

Trade name: Maxigas 400 - Version A -600ml, 7/16"-EU

Product no.: 035570-A, 035570-B

Current version : 1.0.1, issued: 11.02.2020

Replaced version: 1.0.0, issued: 02.07.2019

Region: GB

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

1.1 Product identifier

Trade name

Maxigas 400 - Version A -600ml, 7/16"-EU

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

Relevant identified uses of the substance or mixture

Fuel gas

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet

Address

ROTHENBERGER Werkzeuge GmbH

Industriestraße 7

65779 Kelkheim

Telephone no. +49 (0) 61 95 / 800 - 1

Fax no. +49 (0) 6195 / 800 - 3500

e-mail info@rothenberger.com

Advice on Safety Data Sheet

sdb_info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Eye Irrit. 2; H319

Flam. Gas 1; H220

Press. Gas liq.; H280

STOT SE 3; H336

Classification information

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

Hazard pictograms



GHS02



GHS07

Signal word

Danger

Hazardous component(s) to be indicated on label:

acetone

Hazard statement(s)

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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 statement(s)

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.
P251	Do not pierce or burn, even after use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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.
P410	Protect from sunlight.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Labelling information

It is allowed to use the reduced labelling for gas containers for propane, butane or liquefied petroleum gas (LPG) based on Annex I, point 1.3.2 (EC Regulation 1272/2008 Annex I, 1.3.4).

2.3 Other hazards

Contact with the liquid can cause cold burns or frostbite. Vapours can form an explosive mixture with air.

PBT assessment

The components of this product are not considered to be a PBT.

vPvB assessment

The components of this product are not considered to be a vPvB.

SECTION 3: Composition/information on ingredients
3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures
Hazardous ingredients

No	Substance name		Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration	%
1	Petroleum gas, Petroleum gases, liquefied			
	68476-85-7 270-704-2 649-202-00-6 01-2119486557-22	Flam. Gas 1; H220 Press. Gas liq.; H280	>= 70.00 - < 90.00	Vol%
2	acetone			
	67-64-1 200-662-2 606-001-00-8 -	EUH066 Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336	>= 10.00 - < 25.00	Vol%
3	pentane			
	109-66-0 203-692-4 601-006-00-1 -	Aquatic Chronic 2; H411 Asp. Tox. 1; H304 EUH066 Flam. Liq. 2; H225 STOT SE 3; H336	< 2.50	Vol%

Full Text for all H-phrases and EUH-phrases: pls. see section 16

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
1	K	-	-	-

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Full text for the notes: pls. see section 16 "Notes relating to the identification, classification and labelling of substances ((EC) No 1272/2008, Annex VI)".

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove affected person from danger area, lay him down. If the patient is likely to become unconscious, place and transport in stable sideways position. In case of persisting adverse effects, consult a physician.

After inhalation

Ensure supply of fresh air. If breathing is irregular or stopped, administer artificial respiration.

After skin contact

In case of frostbite, rinse with plenty of water. Do not remove clothing. In case of contact with skin wash off immediately with copious amounts of water. Seek medical attention.

After eye contact

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Get immediate ophthalmic treatment.

After ingestion

Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

CNS depression; drowsiness; Dizziness; Disturbance of vision; Frostbite

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Extinguishing powder; Carbon dioxide

Unsuitable extinguishing media

High power water jet; Foam

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon monoxide and carbon dioxide; May explode if exposed to heat. Liquefied gas: Spilled liquid can cause cold burns. This gas is heavier than air and may accumulate in low areas. Formation of explosive mixtures with air is possible. In case of fire: danger of pressure build up, which could result in container rupture.

5.3 Advice for firefighters

Use self-contained breathing apparatus. Wear protective clothing. Containers close to fire should be transferred to a safe place. Cool closed containers exposed to fire with water. Pressure increase, bursting and explosion hazard during heating.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Keep away sources of ignition. Evacuate all unprotected personnel from the danger zone. Use personal protective clothing.

For emergency responders

Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Avoid release in the environment. Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

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6.3 Methods and material for containment and cleaning up

Ensure adequate ventilation. Allow to vaporise.

6.4 Reference to other sections

Information regarding safe handling, see chapter 7. Information regarding personal protective measures, see chapter 8. Information regarding waste disposal, see chapter 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Product inherent handling risks must be minimised taking the appropriate measures for protection and preventive actions. The working process should be designed to rule out the release of hazardous substances or skin contact as far it is possible by the state of the art. Provide good room ventilation even at ground level (vapours are heavier than air). Open and handle container with care. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Handle with care - avoid bumps, friction and impact.

General protective and hygiene measures

Wash hands before breaks and after work. Do not inhale gases. Do not eat, drink or smoke during work time. Keep away from food, drink and animal feeding stuffs. Avoid contact with eyes and skin. Remove contaminated clothing and shoes and launder thoroughly before reusing.

