



# KRYPTON

## Safety Data Sheet

In accordance with the Regulation on Safety Data Sheets Regarding Hazardous Substances and Mixtures published in the Official Journal numbered 29204 on December 13, 2014

Date of issue: 26/03/2019 Version: 1.0

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

#### 1.1. Product identifier

Product form : Substance  
Substance name : KRYPTON  
EC-No. : 231-098-5  
CAS-No. : 7439-90-9  
Product code : EIGA077A  
Formula : Kr  
Product group : Trade product  
REACH authorisation exemptions : Exempted from REACH registration

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

Relevant identified uses : Test gas/Calibration gas,Laser gas,Laboratory use,Industrial and professional. Perform risk assessment prior to use,Contact supplier for more information on uses.  
Uses advised against : Consumer use.

#### 1.3. Details of the supplier of the safety data sheet

KOYUNCU TİCARET A.Ş.  
GEBZE 5 (KİMYA) İHTİSAS OSB GEBKİM OSB RECEP YAZICI CAD.NO:4  
DİLOVASI  
KOCAELİ - Türkiye  
T +90 262 658 06 05  
[satis@koyuncutas.com](mailto:satis@koyuncutas.com) - [www.koyuncutas.com](http://www.koyuncutas.com)

#### 1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Turkey	Ulusal Zehir Merkezi (UZEM) Refik Saydam Hıfzıssıhha Merkezi Başkanlığı	Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 06590 Ankara	114	Information is provided to public and medical personnel on poisoning incidents via 114.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

Gases under pressure : Compressed gas H280

Full text of H-statements: see section 16

#### 2.2. Label elements

Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

Hazard pictograms (SEA) :



GHS04

Signal word (SEA) : Warning  
Hazard statements (SEA) : H280 - Contains gas under pressure; may explode if heated.  
Precautionary statements (SEA) : P410+P403 - Protect from sunlight. Store in a well-ventilated place.  
Child-resistant fastening : Not applicable  
Tactile warning : Not applicable

#### 2.3. Other hazards

##### Other hazards not contributing to the classification

Other hazards not contributing to the classification : Asphyxiant in high concentrations.



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### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Name	Product identifier	%	Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.
KRYPTON	(CAS-No.) 7439-90-9 (EC-No.) 231-098-5 (REACH-no) *1	100	Press. Gas (Comp.), H280

Full text of H-statements: see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing stopped.
- First-aid measures after skin contact : Adverse effects not expected from this product.
- First-aid measures after eye contact : Adverse effects not expected from this product.
- First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

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

- Most important symptoms and effects, both acute and delayed : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Refer to section 11.

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

None.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray or fog.
- Unsuitable extinguishing media : Do not use water jet to extinguish.

#### 5.2. Special hazards arising from the substance or mixture

- Reactivity in case of fire : No reactivity hazard other than the effects described in sub-sections below.
- Hazardous combustion products : None.

#### 5.3. Advice for firefighters

- Specific methods : Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. Move containers away from the fire area if this can be done without risk.
- Special protective equipment for fire fighters : In confined space use self-contained breathing apparatus. Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters. Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves for firefighters. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.

### SECTION 6: Accidental release measures

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

- General measures : Try to stop release. Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation. Oxygen detectors should be used when asphyxiating gases may be released. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Act in accordance with local emergency plan. Stay upwind.

##### 6.1.1. For non-emergency personnel

No additional information available

##### 6.1.2. For emergency responders

No additional information available



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### 6.2. Environmental precautions

Try to stop release.

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

Methods and material for containment and cleaning up : Ventilate area.

### 6.4. Reference to other sections

See also sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Safe use of the product : The product must be handled in accordance with good industrial hygiene and safety procedures. Only experienced and properly instructed persons should handle gases under pressure. Consider pressure relief device(s) in gas installations. Ensure the complete gas system was (or is regularly) checked for leaks before use. Do not smoke while handling product. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Avoid suck back of water, acid and alkalis. Do not breathe gas. Avoid release of product into work area.

Safe handling of the gas receptacle : Refer to supplier's container handling instructions. Do not allow backfeed into the container. Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. Keep container valve outlets clean and free from contaminants particularly oil and water. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Close container valve after each use and when empty, even if still connected to equipment. Never attempt to transfer gases from one cylinder/container to another. Never use direct flame or electrical heating devices to raise the pressure of a container. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents. Suck back of water into the container must be prevented. Open valve slowly to avoid pressure shock.

