hazardous Materials Response Team. Put the protective gas absorbing clothing and equipment isolating the respiratory tracts (oxygen apparatus complete with a mask).

SECTION 6: Measures in case of unintended release

6.1 Personal precautions, protective equipment and emergency procedures:

For persons out of the rescue staff: notify appropriate services of the emergency. Evacuate from the hazard zone all persons not involved in the emergency operation.

For the rescue staff: ensure proper ventilation, use personal protective equipment.

6.2 Precautions concerning the environmental protection

In case of a failure, avoid release to the environment. Prevent the product from entering sink basins, surface waters and groundwater as well as soil. If possible, try to collect the product in appropriate container for later disposal.

6.3 Methods and materials for containment and clean-up:

Avoid direct contact with the substance being released; dilute the gas being released with dispersed water currents; do not permit penetration of sewage to drains and waters; protect grates and drains; remove sources of ignition; if possible, eliminate leakage (shut down gas flow, seal, place damaged tank in air-tight emergency chamber). Do not release to the environment.



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6.4 References to other sections:

Disposal considerations – refer to the section 13 of the sheet.

Personal protection – refer to the section 8 of the sheet.

SECTION 7: Substance and mixture handling and storage**7.1 Precautions for safe handling:**

Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Avoid sources of ignition, heat, hot surfaces and open flame. Take precautionary measures against static discharges, make sure that the lighting system and wiring are intact and are not a potential source of ignition. Do not use cutting tools that cause sparks. Do not spray on naked flame or any incandescent material. Keep away from any heat sources and flame. Liquid and vapors are extremely flammable.

Observe safety and hygiene rules in a workplace: do not eat, drink and smoke and wash hands after use, remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a well ventilated, cool place. Keep away from children. Avoid direct sunlight and temperatures above 50 °C.

Professional use: Keep in the original, properly marked, hermetic containers, in cool, dry, well-ventilated warehouse premises (in a fireproof building). Keep away from source of heat. Keep away from children. Avoid direct sunlight and temperatures above 50 °C.

7.3 Final specific use(s):

Compressed Gas blown under high pressure allows to remove dust and other dirt from hardly accessible places. Used in electronics, photooptics, precision engineering, electromechanics, telecommunications.

SECTION 8: Exposure control and personal protection**8.1 Regulations concerning the control:**

Regulation of Minister of Labour and Social Policy of 29th November 2002 *on the highest allowable concentrations of health harmful factors at work environment*. (Journal of Laws no. 217/2002, item 1833 with further amendments.: Journal of Laws no. 212/2005 item 1769, Journal of Laws no.161/2007, item 1142, Journal of Laws no. 105/2009, item 807);

Ingredients with exposure limits:

	Substance name	CAS No.	MAC	STEL	TLV
1	propane	74-98-6	1800 mg/m ³	not established	not established
2	n-butane	106-97-8	1900 mg/m ³	3000 mg/m ³	not established



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Determination in air at workplaces:

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

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

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

8.2 Exposure control:

Appropriate mechanical control measures:

Use in well-ventilated areas.

When used professionally: it requires effective local exhaust ventilation and general ventilation of the area in order to reduce exposure of workers. The work environment should be monitored to ensure adequate ventilation. If the exhaust ventilation is insufficient, use a suitable personal protection equipment to protect the respiratory system.

Individual protection measures, such as personal protection equipment:

Eye or face protection:

Avoid contact with eyes. While handling the product, when there is a possibility of exposure, wear goggles which protect against gases (in the case of complete with a half-mask)

Skin protection

Hand protection

Avoid contact with skin. Wear coated protective gloves (e.g. viton, nitrile or polyvinyl alcohol).

Other:

In emergency situations wear appropriate clothing in anti-electrostatic version.

Respiratory protection:

Avoid inhalation of gas. When the concentration of substance is determined and known, personal protection equipment should be selected taking account of the concentration of substances occurring at the given workplace, exposure time, activities performed by the employee and recommendations stated by the manufacturer of personal protection equipment. In emergency situations respiratory system protection equipment in the form of half-masks or masks complete with AX absorber. In emergency when the concentration of the substance at the work post is unknown, use means of personal protection isolating the organism (gastight uniform complete with isolating respiratory system protection equipment).

Thermal hazard:

Not applicable.

Biological monitoring

Not determined.

