

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 14.05.2018

Revision: 14.05.2018

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

**1.1 Product identifier**

**Trade name: 35570 Maxigas 400**

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

No further relevant information available.

**Application of the substance / the preparation:**

Not available.

Gas cartridge

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

ROTHENBERGER Industrial GmbH

Sodener Strasse 47

65779 Kelkheim/Germany

Tel. +49 (0) 61 95/ 99 81 – 0

Fax +49 (0) 61 95/ 99 81 – 7910

Email: info-diy@rothenberger.com

**Further information obtainable from:** ROTHENBERGER Industrial GmbH

**1.4 Emergency telephone number:**

Giftinformationszentrum-Nord / GIZ-Nord Poisons Centre

Telefon / Phone +49 (0) 551/19240

24h / 7d

**SECTION 2: Hazards identification**

**2.1 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 (Comp.) H280 Contains gas under pressure; may explode if heated.

**2.2 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

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

acetone

**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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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

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

P381 In case of leakage, eliminate all ignition sources.

P410+P403 Protect from sunlight. Store in a well-ventilated place.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information:**

EUH066 Repeated exposure may cause skin dryness or cracking.

Buildup of explosive mixtures possible without sufficient ventilation.

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

### SECTION 3: Composition/information on ingredients

**3.2 Chemical characterisation: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 106-97-8	butane	25-30%
EINECS: 203-448-7	☠ Flam. Gas 1, H220; Press. Gas (Comp.), H280	
Reg.nr.: 01-2119474691-32		
CAS: 75-28-5	isobutane	25-30%
EINECS: 200-857-2	☠ Flam. Gas 1, H220; Press. Gas (Comp.), H280	
Reg.nr.: 01-2119485395-27		
CAS: 67-64-1	acetone	21.5%
EINECS: 200-662-2	☠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	
Reg.nr.: 01-2119471330-49		
CAS: 74-98-6	propane	21%
EINECS: 200-827-9	☠ Flam. Gas 1, H220; Press. Gas (Comp.), H280	
Reg.nr.: 01-2119486944-21		

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CAS: 109-66-0  
EINECS: 203-692-4

pentane  
⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H336

1.5%

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

#### SECTION 4: First aid measures

##### 4.1 Description of first aid measures:

###### General information:

Take affected persons out into the fresh air.  
Do not leave affected persons unattended.

**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.

##### 4.2 Most important symptoms and effects, both acute and delayed:

Frost bites

Unconsciousness

##### 4.3 Indication of any immediate medical attention and special treatment needed:

Treat frost-bitten areas appropriately.

If necessary oxygen respiration treatment.

#### SECTION 5: Firefighting measures

##### 5.1 Extinguishing media:

###### Suitable extinguishing agents:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents:** Water with full jet

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

##### 5.3 Advice for firefighters:

###### Protective equipment:

Mouth respiratory protective device.

Do not inhale explosion gases or combustion gases.

###### Additional information:

Collect contaminated fire fighting water separately. It must not enter the sewage system.

#### SECTION 6: Accidental release measures

##### 6.1 Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Keep away from ignition sources.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

##### 6.3 Methods and material for containment and cleaning up:

Absorb liquid components with liquid-binding material.

Ensure adequate ventilation.

##### 6.4 Reference to other sections:

See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

#### 7.1 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.

Pressurised 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.

#### 7.2 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 pressurised containers.

##### Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from oxidising agents.

##### 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.

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

### SECTION 8: Exposure controls/personal protection

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

#### 8.1 Control parameters:

##### Ingredients with limit values that require monitoring at the workplace:

##### 106-97-8 butane

WEL Short-term value: 1810 mg/m<sup>3</sup>, 750 ppm

Long-term value: 1450 mg/m<sup>3</sup>, 600 ppm

Carc (if more than 0.1% of buta-1.3-diene)

##### 67-64-1 acetone

WEL Short-term value: 3620 mg/m<sup>3</sup>, 1500 ppm

Long-term value: 1210 mg/m<sup>3</sup>, 500 ppm

##### 109-66-0 pentane

WEL Long-term value: 1800 mg/m<sup>3</sup>, 600 ppm

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**Additional Occupational Exposure Limit Values for possible hazards during processing:**

**630-08-0 carbon monoxide**

WEL Short-term value: 232 mg/m<sup>3</sup>, 200 ppm  
Long-term value: 35 mg/m<sup>3</sup>, 30 ppm  
BMGV

**8.2 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.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Filter AX

**Protection of hands:**

Protective gloves

Heat resistant 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.

