



## SAFETY DATA SHEET

### Potassium cyanate

Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

##### 1.1. Product identifier

Product name	Potassium cyanate
CAS number	590-28-3
EC number	209-676-3
Synonyms; trade names	Cyanic acid, potassium salt; Potassium isocyanate

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

Identified uses	Use in laboratories.
Uses advised against	Food, drug, pesticide or biocidal product use.

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

Supplier	ORION ISI TEKNOLOJİ SAN. VE TİC.LTD.ŞTİ Ramazanoğlu mah. Saadet sok no 3/1 Pendik/İstanbul Tel: +90(216) 939 98 66 Fax: +90 (216) 365 3050 web: www.orionhts.com e-mail: alper@orionhts.com
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##### 1.4. Emergency telephone number

Emergency telephone	Orion HTS :+90 (216) 939 98 67
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#### SECTION 2: Hazards identification

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

Classification (EC 1272/2008)	
Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H302
Environmental hazards	Not Classified

##### 2.2. Label elements

EC number	209-676-3
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##### Hazard pictograms



Signal word	Warning
Hazard statements	H302 Harmful if swallowed.
Precautionary statements	P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. P330 Rinse mouth. P501 Dispose of contents/ container in accordance with national regulations.



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### 2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Product name	Potassium cyanate
CAS number	590-28-3
EC number	209-676-3
Amount w/w	>95 %

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Remove any dentures. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway.
<b>Skin contact</b>	Brush off loose particles from skin. Wash skin thoroughly with soap and water. Take off contaminated clothing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

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

<b>General information</b>	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	Dust may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
<b>Ingestion</b>	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
<b>Skin contact</b>	Prolonged contact may cause dryness of the skin.
<b>Eye contact</b>	Dust may cause slight irritation.

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

<b>Notes for the doctor</b>	Treat symptomatically.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media** The product is not flammable. Extinguish with foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

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

**Specific hazards** No information available.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

#### 5.3. Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

### SECTION 6: Accidental release measures

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

**Personal precautions** No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material.

#### 6.2. Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.  
Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

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

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Approach the spillage from upwind. Avoid generation and spreading of dust.  
Small Spillages: Remove spillage with vacuum cleaner or collect with a shovel and broom, or similar.  
Large Spillages: Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

#### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.



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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid handling which leads to dust formation. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

##### Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

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

##### Storage precautions

Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

##### Storage class

Chemical storage.

#### 7.3. Specific end use(s)

##### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure controls/Personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

Potassium cyanate; TWA:5 mg/m<sup>3</sup>; IDLH:25 mg/m<sup>3</sup>

#### 8.2. Exposure controls

##### Protective equipment



##### Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

##### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

##### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.



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<b>Other skin and body protection</b>	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
<b>Hygiene measures</b>	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.
<b>Respiratory protection</b>	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m <sup>3</sup> . Wear a suitable dust mask. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Solid.
<b>Colour</b>	White.
<b>Odour</b>	Odourless.
<b>pH</b>	~10, 50 g/l aq.sol.
<b>Melting point</b>	315°C
<b>Initial boiling point and range</b>	No information available.
<b>Flash point</b>	No information available.
<b>Flammability (solid, gas)</b>	No information available.
<b>Vapour pressure</b>	No information available.
<b>Relative density</b>	No information available.
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	No information available.
<b>Auto-ignition temperature</b>	No information available.
<b>Decomposition Temperature</b>	700°C
<b>Viscosity</b>	No information available.
<b>Explosive properties</b>	No information available.
<b>Oxidising properties</b>	No information available.

#### 9.2. Other information

<b>Molecular weight</b>	81.12 g
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

**Reactivity** See the other subsections of this section for further details.

#### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

#### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Polymerization does not occur.

#### 10.4. Conditions to avoid

**Conditions to avoid** Avoid exposure to high temperatures or direct sunlight. Avoid handling which leads to dust formation.

