

JSS " MAXAM-CHIRCHIQ»

PASSPORT

SAFETY OF THE SUBSTANCE (MATERIAL)

CARBAMIDE

GOST 2081-2010

The passport is valid for 5 years.

Chirchik

SAFETY DATA SHEET FOR THE SUBSTANCE (MATERIAL)

AGREED

First Deputy
of the chairman of the board -
Production Director

[Signature] Uzakov R.T.
" 18 " 03 2021

APPROVED

Chairman of the Board
JSS "MAXAM - CHIRCHIQ"
[Signature] Saidakhmedov H.A.

" 19 " 03 2021

Name

(Technical according to ND)

Carbamide

Chemical (IUHFC)

Carbonyl diamide

Trade name

Carbamide

Synonym

Urea

Symbol and name of ND (GOST, TS, ISO, etc.)

GOST 2081-2010 "Carbamide"

Main code of an enterprise
(OKP)

2	1	8	1	9	1
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Commodity nomenclature of foreign
economic activity code

3	1	0	2	1	0	1	0	0	0
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Series, No. and POHV
register. date

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HAZARD STATEMENT: MPC r.z mg/m³

10

hazard class

3

Brief (verbal): According to the effect on the human body, the substance is moderately dangerous. Causes irritation of the skin, respiratory organs, eyes. Toxic to the inhabitants of reservoirs.

Detailed: in 16 proposed sections of the safety data sheet

MAIN HAZARDOUS COMPONENTS

Carbamide

MPC r.z mg/m³

10

Hazard class

3

APPLICANT: Joint Stock Society «MAXAM-CHIRCHIQ»
(full name)

Chirchik
(city)

Applicant type: Manufacturer, supplier, seller, exporter, importer
(strike out what is not needed)

Main code of an enterprise, organization

0	0	2	0	3	0	6	8
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Emergency phone number: 5-15-75

Fax: 6-57-49

Safety Data Sheet

GOST 2081-2010 "Carbamide"	UDC 661.717.5 : 006.354	Page 1 out of 12
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1. Identification of chemical products and information about the manufacturer or supplier

1.1 Technical name.	Carbamide, urea Grades A, B
1.2 Chemical formula.	$\text{CO}(\text{NH}_2)_2$ Carbamide, depending on the brand and grade, is intended for use in industry as a raw material for the preparation of resins, adhesives, etc. in agriculture as a mineral nitrogen fertilizer. Carbamide can be used in animal husbandry as a feed additive.
1.3 The full official name of the organization.	Joint-stock society "MAXAM - CHIRCHIQ"
1.4 Postal address	Address: 111708, Republic of Uzbekistan, Tashkent region, Chirchik, Tashkentskaya str., 2
1.5 Telephone, including for emergency consultations, time limits.	Phone numbers: (+9987071) 5-34-40, 6-40-79 Fax: +998-70-715-15-75 Email: info@maxam-chirchiq.uz
1.6 Responsible for bringing products to market.	Commercial Director

2. Identification of the hazard(s)

2.1. MPC of the working area (maximum permissible concentration).	10 mg/m ³ , hazard class 3.
2.2. The degree of danger of the product as a whole.	Non-flammable substance. Under the influence on the human body, the substance is moderately dangerous. During long-term storage in warehouses in bulk at elevated temperatures, it can caking and partially decompose with the formation of biuret and gaseous ammonia, a combustible substance. Under normal conditions, carbamide is non-flammable, fire - explosion-proof.

3. Composition (information on ingredients)

3.1. Compound.

3.1.1 General characteristics.

Name product	OKP code
Grade A carbamide:	21 8191 0100
Top grade	21 8191 0120
First grade	21 8191 0130
Grade B carbamide:	21 8191 0200
Top grade	21 8191 0220
First grade	21 8191 0230
Second grade	21 8191 0240

Grade A

Name of indicator	Top grade	1st grade
Mass fraction of nitrogen in terms of dry matter, %, not less	46.3	46.2
Mass fraction of biuret, %, no more	0.6	1.4
Mass fraction of free ammonia, %, not more, for urea:		
- crystalline	0.01	0.01
- granular	0.02	0.03
Mass fraction of water, %, not more than:		
- hygroscopic	0.3	0.3
- general	0.6	0.6

