



CHLORINE

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 : CHLORINE
EC Index-No. : 017-001-00-7
EC-No. : 231-959-5
CAS-No. : 7782-50-5
REACH registration No : 01-2119486560-35
Product code : EIGA022
Formula : Cl₂
Product group : Trade product

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

Relevant identified uses : See the list of identified uses and exposure scenarios in the annex of the safety data sheet, 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
safis@koyuncutas.com - 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.

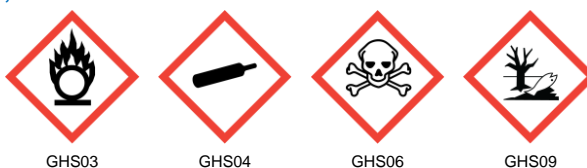
Oxidising Gases, Category 1 H270
Gases under pressure : Liquefied gas H280
Acute toxicity (inhalation:gas) Category 2 H330
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410

Full text of H and EUH 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) :



Signal word (SEA) :

Danger

Hazard statements (SEA) :

H270 - May cause or intensify fire; oxidiser.
H280 - Contains gas under pressure; may explode if heated.



CHLORINE

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

Precautionary statements (SEA)	: H315 - Causes skin irritation. H319 - Causes serious eye irritation. H330 - Fatal if inhaled. H335 - May cause respiratory irritation. H410 - Very toxic to aquatic life with long lasting effects. P220 - Keep/Store away from clothing and other combustible materials. P244 - Keep valves and fittings free from oil and grease. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P264 - Wash hands, forearms and face thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P284 - [In case of inadequate ventilation] wear respiratory protection. P302+P352 - IF ON SKIN: Wash with plenty of water/... P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately dial 114 for the NATIONAL POISON CENTER or call a doctor/physician P312 - If you feel unwell, dial 114 for the NATIONAL POISON CENTER or call a doctor/physician P320 - Specific treatment is urgent (see supplemental first aid instruction on this label). P321 - Specific treatment (see supplemental first aid instruction on this label). P332+P313 - If skin irritation occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P370+P376 - In case of fire: Stop leak if safe to do so P391 - Collect spillage. P403 - Store in a well-ventilated place. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P410+P403 - Protect from sunlight. Store in a well-ventilated place. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation
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 : None.

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.
CHLORINE	(CAS-No.) 7782-50-5 (EC-No.) 231-959-5 (EC Index-No.) 017-001-00-7 (REACH-no) 01-2119486560-35	100	Ox. Gas 1, H270 Press. Gas (Liq.), H280 Acute Tox. 2 (Inhalation:gas), H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H and EUH statements: see section 16

3.2. Mixtures

Not applicable



CHLORINE

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 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 : Remove contaminated clothing. Drench affected area with water for at least 15 minutes. In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.
- First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes.
- 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 : May cause irritation to cornea (with temporary disturbance to vision). May cause irritation to skin. Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea. Refer to section 11.

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

- Obtain medical assistance. Treat with corticosteroid spray as soon as possible after inhalation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray or fog. Foam.
- 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 that are more hazardous than the product itself.

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 : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. Standard EN 943-2: Protective clothing against liquid and gaseous chemicals, aerosols and solid particles. Gas-tight chemical protective suits for emergency teams. 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. Monitor concentration of released product. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Eliminate ignition sources. Ensure adequate air ventilation. 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

6.2. Environmental precautions

Try to stop release. Reduce vapour with fog or fine water spray.

6.3. Methods and material for containment and cleaning up

- Methods and material for containment and cleaning up : Hose down area with water. Wash contaminated equipment or sites of leaks with copious quantities of water. Keep area evacuated and free from ignition sources until any spilled liquid has evaporated (ground free from frost).

6.4. Reference to other sections

See also sections 8 and 13.



CHLORINE

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 7: Handling and storage

7.1. Precautions for safe handling

Safe use of the product

: Keep equipment free from oil and grease. For more guidance, refer to the EIGA Doc. 33 - Cleaning of Equipment for Oxygen Service downloadable at <http://www.eiga.eu>. Use no oil or grease. Avoid exposure, obtain special instructions before use. Installation of a cross purge assembly between the cylinder and the regulator is recommended. Purge system with dry inert gas (e.g. helium or nitrogen) before gas is introduced and when system is placed out of service. Avoid contact with aluminium. 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

: Segregate from flammable gases and other flammable materials in store. 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

