

**SAFETY DATA SHEET**

It complies with the KKDİK (REGULATION ON REGISTRATION, EVALUATION, AUTHORIZATION AND RESTRICTION OF CHEMICALS), Annex II Regulation on Requirements for the Preparation of Safety Data Sheets published in the Official Gazette No. 30105 dated 23.06.2017.

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

**1.1 Product identifier**

Product code : K102013  
 Product name : Barium nitrate  
 KKDİK Reg. No: 0  
 KKDİK Reg. Name: 0

Date of issue / Date of revision: 11.04.2024

Version: 1,0

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

**Relevant identified uses**

Laboratory chemical

Uses advised against	Reason
Not applicable	

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

Manufacturer/ Distributor: Yenilab Laboratuvar ve Eğitim Gereçleri Kimya San. Tic. Ltd. Şti.  
 Çelebiler Mh. Çelebiler Cd. No: 28/2 Adapazarı / Sakarya

e-mail address of person responsible for this SDS: [info@guvenlikbilgiformu.net](mailto:info@guvenlikbilgiformu.net)

**1.4 Emergency telephone number**

**National advisory body/Poison Center**

Telephone number: T. C. Ministry of Health National Poison Information Center Phone Number: 114

**Supplier**

Telephone number: 8503029450 (9:00am -5:00pm)

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

Product definition: Substance

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Oxidizing solids 2

Acute toxicity 3

Serious eye irritation 2

Acute toxicity 4

See Section 16 for the full text of the statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

Yayın Tarihi/Yenilenme tarihi:

Date of issue / Date of revision: 11.04.2024

2.2 Label elements

Hazard pictograms : GHS03



GHS06



Signal word : Danger

Hazard statements :

H272 May intensify fire; oxidiser.	
H301 Toxic if swallowed.	Oral
H319 Causes serious eye irritation.	
H332 Harmful if inhaled.	Inhalation

Precautionary statements

Prevention : P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 Keep/Store away from clothing/.../combustible materials.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P370+P378 In case of fire: Use ... to extinguish.(CHECK RELEVANT SDS SECTION)

Response :

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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P321 Specific treatment (see ... on this label).

P330 Rinse mouth.

	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+P313 P304+P340	If eye irritation persists: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P312	Call a POISON CENTER/doctor/.../if you feel unwell.
<b>Storage :</b>	P405	Store locked up.
<b>Disposal :</b>	P501	Dispose of contents/container according to national regulations

**Hazardous ingredients :**

Barium nitrate

**Supplemental label elements** : Not applicable

Annex XVII- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

**2.3 Other hazards**

**Other hazards which do not result in classification** : Not known.

**SECTION 3: Composition/information on ingredients**

**Substance/mixture** : Substance



**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- General :** In all cases of doubt, or when symptoms persist, seek medical attention.  
Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Inhalation :** Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact :** Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Eye contact :** Check for and remove any contact lenses. Immediately flush eyes with room temperature water for at least 15 minutes, keeping eyelids open. In case of accidental eye contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of the eyes.
- Ingestion :** If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders :**  
No action shall be taken involving any personal risk or without suitable training.  
  
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.  
Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

There are not available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

Exposure to component vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

May cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin

If splashed in the eyes, the liquid may cause irritation and reversible damage. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

May produce an allergic reaction.

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

**Notes to medical doctor :** In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments :** No data available.

**SECTION 5: Firefighting measures**

if available, relevant information was taken from raw material safety data sheets, or from the ICSC database on the ILO-International Labor Organization website.

**5.1 Extinguishing media**

**Suitable extinguishing media:** No data available

**Unsuitable extinguishing media :** Do not use pressurized water.

**5.2 Special hazards arising from the substance or Mixture :**

**Hazards arising from the substance or Mixture :** No data available

**Hazardous thermal decomposition Products :** No data available

**5.3 Advice for firefighters**

**Special Protective action for fire fighters :** Not available

**Special protective equipment For fire fighters:** Positive pressurized complete respiratory instrument (SCBA) and EN 469 compatible equipment must be used.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel :** Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist.  
Refer to protective measures listed in sections 7 and 8.