Mark B

Name of indicator	Top grade	1st grade	2nd grade
Mass fraction of nitrogen in terms of dry matter, %, not less	46, 2	46.2	46.2
Mass fraction of biuret, %, no more	1.4	1.4	1.4
Mass fraction of water, %, not more than:			
- hygroscopic	0.3	0.3	0.3
- general	0.5	0.5	0.6
Friability, %	100	100	100
granulometric composition, %:			
Mass fraction of granules, mm			
- from 1 to 4, not less	94	94	94
- from 2 to 4, not less	70	fifty	-
- less than 1, no more	3	5	5
- residue on sieve 6 mm	Absent	Absent	Absent

4. First aid measures

4.1. In case of poisoning by inhalation (by inhalation).

Take the victim to fresh air, *free* from tight clothing, consult a doctor.

4.2. When ingested (if swallowed).

Rinse your mouth with water, rinse your stomach with warm water with soda and activated charcoal. Seek medical attention if necessary.

4.3. When exposed to the skin.

Rinse with running water.

4.4. In case of contact with eyes.

Rinse with running water. Seek medical attention if necessary.

4.5. First aid kit (first aid kit).

Activated charcoal, baking soda.

5. Measures and means of ensuring fire and explosion safety

5.1. General characteristics of fire and explosion hazard.	Under normal conditions, it is non-flammable, fire and explosion-proof. During long-term storage in bulk warehouses at elevated temperatures, it can cake and partially decompose with the formation of biuret and gaseous ammonia, a combustible substance
5.2. Indicators of fire and explosion hazard.	Melting point between 132.7 and 135°C, urea decomposes with the formation of slow-burning substances.
5.3. Hazard from products of combustion or thermal decomposition.	It undergoes thermal degradation with the formation of nitrogen oxides, ammonia, carbon dioxide. Carbon dioxide is a drug that irritates the skin and mucous membranes, excites the respiratory center in relatively small concentrations, and depresses in very large concentrations. Ammonia causes profuse lacrimation, coughing fits, dizziness, stomach pain, vomiting, urinary retention. Nitrogen oxides - irritates the respiratory tract, affects the alveolar tissue, which leads to pulmonary edema.
5.4. Recommended extinguishing media.	Powder, water with wetting agent.
5.5. Prohibited fire extinguishing media.	Compact water jet.
5.6. Personal protective equipment for firefighting (PPE for firefighters and personnel).	For chemical reconnaissance and for the work manager - PDU-Z (within 20 min.). For emergency teams - an insulating protective suit KIKH-5 complete with an insulating gas mask IP-4M or breathing apparatus ASV-2. In case of fire - fire-retardant suit complete with SPI-20 self-rescuer. Oil and petrol resistant gloves, rubber dispersion gloves, special shoes according to GOST 12265-78.
5.7. Specificity in fire fighting.	In case of fire, the container burns and the product decomposes. Take the wagon to a safe place. Isolate the danger zone within a radius of 200 m. Remove strangers. Enter the danger zone in protective equipment. Observe fire safety measures. Do not smoke! Eliminate sources of fire and sparks. Keep to the windward side. Avoid low places. Provide first aid to the injured. Send people from the affected area for medical examination.

6. Measures to prevent and eliminate accidents and emergencies and their consequences

<p>6.1. Measures to prevent emergencies:</p> <p><i>6.1. 1. General recommendations.</i></p> <p><i>Recommendations for:</i></p> <p><i>6.1.2. Fire and explosion safety.</i></p> <p><i>6.1.3. Handling and storage.</i></p> <p><i>6.1.4. Ensuring the safety of personnel (user).</i></p>	<p>Sealing of production equipment, general and local ventilation installed in places with the highest emission of volatile substances.</p> <p>Use of equipment in anti-corrosion, antistatic, fire and explosion-proof design.</p> <p>Ensuring the air control of the working area.</p> <p>Electrical equipment and artificial lighting must be explosion-proof.</p> <p>The production processes are mechanized, the production is equipped with modern measuring and automatic control devices, the equipment must be grounded.</p> <p>The use of open flames and sources of sparking is prohibited. Smoking only in designated areas.</p> <p>Walkways, driveways, entrances to buildings, stairwells and access to fire extinguishing equipment should not be cluttered.</p> <p>The fire safety of the facility must be ensured by fire prevention and fire protection systems.</p> <p>Objects must have fire safety systems aimed at preventing people from being exposed to fire hazards, including secondary manifestations at the required level.</p> <p>Fire prevention must be achieved by preventing the formation of a combustible atmosphere (or) preventing the formation of (or introduction into) a combustible atmosphere of sources of ignition.</p> <p>Store in closed warehouses that protect the product from atmospheric precipitation.</p> <p>When storing the product in bulk, mixing of carbamide with other types of fertilizers is not allowed.</p> <p>Containers with urea and transport packages fastened with synthetic film may be stored in open areas.</p> <p>Ventilation of premises, compliance with the requirements and norms of the technological regime, the use of PPE (personal protective equipment).</p>
<p><i>6.1.5. Environmental protection.</i></p>	<p>Sealing of technological equipment and transport containers, installation of ventilation exhausts in places of possible product release.</p>