Environment protection

The acceptable level of substances in the air - Regulation of the Minister of the Environment (Journal of Laws no. 47 of 03.03.2008, item 281): have been determined.



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Highest acceptable contaminant values for cleaned industrial sewage - Regulation of the Minister of the Environment (Journal of Laws no. 136/2006, item 964): not determined.

Permitted contamination values in industrial sewage introduced to drainage equipment - Regulation of the Minister of Infrastructure (Journal of Laws no. 129/2002, item 1108): not determined.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form:	gas, colorless in the form of aerosol
Odour:	odourless
pH:	7.0 inert
Temperature of boiling point:	no data available
Temperature of melting point:	no data available
Temperature of flashpoint	no data available
Temperature of autoignition:	no data available
Explosive properties:	not applicable
Vapour pressure:	no data available
Specific gravity:	no data available
Density:	no data available
Vapour density:	4,4 bar
Relative vapour density:	no data available
Gas pressure:	no data available
Solubility in water:	no data available
Vaporization rate:	no data available
Volatile components:	not applicable
Viscosity:	no data available

9.2. Other information:

No additional test results.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under normal use and storage conditions.

10.3 Possible dangerous reactions:

The product will not undergo dangerous polymerization.

10.4 Conditions to avoid

High temperature, source of ignition and exposure to open flame.

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10.5 Materials to avoid:

None

10.6 Hazardous decomposition products:

halide hydrides, trace quantities of carbonylhalides.

SECTION 11: Toxicological information**11.1 Information concerning toxicological effects:**

a) acute toxicity: not displayed

For hazardous ingredients:

Propane: odour detection threshold: 9022-36088 mg/m³**Butane:** odour detection threshold – 6240 mg/m³,LC₅₀ (rat, inhalation) – 658000 mg/m³ (4 h)

b) irritation effect: not displayed

c) corrosive activity: not displayed

d) allergenic activity: not displayed

e) repeated dose toxicity: not displayed

f) carcinogenicity: not displayed

g) mutagenicity: not displayed

h) harmful effect on the reproductive capacity: not displayed

Information concerning probable routes of entry:*Respiratory exposure*

No harmful effects

Skin contact

No harmful effects

Eye contact

Eye contamination with liquid substance may cause pain, redness and likely corneal damage.

Swallowing

Swallowing the product due its form is improbable.

None of the components is classified as carcinogenic, mutagenic or having harmful consequences for reproductive capacity according to Regulation of 25th February 2011 on *chemical substances and chemical preparations* (Journal of Laws no. 63, item 322).

Delayed, direct and chronic effects of transient and persistent exposure:

No data available.

Mutual influence:

No data available.



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SECTION 12: Ecological information

Detailed assessment has not been conducted, so there is no specific data. This preparation is not classified as dangerous to the environment. Do not allow to penetrate to any soil, surface waters, sewage system or water reservoirs.

12.1 Toxicity:

No data available.

12.3 Bioaccumulation capacity:

No data available.

12.4 Soil mobility:

No data available.

12.5 Assessment of the PBT and vPvB criteria:

No data available.

12.6 Other harmful effects:

No data available.

SECTION 13: Disposal considerations

13.1 Waste disposal methods:

Disposable packaging and waste disposal should be run by specialized companies, The method for disposal of collected waste products must be agreed with the competent local environment authorities.

Returned waste should be stored in original containers.

Empty containers must be disposed of according to the applicable regulations or delivered to an appropriate waste landfill.

Regulation of the Minister of Environment of 27th September 2001 on waste catalogue (Journal of Laws, No. 112, item 1206).

Waste (packaging) codes:

16 05 04 – gases in containers (including halocarbons) containing hazardous substances.

15 01 11 – metallic packaging containing a dangerous solid porous matrix (eg asbestos), including empty pressure containers.

EC waste regulations:

Council Directive No. 75/442/EEC on waste, Council Directive No.91/689/EEC on hazardous waste, Commission Decision No. 2000/532/EC of 3th May 2000 as regards the list of wastes, OJ Nr L 226/3 of 6th September 2000, with subsequent amendments.