CHLORINE (7782-50-5)	
Turkey - Occupational Exposure Limits	
Local name	Klor
OEL STEL (mg/m ³)	1.5 mg/m ³
OEL STEL (ppm)	0.5 ppm
Regulatory reference	12 Ağustos 2013 Tarihli ve 28733 Sayılı Resmî Gazete
EU - Occupational Exposure Limits	
Local name	Chlorine
IOELV STEL (mg/m ³)	1.5 mg/m ³
IOELV STEL (ppm)	0.5 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
CHLORINE (7782-50-5)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	1.5 mg/m ³
Acute - local effects, inhalation	1.5 mg/m ³
Long-term - systemic effects, inhalation	0.75 mg/m ³
Long-term - local effects, inhalation	0.75 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.00021 mg/l
PNEC aqua (marine water)	0.00042 mg/l
PNEC aqua (intermittent, freshwater)	0.00026 mg/l



CHLORINE

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

CHLORINE (7782-50-5)

PNEC (STP)

PNEC sewage treatment plant	0.03 mg/l
-----------------------------	-----------

8.2. Exposure controls

Appropriate engineering controls	: Provide adequate general and local exhaust ventilation. Consider the use of a work permit system e.g. for maintenance activities. Product to be handled in a closed system and under strictly controlled conditions. Preferably use permanent leak-tight installations (e.g. welded pipes). Gas detectors should be used when toxic gases may be released. Systems under pressure should be regularly checked for leakages. Ensure exposure is below occupational exposure limits (where available).
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 chemically resistant protective gloves. Standard EN 374 - Protective gloves against chemicals. Consult glove manufacturer's product information on material suitability and material thickness. The breakthrough time of the selected gloves must be greater than the intended use period. Wear cold insulating gloves when transfilling or breaking transfer connections. Standard EN 511 - Cold insulating gloves. Permeation time: minimum >30min short term exposure: material / thickness Chloroprene rubber (Neoprene®) (CR) / 0.4 [mm]. Permeation time: minimum >480min long term exposure : material / thickness Fluoroelastomer (Viton®) (FKM) / 0.7 [mm]. Wear working gloves when handling gas containers. Standard EN 388 - Protective gloves against mechanical risk.
Eye protection	: Wear goggles and a face shield when transfilling or breaking transfer connections. Provide readily accessible eye wash stations and safety showers. Standard EN 166 - Personal eye-protection - specifications
Respiratory protection	: Gas filters may be used if all surrounding conditions e.g. type and concentration of the contaminant(s) and duration of use are known. Use gas filters with full face mask, where exposure limits may be exceeded for a short-term period, e.g. connecting or disconnecting containers. Gas filters do not protect against oxygen deficiency. Standard EN 14387 - Gas filter(s), combined filter(s) and standard EN136, full face masks . Keep self contained breathing apparatus readily available for emergency use. Self contained breathing apparatus is recommended, where unknown exposure may be expected, e.g. during maintenance activities on installation systems. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. Recommended: Filter B (grey).
Thermal hazard protection	: None in addition to the above sections.
Environmental exposure controls	: Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.
Other information	: Keep suitable chemically resistant protective clothing readily available for emergency use. Standard EN943-1 - Full protective suits against liquid, solid and gaseous chemicals. 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	: 71 g/mol
Colour	: Greenish gas.
Odour	: Pungent.
Odour threshold	: Odour threshold is subjective and inadequate to warn of overexposure.
pH	: If dissolved in water pH-value will be affected.
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: Not applicable for gases and gas mixtures.
Melting point	: -101 °C
Freezing point	: -101 °C
Boiling point	: -34 °C
Flash point	: Not applicable for gases and gas mixtures.
Critical temperature	: 144 °C
Auto-ignition temperature	: Non flammable.
Decomposition temperature	: Not applicable.



CHLORINE

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

Flammability (solid, gas)	: Non flammable.
Vapour pressure	: 6.8 bar(a)
Vapour pressure at 50 °C	: 14.3 bar(a)
Critical pressure	: 7991 kPa
Relative vapour density at 20 °C	: Not applicable.
Relative density	: 1.6
Relative gas density	: 2.5
Solubility	: Water: 8620 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	: Oxidiser.
Explosive limits	: Non flammable.
Ci	: 0.7

9.2. Other information

Gas group	: Press. Gas (Liq.)
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

Violently oxidises organic material.

10.4. Conditions to avoid

Avoid moisture in installation systems.

10.5. Incompatible materials

May react violently with combustible materials. May react violently with reducing agents. Keep equipment free from oil and grease. For more guidance, refer to the EIGA Doc. 33 - Cleaning of Equipment for Oxygen Service downloadable at <http://www.eiga.eu>. Reacts with water to form corrosive acids. May react violently with alkalis. With water causes rapid corrosion of some metals. Moisture. For additional information on compatibility refer to ISO 11114.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Fatal if inhaled.