6.1.6. <i>Neutralization, recycling and disposal of waste.</i>	<p>Comply with fire safety regulations.</p> <p>Wash water after washing equipment and communications with a concentration of not more than 300 mg / dm³ should be sent to treatment facilities.</p> <p>Solid waste from the production or use of carbamide (after cleaning equipment and communications) that are not suitable for use for the intended purpose of the product should be sent for technological processing.</p>
6.2. Measures to eliminate emergencies. Necessary actions:	<p>Take the wagon to a safe place. Isolate the danger zone within a radius of 200 m.</p> <p>Remove unauthorized users. Enter the danger zone in protective equipment.</p> <p>Observe fire safety measures.</p> <p>Do not smoke. Eliminate sources of fire and sparks.</p> <p>Keep to the windward side. Avoid low places. Provide first aid to the injured. Send people from the lesion to a medical examination.</p>
6.2.1. <i>General.</i>	
6.2.2. <i>When scattering.</i>	<p>Collect and hand over for recycling.</p>
6.2.3. <i>In case of fire.</i>	<p>Do not approach burning wagons.</p> <p>Extinguish with powders from a maximum distance.</p>
6.2.4. <i>When eliminating the consequences of an emergency.</i>	<p>Rinse the area with water, preventing the ingress of drain (waste) water into drainage, sewerage, water bodies, soil, direct it to treatment facilities.</p>
6.3. Individual protection means.	<p>Protective suit L-1 or L-2 complete with an industrial gas mask with an aerosol filter and cartridges A, B, B₃ BKF.</p> <p>In case of fire - fire-retardant suit complete with SPI-20 self-rescuer.</p>

7. Rules for the storage of chemical products and handling it during loading and unloading operations

7.1 Safety measures and means of protection when working with a substance (material).	<p>All production facilities must be equipped with general forced ventilation, places of possible dusting - with local suction. All work with carbamide must be carried out in compliance with personal protective measures, the use of PPE.</p> <p>Use non-sparking tools, sealed equipment. Conduct regular monitoring of the state of the air environment.</p>
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7.2. Conditions and terms of safe storage.	<p>Urea must be stored in closed warehouses that protect the product from atmospheric precipitation.</p> <p>When storing the product in bulk, mixing of carbamide with other types of fertilizers is not allowed.</p> <p>Urea containers and transport packages, fastened with synthetic film, it is allowed to store in open areas.</p> <p>Guaranteed shelf life - six months from the date of manufacture.</p> <p>Guaranteed shelf life of urea intended for retail trade is 2 years from the date of manufacture.</p> <p>The agrochemical shelf life is not limited.</p>
7.3. Substances (materials) incompatible during storage.	Water, oxidizing agents, acids, fodder, fertilizers.
7.4. Materials recommended for containers.	Bituminated or laminated paper bags, welded polyethylene bags, glued polyethylene bags, woven polymer laminated bags, soft containers, specialized metal containers, polyethylene bags.
7.5. Recommendations for safe movement and transportation.	<p>The cargo is safe.</p> <p>It is transported by all means of transport in accordance with the rules for the carriage of goods in force for this type of transport.</p>