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SECTION 14: Information about transport

14.1 UN code: UN 1950

14.2 Correct shipping UN name: flammable AEROSOLS

14.3 Transport hazard class(es): 2

14.4 Packing group: -

14.5 Environmental hazards: None

14.6 Special precautions for user: no data available

14.7 Bulk transport according to the annex II to the MARPOL 73/78 convention and IBC code: no data available

SECTION 15: Regulatory information

15.1 Legal regulations specific of the substance or mixture concerning safety, health and environment protection:

EU and Council Directive no. 1907/2006 of 18th December 2006 on register, assessment, issuing permissions and applied limitations on chemicals (REACH) with further amendments. EU and Council Directive of 16th December 2008 no. 1272/2008 (CLP) – (par. 55, annex VI, tab. 3.2). EU and Council Directive 67/548/EWG with further amendments, together with the annex 29 (2004/73/WE).

COUNCIL DIRECTIVE NO. 453/2010 of 20th May 2010 amending EU and Council Directive no. 1907/2006 on register, assessment, issuing permissions and applied limitations on chemicals (REACH).

Regulation of 25th February 2011 on chemical substances and their preparations (Journal of Laws no. 63, item 322.).

EU and Council Directive of 16th December 2008 no. 1272/2008 (CLP) with further amendments.

Regulation of the Minister of Health of 20th April 2012 on labelling and identification of packages for hazardous substances and hazardous preparations and some preparations (Journal of Laws 2012 No. 0, item 445).

Regulation of the Minister of Environment of 23rd April 2004 on the labelling regulation of packages (Journal of Laws no. 94, item 927).

Regulation of 27th April 2001 on wastes (Journal of Laws no. 62/2001, item 628 with further amendments).

Regulation of 11th May 2001 on packages and package waste products (Journal of Laws no. 63/2001, item 638 with amendments).

Regulation of Minister of Environment of 27th September 2001 on waste catalogue (Journal of Laws no. 112 item 1206).

Council Directive No. 75/442/EEC on waste, Council Directive No. 91/689/EEC on hazardous waste, Commission Directive No. 2000/532/EC of 3rd May 2000 on waste catalogue, OJ Nr L 226/3 of 6th September 2000, with further amendments.

Regulation of 24th October 2011 on hazardous substance transport (Journal of Laws no.227, item 1367).

Statement of the Council of Ministers of 16th January 2009 on enforcing the amendments in the A and B annex to the European agreement on international road transport of hazardous products (ADR) signed in Geneva on 30th September 1957 (Journal of Laws no. 27, item 162 with further amendments.).

ADR Regulations – legislative status as from 1st January 2011.



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Regulation of the Minister of Labour and Social Policy of 29th November 2002 on the maximum allowable concentrations and intensities of substances that are hazardous to health in the work environment (Journal of Laws 2009 no. 217/2002, item 1833 with further amendments).

Regulation of the Minister of Health of 30th December 2004 on occupational safety and health related to an occurrence of chemical factors in the workplace (Journal of Laws 2005 no. 11, item 86 with further amendments).

Regulation of Minister of Environment of 9th December 2003 on the substances extremely dangerous to the environment (Journal of Laws no. 217, item 2141).

15.2 Chemical safety assessment:

No chemical safety assessment for the substances contained in the preparation and for the preparation.

SECTION 16: Other information

All information herein is based on our current state-of-art of our knowledge. This Material Safety Data Sheet has been developed upon the respective document and data as provided by the original manufacturer of components. Purchases of our product have to take the existing legal regulations in force and other mandatory documents into account.

Other sources of basic data referred to for the revision of this MSDS include:

- ⤴ Legal regulations specified in the paragraph 15 of the MSDS
- ⤴ Annex I to Regulation (EU) 453/2010 of 20th May 2010.
- ⤴ Information from Bureau for Chemical Substances and Preparations, Public Health Inspector, prof. Nofer Institute of Occupational Medicine and Environmental Health.
- ⤴ Material Safety Data Sheet of the manufacturer of the chemical preparation: *Compressed Gas (Compressed Air)*

R- and H-phrases:

R12 – extremely flammable

H220 – extremely flammable gas

Description of the abbreviations acronyms and symbols used in this MSDS:

F+ - extremely flammable

Flam. Gas 1 – Flammable gas cat. 1

Press. Gas – Gas under pressure

MAC – Maximum Allowable Concentration

STEL – Short-Term Exposure Limit

TLV – Threshold Limit Value



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Training courses:

Before starting work with the product, provide obligatorily an OSH training course for the staff due to an occurrence of chemical factors in the workplace. Carry out, prove and acquaint the staff with occupational risk assessment in the workplace connected to an occurrence of chemical factors.