

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.08.2013

Revision: 28.08.2013

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

Product identifier**Trade name:** 035570-A/B Maxigas 400 gas cartridge, 600ml, thread connection 7/16"-EU**Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

Application of the substance / the preparation: Gas cartridge**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

ROTHENBERGER Werkzeuge GmbH

Industriestraße 7

D-65779 Kelkheim / Germany

Phone: +49 (0) 61 95 / 800 - 0

Fax: +49 (0) 6195 / 800 - 3500

Email: info@rothenberger.com

Further information obtainable from: ROTHENBERGER Werkzeuge GmbH**Emergency telephone number:**

Giftinformationszentrum-Nord / GIZ-Nord Poisons Centre

Telefon / Phone +49 (0) 551/19240

24h / 7d

2 Hazards identification

Classification of the substance or mixture:**Classification according to Regulation (EC) No 1272/2008:**

GHS02 flame

Flam. Gas 1 H220 Extremely flammable gas.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Press. Gas H280 Contains gas under pressure; may explode if heated.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

Xi; Irritant

R36: Irritating to eyes.



F+; Extremely flammable

R12: Extremely flammable.

R67: Vapours may cause drowsiness and dizziness.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements:**Labelling according to Regulation (EC) No 1272/2008:**

The product is classified and labelled according to the CLP regulation.

Hazard pictograms:

GHS02 GHS07

Signal word: Danger**Hazard-determining components of labelling:**

acetone

butane

propane

Hazard statements:

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

Other hazards:**Results of PBT and vPvB assessment:****PBT:** Not applicable.**vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures**Description:** Mixture of substances listed below with nonhazardous additions.(Contd. on page 3)

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Dangerous components:

CAS: 106-97-8	butane	25-50%
EINECS: 203-448-7	 F+ R12  Flam. Gas 1, H220; Press. Gas, H280	
CAS: 74-98-6	propane	25-50%
EINECS: 200-827-9	 F+ R12  Flam. Gas 1, H220; Press. Gas, H280	
CAS: 67-64-1	acetone	≤25%
EINECS: 200-662-2	 Xi R36;  F R11 R66-67  Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336	
CAS: 75-28-5	isobutane	≤10%
EINECS: 200-857-2	 F+ R12  Flam. Gas 1, H220; Press. Gas, H280	
CAS: 109-66-0	pentane	1-<2.5%
EINECS: 203-692-4	 Xn R65;  F+ R12;  N R51/53 R66-67  Flam. Liq. 2, H225;  Asp. Tox. 1, H304;  Aquatic Chronic 2, H411;  STOT SE 3, H336	

Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

Description of first aid measures:

After inhalation: Supply fresh air and to be sure call for a doctor.

After skin contact:

In cases of frost bites, rinse with plenty of water. Do not remove clothing. Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Call a doctor immediately.

Information for doctor:
Most important symptoms and effects, both acute and delayed:

No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting measures

Extinguishing media:
Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture: Can form explosive gas-air mixtures.

Advice for firefighters:

Protective equipment: Do not inhale explosion gases or combustion gases.

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6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources.

Environmental precautions: Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:** Ensure adequate ventilation.**Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:**Precautions for safe handling:**

Open and handle receptacle with care.

Use only in well ventilated areas.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

Do not spray onto a naked flame or any incandescent material.

Handle only outside or in explosion protected rooms.

Flammable gas-air mixtures may form in empty receptacles.

Emergency cooling must be available in case of nearby fire.

Conditions for safe storage, including any incompatibilities:**Storage:****Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Store only in the original receptacle.

Observe official regulations on storing packagings with pressurized containers.

Information about storage in one common storage facility: Store away from flammable substances.**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Store receptacle in a well ventilated area.

Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

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Control parameters:**Ingredients with limit values that require monitoring at the workplace:****106-97-8 butane**

WEL Short-term value: 1810 mg/m³, 750 ppm
Long-term value: 1450 mg/m³, 600 ppm
Carc (if more than 0.1% of buta-1.3-diene)

67-64-1 acetone

WEL Short-term value: 3620 mg/m³, 1500 ppm
Long-term value: 1210 mg/m³, 500 ppm

109-66-0 pentane

WEL Long-term value: 1800 mg/m³, 600 ppm

Exposure controls:**Personal protective equipment:****General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Do not inhale gases / fumes / aerosols.

Do not eat, drink, smoke or sniff while working.

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.

Protection of hands: Protective gloves

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties:**General Information:****Appearance:**

Form: Compressed liquefied gas

Colour: Colourless

Odour: Characteristic

Odour threshold: Not determined.

pH-value: Not determined.

Change in condition:

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: -44 °C

Flash point: -97 °C

Flammability (solid, gaseous): Not determined.

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Ignition temperature:	365 °C
Decomposition temperature:	Not determined.
Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	1.5 Vol %
Upper:	13.0 Vol %
Vapour pressure:	Not determined.
Density at 20 °C:	0.587 g/cm ³
Relative density:	Not determined.
Vapour density:	Not determined.
Evaporation rate:	Not applicable.
Solubility in / Miscibility with water at 20 °C:	1.185 g/l
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Other information:	No further relevant information available.

10 Stability and reactivity

Reactivity:**Chemical stability:****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

Possibility of hazardous reactions:

Forms explosive gas mixture with air.

Can react violently with oxygen rich (oxidizing) material. Danger of Explosion.

Used empty containers may contain product gases which form explosive mixtures with air.

Reacts with oxygen.

Reacts with fats and oils.

Conditions to avoid: No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects:**Acute toxicity:****Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.

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Sensitization: No sensitizing effects known.

12 Ecological information

Toxicity:**Aquatic toxicity:** No further relevant information available.**Persistence and degradability:** No further relevant information available.**Behaviour in environmental systems:****Bioaccumulative potential:** No further relevant information available.**Mobility in soil:** No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment:**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects:** No further relevant information available.

13 Disposal considerations

Waste treatment methods:**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.

14 Transport information

UN-Number:**ADR, IMDG, IATA**

UN2037

UN proper shipping name:**ADR**

2037 RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

IMDG, IATA

RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

Transport hazard class(es):**ADR****Class:**

2 5F Gases.

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Label: 2.1

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IMDG, IATA

Class: 2 Gases.
Label: 2.1
Packing group:
ADR, IMDG, IATA Void
Environmental hazards:
Marine pollutant: No
Special precautions for user: Warning: Gases.
Danger code (Kemler): 2.1
EMS Number: F-D,S-U
**Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code** Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ): 1L
Transport category: 2
Tunnel restriction code: D
UN "Model Regulation": UN2037, RECEPTACLES, SMALL, CONTAINING GAS
(GAS CARTRIDGES), 2.1

15 Regulatory information

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

R11 Highly flammable.
R12 Extremely flammable.
R36 Irritating to eyes.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

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Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)
