

**Trade name:** R1270 - Propene 2.5; Tegan®1270, Propene 2.5**Product no.:** R1270**Current version :** 2.1.0, issued: 13.05.2020**Replaced version:** 2.0.0, issued: 20.02.2019**Region:** GB**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name****R1270 - Propene 2.5; Tegan®1270, Propene 2.5**

Substance name propene  
 REACH registration no. 01-2119447103-50

**Identification numbers**

CAS no. 115-07-1  
 EC no. 204-062-1  
 Index no. 601-011-00-9

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

Industrial Use  
 Professional use  
 Formulation of mixtures

**General chemical processes**

soldering agent  
 welding technology  
 Intermediate  
 industrial chemicals  
 electronic components  
 Refrigerant

**Uses advised against**

Consumer use

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

TEGA - Technische Gase und Gasetechnik GmbH  
 Werner-von-Siemens-Straße 18  
 97076 Würzburg

Telephone no. +49 931 2093-220  
 Fax no. +49 931 2093-180  
 e-mail kaeltmittel@tega.de

**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)**

Flam. Gas 1; H220  
 Press. Gas liq.; H280

Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
U	-	-	-

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)".

**Classification information**

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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**

115-07-1 (propene)

**Hazard pictograms**

GHS02



GHS04

**Signal word**

Danger

**Hazard statement(s)**

H220

Extremely flammable gas.

H280

Contains gas under pressure; may explode if heated.

**Precautionary statement(s)**

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.

P381

In case of leakage, eliminate all ignition sources.

P403

Store in a well-ventilated place.

## 2.3 Other hazards

Contact with the liquid can cause cold burns or frostbite.

PBT assessment

The product is not considered to be a PBT.

vPvB assessment

The product is not considered to be a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

**Chemical characterization**

Substance name propene

Formula C<sub>3</sub>H<sub>6</sub>

Molecular weight 42.08

**Identification numbers**

CAS no. 115-07-1

EC no. 204-062-1

Index no. 601-011-00-9

### 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**

In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may

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not be aware of asphyxiation. Remove affected person from danger area, lay him down. Seek medical advice immediately.

**After inhalation**

Remove affected persons from dangerous area by observing suitable respiratory protection measures. Ensure supply of fresh air. Irregular breathing/no breathing: artificial respiration. Call a doctor immediately.

**After skin contact**

In case of contact with skin wash off immediately with soap and 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).

**After ingestion**

Rinse mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person.

**4.2 Most important symptoms and effects, both acute and delayed****Symptoms**

Shortness of breath; Frostbite; respiratory arrest. Unconsciousness

**4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Extinguishing powder; Water spray jet; Water mist; Foam

**Unsuitable extinguishing media**

High power water jet; Carbon dioxide

**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.

**5.3 Advice for firefighters**

Use self-contained breathing apparatus. Wear full protective suit. 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. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

**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. Do not breathe gas. Cordon and mark contaminated area. Remove persons to safety. Risk of explosion.

**For emergency responders**

No data available. Personal protective equipment (PPE) - see Section 8.

**6.2 Environmental precautions**

Avoid release in the environment. Suppress gases/vapours/mists with water spray jet.

**6.3 Methods and material for containment and cleaning up**

Ensure adequate ventilation. Dispose of absorbed material in accordance with the regulations.

**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.

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Only qualified and trained persons are authorised to handle. Provide good ventilation at the work area (local exhaust ventilation, if necessary). To be used only according to instructions for use. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers heat or sources of ignition. In case of accidental release: danger due to low temperature of the liquid product. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Comply with the health and safety at work laws.

**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 foodstuffs and beverages. Have emergency shower available.

**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: combustible materials; oxidizing agents; oxidizing substances; spontaneously combusting substances; explosive substances

**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**

Ensure adequate ventilation, local exhaust at the work station if necessary. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

**Personal protective equipment****Respiratory protection**

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

Respiratory filter (gas) : AX

**Eye / face protection**

Tightly fitting safety glasses (EN 166).

**Hand protection**

Low-temperature-resistant gloves (EN 511). 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

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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.