Advice on protection against fire and explosion

Vapours can form an explosive mixture with air. Isolate from sources of heat, sparks and open flame. Take precautionary measures against electrostatic loading (earthing necessary during loading operations). Use explosion-proof equipment/fittings and non-sparking tools. Electrical equipment should be protected to the appropriate standard.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed in a cool, well-ventilated place, open and handle carefully. Protect from heat and direct sunlight.

Recommended storage temperature

Value < 50 °C

Requirements for storage rooms and vessels

Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original.

Incompatible products

Do not store together with: oxidizing agents; oxidizing substances

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.	EC no.
1	Petroleum gas, Petroleum gases, liquefied	68476-85-7	270-704-2
	List of approved workplace exposure limits (WELs) / EH40		
	Liquefied petroleum gas		
	WEL short-term (15 min reference period)	2180 mg/m ³	1250 ppm
	WEL long-term (8-hr TWA reference period)	1750 mg/m ³	1000 ppm
	Comments	Carc (only applies if LPG contains more than 0.1% of buta-1,3-diene)	
2	acetone	67-64-1	200-662-2
	2000/39/EC		
	Acetone		
	WEL long-term (8-hr TWA reference period)	1210 mg/m ³	500 ppm

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List of approved workplace exposure limits (WELs) / EH40					
Acetone					
	WEL short-term (15 min reference period)	3620	mg/m ³	1500	ppm
	WEL long-term (8-hr TWA reference period)	1210	mg/m ³	500	ppm
3	carbon monoxide	630-08-0		211-128-3	
2017/164/EU					
Carbon monoxide					
	WEL short-term (15 min reference period)	117	mg/m ³	100	ppm
	WEL long-term (8-hr TWA reference period)	23	mg/m ³	20	ppm
List of approved workplace exposure limits (WELs) / EH40					
Carbon monoxide					
	WEL short-term (15 min reference period)	117	mg/m ³	100	ppm
	WEL long-term (8-hr TWA reference period)	23	mg/m ³	20	ppm
	Comments	BMGV			
List of approved workplace exposure limits (WELs) / EH40					
Carbon monoxide					
	WEL short-term (15 min reference period)	232	mg/m ³	200	ppm
	WEL long-term (8-hr TWA reference period)	35	mg/m ³	30	ppm
	Comments	Limits applicable to underground mining & tunnelling industries ONLY until 21/8/23			
4	pentane	109-66-0		203-692-4	
2006/15/EC					
Pentane					
	WEL long-term (8-hr TWA reference period)	3000	mg/m ³	1000	ppm
List of approved workplace exposure limits (WELs) / EH40					
Pentane					
	WEL long-term (8-hr TWA reference period)	1800	mg/m ³	600	ppm

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, local exhaust at the work station if necessary.

Personal protective equipment

Respiratory protection

Self-contained breathing apparatus. In case of insufficient ventilation or long-term effect use breathing apparatus.

Eye / face protection

Tightly fitting safety glasses (EN 166).

Hand protection

insulated gloves; Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other

Chemical-resistant work clothes. Fire-resistant antistatic protective clothing. Protective shoes.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form/Colour
Compressed liquified gas
colourless
Odour
characteristic
Odour threshold

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Value	2.9 - 14.6	mg/m ³
Reference substance	n-Butan	
Source	supplier	
Value	47.5 - 1613.9	mg/m ³
Reference substance	Acetone	
Source	supplier	
pH value		
No data available		
Boiling point / boiling range		
Value	-0.5	°C
Source	supplier	
Melting point / melting range		
Value	< 130	°C
Source	supplier	
Decomposition point / decomposition range		
No data available		
Flash point		
Value	-74	°C
Source	supplier	
Ignition temperature		
Value	465	°C
Auto-ignition temperature		
Value	365	°C
Oxidising properties		
not oxidizing		
Explosive properties		
This product is not explosive. In and after use danger of production of inflammable compounds.		
Flammability (solid, gas)		
highly flammable		
Source	supplier	
Lower flammability or explosive limits		
Value	1.8	% vol
Reference substance	n-Butan	
Source	supplier	
Value	1.8	% vol
Reference substance	isobutane	
Source	supplier	
Value	2.2	% vol
Reference substance	propane	
Source	supplier	
Value	2.5	% vol
Reference substance	Acetone	
Source	supplier	
Upper flammability or explosive limits		
Value	8.4	% vol
Reference substance	n-Butan	
Source	supplier	
Value	9.8	% vol
Reference substance	isobutane	
Source	supplier	
Value	10	% vol
Reference substance	propane	
Source	supplier	

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Value	12.8	% vol
Reference substance	Acetone	
Source	supplier	