**For emergency responders :** If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions :** Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations

**6.3 Methods and materials for containment and cleaning up:** Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

**6.4 Reference to other sections :** See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Protective measures:** The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.  
Keep container tightly closed. Keep away from heat, sparks and flame.  
No sparking tools should be used.  
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.  
Put on appropriate personal protective equipment (see Section 8).  
Never use pressure to empty. Container is not a pressure vessel.  
Always keep in containers made from the same material as the original one.  
Comply with the health and safety at work laws.

**Advice on general occupational hygiene:**

**7.2 Conditions for safe storage, including incompatibilities :** any Store in accordance with local regulations

**Notes on joint storage**

Keep away from: Metal, powder, organic substances, oxidizing agents, strong alkalis, strong acids.

**Additional information on storage conditions**

Observe label precautions.  
 Store in a dry, cool and well-ventilated area.  
 Keep away from heat and direct sunlight.  
 Keep away from sources of ignition  
 No smoking.  
 Prevent unauthorized access.  
 Keep container tightly closed.  
 Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

**7.3 Specific end use(s) Recommendations :** For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

**Industrial sector specific solutions:** No data available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limits**

Product/ingredient name	Exposure limit values
No data available.	No data available.

**Recommended monitoring procedures :** If this product contains ingredients with exposure limits, personal, workplace atmosphere 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. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard

EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNEL's/DMEL's**

<b>EC / List no.</b>	<b>Name</b>	<b>CAS Number</b>
233-020-5	Barium nitrate	10022-31-8

Data for WORKERS

INHALATION Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 2.73 mg/m <sup>3</sup>	repeated dose toxicity
Acute /short term:	Low hazard (no threshold derived)	
Local Effects		
Long-term:	No hazard identified	
Acute /short term:	No hazard identified	
DERMAL Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 8.14 mg/kg bw/day	repeated dose toxicity
Acute /short term:	No hazard identified	
Local Effects		
Long-term:	No hazard identified	
Acute /short term:	No hazard identified	

EYE Exposure

Low hazard (no threshold derived)

Data for the GENERAL POPULATION

INHALATION Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 670 µg/m <sup>3</sup>	repeated dose toxicity
Acute /short term:	Low hazard (no threshold derived)	
Local Effects		
Long-term:	No hazard identified	
Acute /short term:	No hazard identified	
DERMAL Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 4.07 mg/kg bw/day	repeated dose toxicity
Acute /short term:	No hazard identified	
Local Effects		
Long-term:	No hazard identified	
Acute /short term:	No hazard identified	
ORAL Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 580 µg/kg bw/day	repeated dose toxicity
Acute /short term:	Medium hazard (no threshold derived)	

EYE Exposure

Low hazard (no threshold derived)

**PNEC' s**

EC / List no.	Name	CAS Number
233-020-5	Barium nitrate	10022-31-8

**Hazard for Aquatic Organisms**

Freshwater	115 µg/L (2)
Intermittent releases (freshwater) -	
Marine water	11.5 µg/L (1)
Intermittent releases (marine water)	No data: aquatic toxicity unlikely (1)
Sewage treatment plant (STP)	62.2 mg/L (2)
Sediment (freshwater)	600 mg/kg sediment dw (2)
Sediment (marine water)	No hazard identified (1)
<b>Hazard for Air</b>	
Air	No hazard identified (2)
<b>Hazard for Terrestrial Organism</b>	
Soil	207.7 mg/kg soil dw (2)
<b>Hazard for Predators</b>	
Secondary poisoning	No potential for bioaccumulation (2)

**8.2 Exposure controls**
**Appropriate engineering controls:**

Provide adequate ventilation. Avoid inhaling. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general **extraction. If these are not sufficient to maintain concentrations of** particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

**Individual protection measures**
**Hygiene measures :**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection :**

Use safety eyewear designed to protect against splash of liquids according to EN166.

**Skin protection :**
**Hand protection :**
**Gloves :**

Wear suitable gloves tested to EN374. There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time

of the gloves cannot be accurately estimated. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

**Body protection :** Personnel should wear antistatic clothing made of natural fibers or of hightemperature-resistant synthetic fibers.