#### 10.5. Incompatible materials

**Materials to avoid** Strong oxidising agents.

#### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Nitrogen Oxides (NOx) Hydrocyanic acid

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Acute toxicity - oral**

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 567.0

**Species** Rat

**Notes (oral LD<sub>50</sub>)** Acute Tox. 4 - H302 Harmful if swallowed.

**ATE oral (mg/kg)** 567.0

**Acute toxicity - dermal**

**Notes (dermal LD<sub>50</sub>)** Based on available data the classification criteria are not met.

**Acute toxicity - inhalation**

**Notes (inhalation LC<sub>50</sub>)** Based on available data the classification criteria are not met.

**Skin corrosion/irritation**

**Skin corrosion/irritation** Based on available data the classification criteria are not met.

**Serious eye damage/irritation**

**Serious eye damage/irritation** Based on available data the classification criteria are not met.

**Respiratory sensitisation**

**Respiratory sensitisation** Based on available data the classification criteria are not met.

**Skin sensitisation**

**Skin sensitisation** Based on available data the classification criteria are not met.

**Germ cell mutagenicity**

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

**Carcinogenicity**

**Carcinogenicity** Based on available data the classification criteria are not met.



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<b>IARC carcinogenicity</b>	None of the ingredients are listed or exempt.
<b>Reproductive toxicity</b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	Based on available data the classification criteria are not met.
<b>Specific target organ toxicity - single exposure</b>	
<b>STOT - single exposure</b>	Based on available data the classification criteria are not met.
<b>Specific target organ toxicity - repeated exposure</b>	
<b>STOT - repeated exposure</b>	Based on available data the classification criteria are not met.
<b>Aspiration hazard</b>	
<b>Aspiration hazard</b>	Not relevant. Solid.
<b>General information</b>	Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	Dust may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
<b>Ingestion</b>	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
<b>Skin contact</b>	Prolonged contact may cause dryness of the skin.
<b>Eye contact</b>	Dust may cause slight irritation.
<b>Route of exposure</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target organs</b>	No specific target organs known.

### SECTION 12: Ecological information

**Ecotoxicity** Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

#### 12.1. Toxicity

**Toxicity** Based on available data the classification criteria are not met.

#### **Acute aquatic toxicity**

**Acute toxicity - fish** LC<sub>50</sub>, 96 hour: 24,3 mg/l, Oncorhynchus mykiss (Rainbow trout)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hour: 18 mg/l, Daphnia magna

#### 12.2. Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** No information available.

#### 12.4. Mobility in soil

**Mobility** The product is water-soluble and may spread in water systems.



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### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** No data available.

### 12.6. Other adverse effects

**Other adverse effects** None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

**Disposal methods** Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of the local water authority.

**Waste class** 11 03 01\* waste containing cyanide  
15 01 10 \*packaging containing residues of or contaminated by dangerous substances

## SECTION 14: Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.1. UN number

Not applicable.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

No transport warning sign required.

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**  
No.

### 14.6. Special precautions for user

Not applicable.

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

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.





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### SECTION 15: Regulatory information

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

**EU legislation** Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).  
Commission Regulation (EU) No 2015/830 of 28 May 2015.  
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

**Seveso Directive - Control of major accident hazards** Not relevant.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

**Abbreviations and acronyms used in the safety data sheet** ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
IATA: International Air Transport Association.  
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.  
IMDG: International Maritime Dangerous Goods.  
CAS: Chemical Abstracts Service.  
ATE: Acute Toxicity Estimate.  
LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
EC<sub>50</sub>: 50% of maximal Effective Concentration.  
PBT: Persistent, Bioaccumulative and Toxic substance.  
vPvB: Very Persistent and Very Bioaccumulative.

**Classification abbreviations and acronyms** Acute Tox. = Acute toxicity

**Key literature references and sources for data** This SDS is prepared based on the information received from the product owner. Source: European Chemicals Agency, <http://echa.europa.eu/>

**Classification procedures according to Regulation (EC) 1272/2008** Acute Tox. 4 - H302: : Calculation method.

**Training advice** Read and follow manufacturer's recommendations. Only trained personnel should use this material.

**Revision comments** This is the first issue.

**Issued by** Büşra Tarakci / CRAD  
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**Note to organizer** The certificate information is used exclusively for this SDS. No changes can be made to this SDS without the knowledge and approval of the certificate holder or the certificate information can not be used for another SDS. Otherwise, the certificate will assume no responsibility for the owner SDS.  
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<b>Revision date</b>	21/03/2022
<b>Revision</b>	0.2
<b>Supersedes date</b>	06/08/2021
<b>SDS number</b>	11857
<b>Hazard statements in full</b>	H302 Harmful if swallowed.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.