### 7.2. Conditions for safe storage, including any incompatibilities

Conditions for safe storage, including any incompatibilities : Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Container valve guards or caps should be in place. Containers should be stored in the vertical position and properly secured to prevent them from falling over. Stored containers should be periodically checked for general condition and leakage. Keep container below 50°C in a well ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible materials.

### 7.3. Specific end use(s)

None.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

KRYPTON (7439-90-9)	
DNEL/DMEL (additional information)	
Additional information	None available.
PNEC (additional information)	
Additional information	None available.

Additional information : None available.

### 8.2. Exposure controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Oxygen detectors should be used when asphyxiating gases may be released. Systems under pressure should be regularly checked for leakages. Consider the use of a work permit system e.g. for maintenance activities.

Personal protective equipment : A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered: PPE compliant to the recommended EN/ISO standards should be selected.

Hand protection : Wear working gloves when handling gas containers. Standard EN 388 - Protective gloves against mechanical risk.



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Eye protection	: Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - specifications
Respiratory protection	: Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.
Thermal hazard protection	: None in addition to the above sections.
Environmental exposure controls	: None necessary.
Other information	: Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Gas
Molecular mass	: 84 g/mol
Colour	: Colourless.
Odour	: No odour warning properties.
Odour threshold	: Odour threshold is subjective and inadequate to warn of overexposure.
pH	: Not applicable for gases and gas mixtures.
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: Not applicable for gases and gas mixtures.
Melting point	: -157.2 °C
Freezing point	: -157.2 °C
Boiling point	: -153 °C
Flash point	: Not applicable for gases and gas mixtures.
Critical temperature	: -63.8 °C
Auto-ignition temperature	: Non flammable.
Decomposition temperature	: Not applicable.
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: Not applicable.
Vapour pressure at 50 °C	: Not applicable.
Critical pressure	: 5500 kPa
Relative vapour density at 20 °C	: Not applicable.
Relative density	: 2.4
Relative gas density	: 2.9
Solubility	: Water: 221 mg/l
Log Pow	: Not applicable for inorganic products.
Log Kow	: Not applicable for gas mixtures.
Viscosity, kinematic	: No reliable data available.
Viscosity, dynamic	: No reliable data available.
Explosive properties	: Not applicable.
Oxidising properties	: Not applicable.
Explosive limits	: Non flammable.

### 9.2. Other information

Gas group	: Compressed gas
Additional information	: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None.



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### 10.4. Conditions to avoid

Avoid moisture in installation systems.

### 10.5. Incompatible materials

None. For additional information on compatibility refer to ISO 11114.

### 10.6. Hazardous decomposition products

None.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified pH: Not applicable for gases and gas mixtures.
Serious eye damage/irritation	: Not classified pH: Not applicable for gases and gas mixtures.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: No ecological damage caused by this product.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

### 12.2. Persistence and degradability

KRYPTON (7439-90-9)	
Persistence and degradability	No ecological damage caused by this product.

### 12.3. Bioaccumulative potential

KRYPTON (7439-90-9)	
Log Pow	Not applicable for inorganic products.
Log Kow	Not applicable for gas mixtures.
Bioaccumulative potential	No data available.

### 12.4. Mobility in soil

KRYPTON (7439-90-9)	
Mobility in soil	No additional information available
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.

### 12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	: No data available.
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### 12.6. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No known effects from this product.
Effect on the ozone layer	: None.
Effect on global warming	: None.



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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Regional legislation (waste) : Disposal must be done according to official regulations. Regulation on Incineration of Waste Materials published in the Official Journal numbered 27721 on October 6, 2010. Waste Management Regulation published in the Official Journal numbered 29314 on April 2, 2015.
- Waste treatment methods : May be vented to atmosphere in a well ventilated place. Do not discharge into any place where its accumulation could be dangerous. Return unused product in original cylinder to supplier.
- Additional information : External treatment and disposal of waste should comply with applicable local and/or national regulations.
- List of hazardous waste codes (from Commission Decision 2000/532/EC as amended) : 16 05 05 : Gases in pressure containers other than those mentioned in 16 05 04.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1056	1056	1056	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
KRYPTON, COMPRESSED	KRYPTON, COMPRESSED	Krypton, compressed	Not applicable	Not applicable
<b>Transport document description</b>				
UN 1056 KRYPTON, COMPRESSED, 2.2, (E)	UN 1056 KRYPTON, COMPRESSED, 2.2	UN 1056 Krypton, compressed, 2.2	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
2.2	2.2	2.2	Not applicable	Not applicable
			Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

#### 14.6. Special precautions for user

- Special transport precautions : Avoid transport on vehicles where the load space is not separated from the driver's compartment, Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency, Before transporting product containers: - Ensure there is adequate ventilation, - Ensure that containers are firmly secured, - Ensure cylinder valve is closed and not leaking, - Ensure valve outlet cap nut or plug (where provided) is correctly fitted, - Ensure valve protection device (where provided) is correctly fitted.