CHLORINE (7782-50-5)	
LC50 inhalation rat (ppm)	146.5 ppm/4h
ATE (SEA) (Gases)	146.5 ppm/4h

Skin corrosion/irritation	: Causes skin irritation. pH: If dissolved in water pH-value will be affected.
Serious eye damage/irritation	: Causes serious eye irritation. pH: If dissolved in water pH-value will be affected.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
Target organ(s)	: Respiratory tract.



CHLORINE

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

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Acute aquatic toxicity : Very toxic to aquatic life.
Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

CHLORINE (7782-50-5)	
LC50 96 h - Fish [mg/l]	0.032 mg/l
EC50 48h - Daphnia magna [mg/l]	0.141 mg/l
EC50 72h - Algae [mg/l]	0.001 - 0.01

12.2. Persistence and degradability

CHLORINE (7782-50-5)	
Persistence and degradability	Not applicable for inorganic products.

12.3. Bioaccumulative potential

CHLORINE (7782-50-5)	
Log Pow	Not applicable for inorganic products.
Log Kow	Not applicable for gas mixtures.
Bioaccumulative potential	No data available.

12.4. Mobility in soil

CHLORINE (7782-50-5)	
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 : Not classified as PBT or vPvB.

12.6. Other adverse effects

Ozone : Not classified
Other adverse effects : May cause pH changes in aqueous ecological systems.
Effect on the ozone layer : None.
Effect on global warming : No known effects from this product.

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 : Contact supplier if guidance is required. Ensure that the emission levels from local regulations or operating permits are not exceeded. Refer to the EIGA code of practice Doc.30 "Disposal of Gases", downloadable at <http://www.eiga.eu> for more guidance on suitable disposal methods. Must not be discharged to atmosphere. 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 04 *: Gases in pressure containers (including halons) containing hazardous substances.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1017	1017	1017	Not applicable	Not applicable
14.2. UN proper shipping name				
CHLORINE	CHLORINE	Chlorine	Not applicable	Not applicable



CHLORINE

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

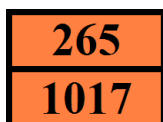
ADR	IMDG	IATA	ADN	RID
Transport document description				
UN 1017 CHLORINE, 2.3 (5.1+8), (C/D), ENVIRONMENTALLY HAZARDOUS	UN 1017 CHLORINE, 2.3 (5.1+8), MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1017 Chlorine, 2.3, ENVIRONMENTALLY HAZARDOUS	Not applicable	Not applicable
14.3. Transport hazard class(es)				
2.3 (5.1, 8)	2.3 (5.1, 8)	2.3 (5.1, 8)	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
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) : 2TOC
 Limited quantities (ADR) : 0
 Excepted quantities (ADR) : E0
 Packing instructions (ADR) : P200
 Mixed packing provisions (ADR) : MP9
 Portable tank and bulk container instructions (ADR) : (M), T50
 Portable tank and bulk container special provisions (ADR) : TP19
 Tank code (ADR) : P22DH(M)
 Tank special provisions (ADR) : TA4, TT9, TT10
 Vehicle for tank carriage : AT
 Transport category (ADR) : 1
 Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV10, CV36
 Special provisions for carriage - Operation (ADR) : S14
 Hazard identification number (Kemler No.) : 265
 Orange plates :





CHLORINE

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

Tunnel restriction code (ADR)	: C/D
- Transport by sea	
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P200
Tank instructions (IMDG)	: T50
Tank special provisions (IMDG)	: TP19
EmS-No. (Fire)	: F-C
EmS-No. (Spillage)	: S-U
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW2
Properties and observations (IMDG)	: Non-flammable, toxic and corrosive yellow gas with a pungent odour. Corrosive to glass and to most metals. Much heavier than air (2.4). Highly irritating to skin, eyes and mucous membranes. Powerful oxidant which may cause fire.
MFAG-No	: 124

- Air transport

PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: Forbidden
CAO max net quantity (IATA)	: Forbidden
ERG code (IATA)	: 2CP

- 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

Abbreviations and acronyms:

	ATE - Acute Toxicity Estimate
	CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008



CHLORINE

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

	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 : Users of breathing apparatus must be trained. Ensure operators understand the toxicity hazard.

Other information : Classification using data from databases maintained by the European Industrial Gases Association (EIGA).

Full text of H- and EUH-statements

Acute Tox. 2 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 2
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Gas 1	Oxidising Gases, Category 1
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H270	May cause or intensify fire; oxidiser.
H280	Contains gas under pressure; may explode if heated.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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.