8. Exposure controls/personal protection

8.1. Working area parameters subject to mandatory control (MPC).	MPC = 10 mg/m ³ , hazard class 3.
8.2. Measures to ensure the content of harmful substances in permissible concentrations.	<p>Sealing of production equipment, operation of supply and exhaust ventilation.</p> <p>Control over the state of the air environment is carried out by departmental laboratories according to a plan agreed with the organization of sanitary supervision by universal gas analyzers - UG-2.</p>
<p>8.3. Measures and means of personnel protection.</p> <p>8.3.1. <i>General recommendations:</i></p> <p>8.3.2. <i>Respiratory protection:</i></p>	<p>Observe precautions. Avoid direct contact with the product.</p> <p>Use PPE, undergo periodic medical examinations.</p> <p>Filtering industrial gas mask brand DOT M 600 B2 E2 K2 CO20 SX, respirators such as "Super Wind 9550V" or cotton-gauze bandage. When working in confined spaces, insulating gas masks of ПIII-1, ПIII-2 type.</p> <p>Cotton suit, leather shoes or boots.</p> <p>Goggles type "G".</p> <p>Rubber knitted gloves.</p>

8.3.3. <i>Protective clothing (material, type):</i>	It is used as a mineral nitrogen fertilizer and as a feed additive in livestock breeding.
8.3.4. <i>Eye protection:</i>	
8.3.5. <i>Hand protection:</i>	
8.3.6. <i>At home:</i>	

9. Physiochemical properties

9.1. Physical state (aggregate state, color, smell).	GRANULES OR CRYSTALS WHITE OR SLIGHTLY COLORED. WITHOUT SMELL.
9.2. The parameters characterizing the basic properties of a substance (material) are primarily dangerous.	Melting point 132.7 0 C. There is no ignition temperature up to 220 0 C. Soluble in water: at a temperature of +20 0 C - 1,094,000 mg / l, at a temperature of +40 0 C - 1,653,000 mg / l. Let's not dissolve in fats. Density - 1.3230 g/m3 at 20 0 C.

10. Stability and reactivity

10.1. Stability.	Under normal conditions, it is non-flammable, fire-explosion-proof.
10.2. Conditions causing a dangerous reaction.	When heated above the melting point (132.7 0 C), dry carbamide decomposes with the formation of ammonia, carbon dioxide, biuret, cyanuric acid. In the presence of an excess of ammonia, the decomposition of urea stops.
10.3. Substances, contact with which may cause a dangerous reaction.	In an aqueous solution of urea, heated to 80 0C, hydrolysis and dissociation reactions occur (biuret, ammonia are formed). When urea interacts with nitric acid, urea nitrate is formed. $\text{CO}(\text{NH}_2)_2 * \text{HNO}_3$, which decomposes with an explosion when heated.
10.4. Harmful products.	Ammonia. Carbon dioxide.
10.5. Possibility of dangerous exothermic (releasing heat) reaction.	Under these conditions, the combustible properties of urea are on the border separating slow-burning and combustible substances.

10.6. Shelf life under the above conditions.	Urea must be stored in closed warehouses that protect the product from atmospheric precipitation. It is not allowed to mix the product with other types of fertilizer, because the ingress of moisture into the product leads to an increase in caking. Guaranteed shelf life - six months from the date of manufacture. Guaranteed shelf life of urea intended for retail trade is 2
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years from the date of manufacture.
The agrochemical shelf life is not limited.

11. Information about toxicity

11.1. Assessment of the degree of danger (toxicity) of exposure to the body:	It does not have pronounced toxic properties. According to the degree of impact on the human body, it belongs to the 3rd hazard class, to substances of moderate danger.
11.2. Doses (concentrations) with minimal toxic effects:	Dmax - 45 mg/m ³ used 4 months, rats. (Changes in urea balance, weight loss and increased protein in the urine). Dmax- 0.72 mg/kg for 6 months. (changes in the balance of urea conditioned reflex activity, decreased hemoglobin).
11.3. Information about the effects hazardous to health in direct contact with the substance, as well as the consequences of these effects (irritant effect on the upper respiratory tract, eyes, skin).	Does not cause acute toxic effects. It has a skin-resorptive sensitizing effect. Prolonged inhalation of urea dust in concentrations exceeding the MPC leads to the development of chronic inflammation of the mucous membrane of the trachea and bronchi, changes in the function of the liver and kidneys. Embryotronic, gerotogenic actions have not been established. Gonadotronic, carcinogenic effects have not been studied. Has mutagenic activity.