#### - Overland transport

- Classification code (ADR) : 1A
- Special provisions (ADR) : 662
- Limited quantities (ADR) : 120ml
- Excepted quantities (ADR) : E1
- Packing instructions (ADR) : P200
- Mixed packing provisions (ADR) : MP9
- Portable tank and bulk container instructions (ADR) : (M)
- Tank code (ADR) : CxBN(M)
- Tank special provisions (ADR) : TA4, TT9
- Vehicle for tank carriage : AT
- Transport category (ADR) : 3



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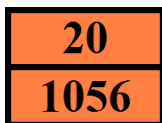
In accordance with the Regulation on Safety Data Sheets Regarding Hazardous Substances and Mixtures published in the Official Journal numbered 29204 on December 13, 2014

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Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV10, CV36

Hazard identification number (Kemler No.) : 20

Orange plates :



Tunnel restriction code (ADR) : E

### - Transport by sea

Limited quantities (IMDG) : 120 ml

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : P200

EmS-No. (Fire) : F-C

EmS-No. (Spillage) : S-V

Stowage category (IMDG) : A

Properties and observations (IMDG) : Inert gas. Much heavier than air (2.9).

MFAG-No : 121

### - Air transport

PCA Excepted quantities (IATA) : E1

PCA Limited quantities (IATA) : Forbidden

PCA limited quantity max net quantity (IATA) : Forbidden

PCA packing instructions (IATA) : 200

PCA max net quantity (IATA) : 75kg

CAO packing instructions (IATA) : 200

CAO max net quantity (IATA) : 150kg

ERG code (IATA) : 2L

### - Inland waterway transport

No data available

### - Rail transport

No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. National regulations

Local regulations (Turkey) : Regulation on Health and Safety Precautions When Working with Carcinogenic and Mutagenic Substances published in the Official Journal numbered 28730 on August 6, 2013  
Regulation on Health and Safety Precautions When Working with Chemical Substances published in the Official Journal numbered 28733 on August 12, 2013  
Personal Protective Equipment Regulation published in the Official Journal numbered 26361 on November 29, 2006  
Regulation on Use of Personal Protective Equipments in Workplaces published in the Official Journal numbered 28695 on July 2, 2013  
Aerosol Containers Regulation published in the Official Journal numbered 24246 on November 30, 2000  
Regulation on Transportation of Dangerous Goods by Road published in the Official Journal numbered 28801 on October 24, 2013  
Simple Pressurized Containers Regulation published in the Official Journal numbered 29877 on November 3, 2016.

This product doesn't contain any substances that is controlled or prohibited for use according to the Regulation for Reduction of Ozone Depleting Substances published in the Official Journal numbered 27052 on November 12, 2008.

Restrictions on use : None.

## SECTION 16: Other information



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### Abbreviations and acronyms:

	ATE - Acute Toxicity Estimate
	CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
	REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
	EINECS - European Inventory of Existing Commercial Chemical Substances
	CAS# - Chemical Abstract Service number
	PPE - Personal Protection Equipment
	LC50 - Lethal Concentration to 50 % of a test population
	RMM - Risk Management Measures
	PBT - Persistent, Bioaccumulative and Toxic
	vPvB - Very Persistent and Very Bioaccumulative
	STOT- SE : Specific Target Organ Toxicity - Single Exposure
	CSA - Chemical Safety Assessment
	EN - European Standard
	UN - United Nations
	ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
	IATA - International Air Transport Association
	IMDG code - International Maritime Dangerous Goods
	RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
	WGK - Water Hazard Class
	STOT - RE : Specific Target Organ Toxicity - Repeated Exposure

Data sources	: Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.
Training advice	: The hazard of asphyxiation is often overlooked and must be stressed during operator training.
Other information	: Classification using data from databases maintained by the European Industrial Gases Association (EIGA).

### Full text of H-statements

Press. Gas (Comp.)	Gases under pressure : Compressed gas
H280	Contains gas under pressure; may explode if heated.

### Safety Data Sheet author's

Name	: Ezgi Üstün
Certificate number	: NBC 01.77.03
Certificate valid until	: 28/03/2019
Contact information	: eustun@koyuncutas.com

### SDS Turkey

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*