Appropriate Material nitrile  
Breakthrough time 240 min

**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**

<b>Form/Colour</b>	
liquified gas	
colourless	
<b>Odour</b>	
odourless	
<b>Odour threshold</b>	
No data available	
<b>pH value</b>	
No data available	
<b>Boiling point / boiling range</b>	
Value	-47.69 °C
Reference pressure	1.013 hPa
<b>Melting point / melting range</b>	
Value	appr. -185 °C
<b>Decomposition point / decomposition range</b>	
No data available	
<b>Flash point</b>	
No data available	
<b>Auto-ignition temperature</b>	
Value	455 - 460 °C
<b>Oxidising properties</b>	
No data available	
<b>Explosive properties</b>	
May form explosive gas-air mixtures.	
<b>Flammability (solid, gas)</b>	
highly flammable	
<b>Lower flammability or explosive limits</b>	
Value	1.8 % vol
<b>Upper flammability or explosive limits</b>	
Value	11 % vol
<b>Vapour pressure</b>	
Value	appr. 1158 kPa
Reference temperature	25 °C
<b>Vapour density</b>	

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Value	1.49
Comments	Air = 1

**Evaporation rate**

No data available

**Relative density**

No data available

**Density**

No data available

**Solubility in water**

Value	200	mg/l
Reference temperature	25	°C

**Solubility(ies)**

No data available

**Partition coefficient: n-octanol/water**

No	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
log Pow		1.77	
Reference temperature		20	°C
with reference to Source		pH 7 ECHA	

**Viscosity**

Value	0.083	mPa*s
Reference temperature	16.7	°C
Type	dynamic	

**9.2 Other information****Other information**

No data available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Dangerous reactions are not expected if the product is handled according to its intended use.

**10.2 Chemical stability**

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

**10.3 Possibility of hazardous reactions**

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

**10.4 Conditions to avoid**

T &gt; 48 °C; Heat, naked flames and other ignition sources.

**10.5 Incompatible materials**

Oxidizing agents; humidity

**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

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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	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Reproduction toxicity			
No	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
Route of exposure		inhalational	
Species		rat / mouse	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Carcinogenicity			
No	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
Route of exposure		inhalational	
Species		rat / mouse	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

STOT - single exposure
No data available

STOT - repeated exposure			
No	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
Route of exposure		inhalational	
Species		rat / mouse	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Aspiration hazard
No data available

## SECTION 12: Ecological information

## 12.1 Toxicity

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
LC50		51.7	mg/l
Duration of exposure		96	h
Species		fish	
Method		QSAR	
Source		ECHA	

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Toxicity to fish (chronic)	
No data available	

Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
EC50		28.2	mg/l
Duration of exposure		48	h
Species		Daphnia	
Method		QSAR	
Source		ECHA	

Toxicity to Daphnia (chronic)	
No data available	

Toxicity to algae (acute)			
No	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
EC50		12.1	mg/l
Duration of exposure		96	h
Species		Algae	
Method		QSAR	
Source		ECHA	

Toxicity to algae (chronic)	
No data available	

Bacteria toxicity	
No data available	

## 12.2 Persistence and degradability

Abiotic Degradation			
No	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
Type		Photolysis	
Half-life		14.6	h
Source		ECHA	

## 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water			
No	Substance name	CAS no.	EC no.
1	propene	115-07-1	204-062-1
log Pow		1.77	
Reference temperature		20	°C
with reference to		pH 7	
Source		ECHA	

## 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 product is not considered to be a PBT.
vPvB assessment	The product is not considered to be a vPvB.

## 12.6 Other adverse effects

No data available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



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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	2F
Hazard identification no.	23
UN number	UN1077
Proper shipping name	PROPYLENE
Tunnel restriction code	B/D
Label	2.1 RID: (+13)

**14.2 Transport IMDG**

Class	2.1
UN number	UN1077
Proper shipping name	PROPYLENE
EmS	F-D, S-U
Label	2.1

**14.3 Transport ICAO-TI / IATA**

Class	2.1
UN number	UN1077
Proper shipping name	Propylene
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)**

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, 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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<b>Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances</b>	
This product is subject to Part I of Annex I, risk category:	P2

<b>Other regulations</b>	
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****Sources of key data used to compile the data sheet:**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

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

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

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

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

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

U When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

**Department issuing safety data sheet**

UMCO GmbH

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.

**Alterations/supplements:**

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

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