Vapour pressure		
Value	1820	mmHg
Reference temperature	25	°C
Reference substance	n-Butan	
Source	supplier	
Value	2611	mmHg
Reference temperature	25	°C
Reference substance	isobutane	
Source	supplier	
Value	7150	mmHg
Reference temperature	25	°C
Reference substance	propane	
Source	supplier	
Value	231	mmHg
Reference temperature	25	°C
Reference substance	Acetone	
Source	supplier	

Vapour density		
Value	2.07	
Reference substance	n-Butan	
Source	supplier	
Comments	Air = 1	
Value	2.07	
Reference substance	isobutane	
Source	supplier	
Comments	Air = 1	
Value	1.56	
Reference substance	propane	
Source	supplier	
Comments	Air = 1	

Evaporation rate		
No data available		

Relative density		
Value	0.6	
Reference substance	n-Butan	
Source	supplier	
Comments	Water=1	
Value	0.6	
Reference substance	isobutane	
Source	supplier	
Comments	Water=1	
Value	0.8	
Reference substance	Acetone	
Source	supplier	
Comments	Water=1	

Density		
No data available		

Solubility in water		
No data available		

Solubility(ies)		
Value	61.2	mg/l
Reference temperature	25	°C
Reference substance	n-Butan	
Source	supplier	

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Value	48.9	mg/l
Reference temperature	25	°C
Reference substance	isobutane	
Source	supplier	
Value	62.4	ppm
Reference temperature	25	°C
Reference substance	propane	
Source	supplier	

Partition coefficient: n-octanol/water
No data available

Viscosity		
Value	0.30	cSt
Reference temperature	20	°C
Reference substance	n-Butan	
Source	supplier	
Comments	Liquid	
Value	0.20	cSt
Reference temperature	20	°C
Reference substance	propane	
Source	supplier	
Comments	Liquid	
Value	0.32	cSt
Reference temperature	20	°C
Reference substance	Acetone	
Source	supplier	
Comments	Liquid	

9.2 Other information

Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions

Risk of formation of explosive gas mixtures in air. Reactions with oxygen. Exothermal reactions are possible in the event of contact with incompatible substances.

10.4 Conditions to avoid

Temperatures > 50°C. Heat, naked flames and other ignition sources.

10.5 Incompatible materials

Oxidizing agents; Halogens

10.6 Hazardous decomposition products

None, if handled according to intended use.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity
No data available

Acute dermal toxicity
No data available

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Acute inhalational toxicity
No data available
Skin corrosion/irritation
No data available
Serious eye damage/irritation
No data available
Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
No data available
Reproduction toxicity
No data available
Carcinogenicity
No data available
STOT - single exposure
No data available
STOT - repeated exposure
No data available
Aspiration hazard
No data available

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)
No data available
Toxicity to fish (chronic)
No data available
Toxicity to Daphnia (acute)
No data available
Toxicity to Daphnia (chronic)
No data available
Toxicity to algae (acute)
No data available
Toxicity to algae (chronic)
No data available
Bacteria toxicity
No data available

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	The components of this product are not considered to be a PBT.
vPvB assessment	The components of this product are not considered to be a vPvB.

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12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

dispose of in accordance with local regulation.

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Compressed gas packaging under pressure. Do not open by force. Do not heat above 50°C. Dispose of compressed gas packagings only if completely discharged. Do not burn empty compressed gas packagings. Do not pierce, cut or weld uncleaned containers.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	2
Classification code	5F
UN number	UN2037
Proper shipping name	RECEPTACLES, SMALL, CONTAINING GAS
Tunnel restriction code	D
Label	2.1

14.2 Transport IMDG

Class	2
UN number	UN2037
Proper shipping name	RECEPTACLES, SMALL, CONTAINING GAS
EmS	F-D, S-U
Label	2.1

14.3 Transport ICAO-TI / IATA

Class	2.1
UN number	UN2037
Proper shipping name	Receptacles, small, containing gas
Label	2.1

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

To be transported always in closed, upright and safe containers. Make sure that persons handling these containers are aware of the rules of conduct in case of incident or spillage.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

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According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.
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Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, PREPARATIONS AND ARTICLES	
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The product is considered being subject to REACH regulation (EC) 1907/2006 annexe XVII.	No 40
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Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances	
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This product is subject to Part I of Annex I, risk category:	P2
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Other regulations

Adhere to the national sanitary and occupational safety regulations when using this product.
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15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this mixture.

SECTION 16: Other information

Further information

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

Sources of key data used to compile the data sheet:

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

National Threshold Limit Values of the corresponding countries as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EU

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H411	Toxic to aquatic life with long lasting effects.

Notes relating to the identification, classification and labelling of substances and mixtures ((EC) No 1272/2008, Annex VI)

C	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
K	The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0.1 % w/w 1,3-butadiene (EINECS No 203-450-8). If the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P210-P403 (Table 3.1) or the S-phrases (2-)9-16 (Table 3.2) should apply. This note applies only to certain complex oil-derived substances in Part 3.

Department issuing safety data sheet

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

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