**Respiratory protection :** If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

**Environmental exposure controls :** Do not allow to enter drains or watercourses.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Physical state,appearance : Solid  
 Color : No data available  
 Odor : Odourless  
 Odor threshold : No data available  
 Melting point/freezing point : 590 - 600 °C @ 100.3 kPa [4]  
 Flash point : No data available  
 Flammability (solid, gas): No data available  
 pH : No data available  
 Up and down flame. or explosion limits : No data available  
 Density : 3.24 g/cm³ [1]  
 First boiling point and range : No data available  
 Evaporation rate : No data available  
 Vapor pressure : No data available  
 Vapor density : No data available  
 Relative density : No data available  
 Solubility(ies) : 92.7 - 94 g/L @ 20 - 25 °C and pH 6.4 - 6.6 [2] in water

Partition coefficient: n-octanol/ wa No data available

Auto-ignition temperature : No data available  
 Decomposition temperature : No data available  
 Viscosity : No data available  
 Explosive properties : No data available  
 Oxidizing properties : No data available

**9.2 Other information**

VOC % No data available

**SECTION 10: Stability and reactivity**

**10.1 Reactivity :** No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability :** Stable under recommended storage and handling conditions (see Section 7).

**10.3 Possibility of hazardous reactions :** Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid :** When exposed to high temperatures may produce hazardous decomposition products.

**10.5 Incompatible materials :** Keep away from the following materials to prevent strong exothermic reactions:

Metal, powder, organic substances, oxidizing agents, strong alkalis, strong acids.

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

**SECTION 11: Toxicological information**

There are not available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

Exposure to component vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

**11.1 Information on toxicological effects**

**Acute toxicity**

Acute toxicity 3-Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Acute toxicity 4-Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Irritation/Corrosion**

Yayın Tarihi/Yenilenme tarihi:

Date of issue / Date of revision:

11.04.2024

Serious eye irritation 2- Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Sensitization**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Mutagenicity**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Carcinogenicity**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Reproductive toxicity**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Teratogenicity**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Specific target organ toxicity (single exposure)**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Specific target organ toxicity (repeated exposure)**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Aspiration hazard**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**SECTION 12: Ecological information**

There are not available on the mixture itself.  
Do not allow to enter drains or watercourses.

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS].**

**12.1 Toxicity**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**12.2 Persistence and degradability**

The product has not been tested. Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**12.3 Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
No data available			

**12.4 Mobility in soil**

Soil/water partition coefficient (KOC): No data available

Mobility : No data available

**12.5 Results of PBT and vPvB assessment**

PBT : Not applicable.

vPvB : Not applicable.

**12.6 Other adverse effects :** No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

Do not allow to enter drains or watercourses.

Dispose of according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

**13.1 Waste treatment methods**

**Product disposal methods:** The generation of waste should be avoided or minimized wherever possible.









Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Packaging disposal methods :** The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**European Waste Catalogue (EWC) Special precautions :** This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	1446	1446	1446	1446

<b>14.2 UN proper shipping name</b>	BARIUM NITRATE	BARIUM NITRATE	BARIUM NITRATE	BARIUM NITRATE
<b>14.3 Transport hazard class(es) &amp; class. Code</b>	5,1(OT2)	5,1(OT2)	5,1(OT2)	5,1(OT2)
<b>Label Info</b>				
5.1				
6.1				
<b>14.4 Packing group</b>	II	II	II	II
<b>14.5 Environmental hazards</b>	No	No	No	No
<b>Additional information (Tunnel restriction code)</b>	2 ( E )	-	-	-

**14.6 Special Precautions for use:** Transport within user's premises: always transport in closed containers

that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk :** No data available according to Annex II of MARPOL 73/78 and the IBC Code

**SECTION 15: Regulatory information**

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

EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:** Not applicable.

**Other EU regulations**

**Industrial use :** The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

**15.2 Chemical Safety Assessment :** No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**Abbreviations and acronyms :** ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Oxidizing solids 2	Calculation method
Acute toxicity 3	
Serious eye irritation 2	
Acute toxicity 4	

Full text of abbreviated H statements:	Exposure way
H272 May intensify fire; oxidiser.	0
H301 Toxic if swallowed.	Oral
H319 Causes serious eye irritation.	0
H332 Harmful if inhaled.	Inhalation

**Full text of classifications [CLP/GHS] :**

Oxidizing solids 2
Acute toxicity 3
Serious eye irritation 2
Acute toxicity 4

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Specialist Accreditation No: **TÜV / 11.42.06**  
Specialist Accreditation Valid Until: **30.09.2025**

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws.

The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.