**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

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties:**

**General Information:**

**Appearance:**

**Form:** Condensed gas

**Colour:** Colourless

**Odour:** Characteristic

**Odour threshold:** Not determined.

**pH-value:** Not determined.

**Change in condition:**

**Melting point/freezing point:** Undetermined.

**Initial boiling point and boiling range:** -44 °C

**Flash point:** -97 °C

**Flammability (solid, gas):** Not determined.

**Ignition temperature:** 365 °C

**Decomposition temperature:** Not determined.

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<b>Auto-ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
<b>Explosion limits:</b>	
<b>Lower:</b>	1,5 Vol %
<b>Upper:</b>	13,0 Vol %
<b>Vapour pressure at 20 °C:</b>	8300 hPa
<b>Density:</b>	Not determined.
<b>Relative density:</b>	Not determined.
<b>Vapour density:</b>	Not determined.
<b>Evaporation rate:</b>	Not applicable.
<b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>9.2 Other information:</b>	No further relevant information available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity:** No further relevant information available.

**10.2 Chemical stability:**

**Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions:**

Forms explosive gas mixture with air.

Can react violently with oxygen rich (oxidising) 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.

**10.4 Conditions to avoid:** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects:**

**Acute toxicity** Based on available data, the classification criteria are not met.

**Primary irritant effect:**

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure**

May cause drowsiness or dizziness.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

**12.1 Toxicity:**

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability:** No further relevant information available.

**12.3 Bioaccumulative potential:** No further relevant information available.

**12.4 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.

**12.5 Results of PBT and vPvB assessment:**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects:** No further relevant information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods:**

**European waste catalogue:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Uncleaned packaging:**

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

**SECTION 14: Transport information**

**14.1 UN-Number:**

ADR, IMDG, IATA

UN2037

**14.2 UN proper shipping name:**

ADR

2037 RECEPTACLES, SMALL, CONTAINING GAS  
(GAS CARTRIDGES)

IMDG, IATA

RECEPTACLES, SMALL, CONTAINING GAS (GAS  
CARTRIDGES)

**14.3 Transport hazard class(es):**

ADR



**Class:**

2 5F Gases.

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Label: 2.1

IMDG, IATA



Class: 2 Gases.  
Label: 2.1  
14.4 Packing group: Void  
ADR, IMDG, IATA  
14.5 Environmental hazards: Void  
Marine pollutant: No  
14.6 Special precautions for user: Warning: Gases.  
EMS Number: F-D,S-U  
14.7 Transport in bulk according to Annex II of  
Marpol and the IBC Code Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ): 1L  
Transport category: 2  
Tunnel restriction code: D  
UN "Model Regulation": UN 2037 RECEPTACLES, SMALL, CONTAINING GAS  
(GAS CARTRIDGES), 2.1

**SECTION 15: Regulatory information**

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

Directive 2012/18/EU

Qualifying quantity (tonnes) for the application of lower-tier requirements 10 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50 t

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

**SECTION 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.

**Training hints:**

Employees who use the product have to be trained on risks for health, hygiene, use of individual protection, accident preventive actions, rescue actions, etc.,

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**Department issuing SDS:**

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Wildsteig 4A  
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Fax. +49 (0) 202 2575701  
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**Contact:** Dr. Axel Deeg**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 Harmonised 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)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Gas 1: Flammable gases – Category 1  
Press. Gas (Comp.): Gases under pressure – Compressed gas  
Flam. Liq. 2: Flammable liquids – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
Asp. Tox. 1: Aspiration hazard – Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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