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

1.1 Product identifier

Trade name

Steel acetylene tank, filled

Substance name	acetylene
REACH registration no.	01-2119457406-36

Identification numbers

CAS no.	74-86-2
EC no.	200-816-9
Index no.	601-015-00-0

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

Relevant identified uses of the substance or mixture
Technical 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)
Chem. Unst. Gas A; H230
Flam. Gas 1; H220
Press. Gas compr.; H280

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 and 4 of Annex I to CLP.

2.2 Label elements

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

Product identifier
74-86-2 (acetylene)

Hazard pictograms


GHS02


GHS04

Signal word
Danger

Hazard statement(s)

H220	Extremely flammable gas.
H230	May react explosively even in the absence of air.
H280	Contains gas under pressure; may explode if heated.

Precautionary statement(s)

P102	Keep out of reach of children.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P403	Store in a well-ventilated place.

2.3 Other hazards

PBT assessment
No data available.

vPvB assessment
No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterization

Substance name	acetylene
Molecular weight	26

Identification numbers

CAS no.	74-86-2
EC no.	200-816-9
Index no.	601-015-00-0

3.2 Mixtures

Not applicable. The product is not a mixture.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. In case of persisting adverse effects, consult a physician.

After inhalation
Remove affected persons from dangerous area by observing suitable respiratory protection measures. Ensure supply of fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a doctor immediately.

After skin contact
In case of contact with skin wash off with water. In case of frostbite, rinse with plenty of water. Do not remove clothing.

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). Seek medical assistance.

After ingestion
Rinse the mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms
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; Water spray jet; Water mist

Unsuitable extinguishing media
High power water jet; Carbon dioxide

5.2 Special hazards arising from the substance or mixture
In case of fire: danger of pressure build up, which could result in container rupture. Formation of explosive mixtures with air is possible. In the event of fire, the following can be released: Carbon monoxide and carbon dioxide

5.3 Advice for firefighters
Use self-contained breathing apparatus. Wear protective clothing. Run-off water from fire fighting must not be discharged into drains or enter surface water. Cool closed containers exposed to fire with water.

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 from ignition sources. Evacuate all unprotected personnel from the danger zone. Use breathing apparatus if exposed to vapours/dust/aerosol. Keep people away and stay on the upwind side.

For emergency responders
Personal protective equipment (PPE) - see section 8.

6.2 Environmental precautions
No special measures necessary. Stop gas leak.

6.3 Methods and material for containment and cleaning up
Ensure adequate ventilation.

6.4 Reference to other sections
Information regarding safe handling, see section 7. Information regarding personal protective measures, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances. Ensure adequate ventilation. Open and handle container with care. Only qualified and trained persons are authorised to handle. Handle with care - avoid bumps, friction and impact. Avoid eye, skin and clothing contact.

General protective and hygiene measures
Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Remove contaminated clothing and shoes and launder thoroughly before reusing.

Advice on protection against fire and explosion
Keep away from sources of heat and ignition. No sparking tools should be used. Take precautionary measures against electrostatic loading (earthing necessary during loading operations). Vapours can form an explosive mixture with air.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed and dry in a cool, well-ventilated place. 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. Keep only in the original container. Keep only in the original container (with safety valve).

Incompatible products
Substances to be avoided, see section 10.

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No parameters available for monitoring.

8.2 Exposure controls

Appropriate engineering controls
Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL (=Occupational Exposure Limit), suitable respiratory protection must be worn. Handle substance within a closed system; Establish monitoring systems for monitoring particulates, vapours, gases concentrations.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Respirator	EN 14387, EN 136

Eye / face protection
Safety glasses with side protection shield (EN 166)

Hand protection
Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. 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
Fire-resistant antistatic protective clothing. Chemical-resistant work clothes.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation
gas

Form
Compressed liquified gas

Colour
colourless

Odour
garlic-like

pH value
No data available

Boiling point / boiling range			
Value		-84	°C
Source	supplier		

Melting point/freezing point			
Value		-80.8	°C
Source	supplier		

Decomposition temperature
No data available

Flash point
No data available

Ignition temperature			
Value		305	°C
Source	supplier		

Auto-ignition temperature	
Comments	Product is not selfigniting.

Flammability
No data available

Lower explosion limit			
Value		2.3	% vol
Source	supplier		

Upper explosion limit			
Value		100	% vol
Source	supplier		

Vapour pressure			
Value		44	bar
Reference temperature		20	°C
Source	supplier		

Relative vapour density
No data available

Relative density	
Value	0.9
Source	supplier
Comments	Air = 1

Density
No data available

Solubility in water			
Value		1185	mg/l
Source	supplier		

Solubility
No data available

Partition coefficient n-octanol/water (log value)
No data available

Kinematic viscosity
No data available

Particle characteristics
No data available

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
Reaction with combustible materials, grease, oils, reducing agents and organic substances. Risk of formation of explosive gas mixtures in air. May decompose violently at high temperatures and/or pressure or in the presence of a catalyst.

10.4 Conditions to avoid
Heat, naked flames and other ignition sources. Temperatures > 50°C.

10.5 Incompatible materials
Oxidizing agents; air; copper; Silver; Mercury

10.6 Hazardous decomposition products
No data available.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity
No data available

Acute dermal toxicity
No data available

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

11.2 Information on other hazards

Endocrine disrupting properties

No data available.

Other information
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	No data available.
vPvB assessment	No data available.

12.6 Endocrine disrupting properties
No data available.

12.7 Other adverse effects
No data available.

12.8 Other information

Other information
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.
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

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer. 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	4F
Hazard identification no.	239
UN number	UN1001
Proper shipping name	ACETYLENE, DISSOLVED
Tunnel restriction code	B/D
Label	2.1

14.2 Transport IMDG

Class	2.1
UN number	UN1001
Proper shipping name	ACETYLENE, DISSOLVED
EmS	F-D, S-U
Label	2.1

14.3 Transport ICAO-TI / IATA

Class	2.1
UN number	UN1001
Proper shipping name	Acetylene, dissolved
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

No data available.

14.7 Maritime transport in bulk according to IMO instruments

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)
In accordance with the REACH regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

REACH candidate list of substances of very high concern (SVHC) for authorisation
In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES	
The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.	No 40

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances				
This substance is subject to Part 2 of Annex I				
No	**Substance name**	**CAS no.**	**EC no.**	**No**
1	**acetylene**	**74-86-2**	**200-816-9**	**19**

Other regulations
Adhere to the national sanitary and occupational safety regulations when using this product.

15.2 Chemical safety assessment

A chemical safety assessment has been carried out for this substance.

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.
Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Creation of the safety data sheet
UMCO GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 187, Tel.: +49(40)555 546 300, Fax: +49(40)555 546 357, e-mail: umco@umco.de

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.

Document protected by copyright. Alterations or reproductions require the express written permission of UMCO GmbH.
Prod-ID 753770