12. Information on the impact on the environment.

12.1. Assessment of possible environmental impacts.	The main type of hazardous impact on the environment is atmospheric air pollution in populated areas as a result of leaks, emissions, discharges, violations of storage rules, and emergencies. It dissolves in water, does not give it a smell, does not change color.
12.2. The most important environmental impact characteristics.	Under normal conditions, carbamide is non-flammable, fire and explosion-proof. In the soil, urea is first ammonified, it turns under the influence of moisture into ammonium carbonate, which has a neutralizing effect on acidic soil. Further, the ammonium ion is nitrified, which leads to soil acidification. It has a slow action value in the soil.
12.2.1. Hygienic standards.	Acceptable daily dose - 10.0 mg/person. h, MPC in the water of reservoirs - 1.0 mg/dm ³ , MPC in the air of the working area - 10.0 mg/m ³ , MPC average daily in the atmospheric air of populated areas - 0.25 mg/m ³ ,

	<p>MPC for nitrates in plant products according to Sanitary Rules and Norms 0050-96,</p> <p>MPC in soil - 120.0 mg/kg, Sanitary protection zone – 100 m.</p>
12.2.2. Toxicity.	<p>Urea has cumulative properties of a functional nature, does not cause allergies, and does not have long-term effects. According to the parameters of acute toxicity, urea belongs to substances of the 4th hazard class (Sanitary Rules and Norms 0059-96). According to the degree of impact on the human body, urea is classified as a moderately hazardous substance of the 3rd hazard class according to GOST 12.1.007-76. Wash water after washing equipment with urea concentrations of not more than 300 mg/dm³ should be directed to biological treatment facilities.</p>

13. Recommendations for the disposal of waste (residues)

13.1. Safety requirements for waste management.	Use PPE when handling waste.
13.2. Methods of neutralization or disposal of waste.	Solid waste from the production or use of urea after cleaning equipment and communications that are not suitable for the intended use of the product should be sent for technological processing.

14. Information during transportation (transportation)

14.1. Transportation safety requirements:	Urea of A or B grade
14.2. Shipping name (including):	All types of transport in accordance with the rules for the carriage of goods in force for this type of transport.
14.3. Type of vehicles:	Not classified according to GOST 19433-88.
14.4. Dangerous goods classification:	Transport marking in accordance with GOST 14192-96 with the application of the handling sign "Afraid of humidity".
14.5. Transport marking (manipulation signs and information labels):	3; 4 P.
14.6. Hazard information for road transport (KEM):	Absent.
14.7. Emergency card:	Absent.
14.8. Hazard information for rail transport:	

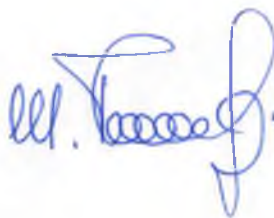
15. Information on national and international legislation

15.1. Laws of the Republic of Uzbekistan.	Law of the Republic of Uzbekistan "On Protection of Consumer Rights" dated 26.04.1996 Law "On the Protection of Atmospheric Air" dated 27.12.1996 Law "On State Sanitary Supervision" dated 03.07.1992 Law "On Standardization" of December 28, 1993 Law "On Metrology" of December 28, 1993 Law "On Nature Protection" dated 09.12.1992
15.2. Documents regulating the requirements for the protection of humans and the environment.	Technological regulations for the production of urea. GOST 2081-2010 "Urea".

16. Additional Information

16.1 <i>List of information sources</i>	<ol style="list-style-type: none">1. GOST 2081-2010 "Urea".2. M.E. Pozin "Technology of mineral salts" vol. 13. "Production of urea" edited by V.V. Lebedev.4. V.A. Klevke "Technology of nitrogen fertilizers".5. "Harmful substances in industry", Handbook edited by Lazareva 1977.6. Technological regulations for the production of carbamide.7. Safety rules and procedures for the elimination of emergency situations with dangerous goods during their transportation by rail.8. Unified tariff-statistical nomenclature of goods.9. GOST 12.1004-91 "System of safety standards labor. Fire safety. General requirements.»10. Fire and explosion hazard of substances and materials and means of extinguishing them.11. Handbook edited by A.Ya.Korolchenko 1990.
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1 Head of Carbamide production plant



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«AGREED»

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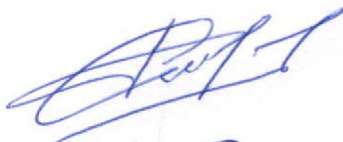
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