MATERIAL SAFETY DATA SHEET

(Safety Data Sheet)

Entered into the Register

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Rosstandard

Information Analysis Center
"Substances and Materials Safety"
Federal State Unitary Enterprise "All-Russian Research and Development Center for Standartization, Information and Certification of Raw Materials, Materials and Substances" (FGUP "VNICSMV")

Head_____/A.A. Toporkov/
locus sigilli

NAME:

technical name (in accordance with ND)	**Argicultural chemical Urea Grade B**
chemical name (according to IUPAC)	**Carbonyldiamide**
trade name	**Argicultural chemical Urea Grade B**
synonyms	**Urea, phthalic diamide**

OKP code: 2 1 8 1 9 1

TN VED Code: 3 1 0 2 1 0 1 0 0 0

Identification code and name of main standardized, technical or informational document for the product (GOST, TU, OST, STO, (M)SDS etc).

GOST 2081-2010 Urea, Technical Conditions

HAZARD CHARACTERISTICS:

Signal word: WARNING

Brief (word) **characteristics:** By the level of effect on a human body the substance falls in the category of medium hazardous substances. Causes eye irritation. When entering water bodies in large quantities, may affect sanitary conditions. Combustible substance

Detailed characteristics: provided in 16 sections of attached material safety data sheet.

MAIN HAZARDOUS COMPONENTS	MAC w.a., mg/m^3	Class of hazard	CAS number	EC number
Carbonyldiamide	10	3	57-13-6	200-315-5

APPLICANT: JSC Novomoskovskaya joint stock company Azot, Novomoskovsk, Tula region
(company name) (city)

Type of an applicant: manufacturer, supplier, seller, exporter, ~~importer~~
(delete as appropriate)

OKPO code: 0 5 7 6 1 4 3

Hot line: (48762)22222*26600

Head of the applicant - company: _____ П.п. _____ / O.G.. Boyarkin /
(signature) full name stamp here

ЕВРОХИМ

Material Safety Data Sheet (MSDS) complies with UN Recommendations ST/SG/AC.10/30 «СГС (GHS)»

IUPAC	–	International Union of Pure and Applied Chemistry
GHS (СГС)	–	United Nations recommendations ST/SG/AC.10/30 «Globally Harmonized System of Classification and Labeling of Chemicals»
OKP	–	Russian Classifier of Industrial and Agricultural Production
OKPO	–	Russian National Nomenclature of Businesses and Organizations
TN VED	–	Foreign Economic Activity Commodity Nomenclature
CAS No.	–	number of a substance in Chemical Abstracts Service Register
EC No.	–	number of a substance in ECHA (European Chemical Agency) Register
MAC w.a.	–	maximum allowable concentration of a chemical in the working zone area, mg/m^3
Safety Data Sheet	–	Material Safety Data Sheet (substance, mixture, material, industri waste)
Signal word	–	Word used to highlight the level of chemical product hazard and chose according to GOST 31340-2013

1 Chemical product identification and information on manufacturer or supplier

1.1 Chemical product identification

1.1.1. Technical name	Agricultural chemical Urea Grade B
1.1.2 Brief use recommendations (incl. usage restrictions)	Urea, grade B is dedicated for use in agriculture, including personal subsidiary plots and farms as mineral nitrogen fertilizer. Urea acc. to TU 2181-052-05761643-2013, obtained during production process (formation of bulk in storehouses, collecting of scatterings from packing, loading, technological equipment and conveyor galleries cleaning etc) is used in agriculture as mineral fertilizer. /1,9/

1.2 Data on manufacturer or supplier

1.2.1 Full official name of the enterprise	Joint-stock company "Novomoskovsk joint-stock company "Azot"
1.2.2. Address (postal and registered)	301651, Novomoskovsk-1, Tula region, Svyazi str. 10
1.2.3 Phone, incl. for consultation in an emergency situation and a limited time:	(48762) 2-22-22*26-100; 26*200 For emergency consultation: (48762) 2-22-22, 26-600-23 (from 8oo till 17oo)
1.2.4 Fax	(48762) 2-22-22*26-104
1.2.5 E-mail	novomoskovsk@eurochem.ru

2 Hazard(s) identification

2.1. Hazard level of product in general (information on hazard classification in accordance with the Russian Federation law (GOST 12.1.007-76) and GHS (GOST 32419-2013, GOST 32423-2013, GOST 32424-2013, GOST 32425-2013)	Medium hazard substance as to the level of effect on the human body according to GOST 12.1.007 and SanPiN 1.2.2584-10 - 3d class of hazard. /1,7,13,26/ Classification of chemical products according to GOST 32419-2013: - causes mild irritation of eye mucosa: class 2, subclass 2B. /24/

2.2 Warning marking data according to GOST 31340-2013

2.2.1 Signal word	WARNING	/17/
2.2.2. Hazard pictograms	N/A	/17/
2.2.3 Brief characteristic of hazard (H-phrases)	H 320: Causes irritation on contact with eyes.	/17/

3. Composition (information on components)

3.1 General information on the product

3.1.1 Chemical name (acc. to IUPAC)	Carbonyldiamide	/10/
3.1.2 Chemical formula	CH_4N_2O	/10/
3.1.3 General characteristic of the composition (taking into consideration grade choice; production	Urea, grade B is produced from ammonia and carbon dioxide. Stabilizing agents (conditioners) can be added to Urea.	

method) The quality of Urea is standardized according to GOST 2081-2010 and TC 2181-052-05761643-2013. /1,9/

3.2 Components

(name, CAS number, EC number, mass fraction (must be 100% in total), MAC w.z. or SRLI w.z, class of hazard, references to data sources)

Table 1 /1,7,10/

Components (name)	Mass fraction, %		Hygienic regulations for working zone air		CAS No.	EC No.
	For crop growing	For retail sales	MAC w.z. mg/m^3	Class of hazard		
Urea, not less than	98	98	10 (aerosol)	3	57-13-6	200-315-5
Biuret, not more than	1.4	1.5	No	N/A	108-19-0	203-359-0
Water, not more than	0.6	-	No	N/A	7732-18-5	231-791-2

4 First aid measures

4.1 Observable symptoms

4.1.1 In case of intoxication through inhalation (if inhaled): Congested pipes, coughing, irritation of respiratory system mucous membranes. /10,13/

4.1.2 In case of skin contact: N/A /21/

4.1.3 In case of eye contact: Irritation, eyelid edema. /21/

4.1.4 In case of oral intoxication (if swallowed): Chest pain and stomach ache, nausea, vomiting, rough breath, foamy nasal discharge, visible mucosa cyanosis, spasms. /10,13/

4.2 First-aid measures for the victims

4.2.1 In case of intoxication through inhalation: Fresh air, rest, warmth, strong tea or coffee. /10/

4.2.2 In case of skin contact: Remove excess of substance with a cotton ball. Wash with running water and soap. /10,13,21/

4.2.3 In case of eye contact: Wash with running water with palpebral fissure wide open for 15 minutes. /10,13,21/

4.2.4 In case of oral intoxication: Rinse mouth with water, drink lots of water, induce vomiting, then drink more water with activated carbon (4-5 g of the absorbent per glass of water), saline purge. /10,13,21/

Seek medical aid if necessary, show package label or application data sheet. /10,13/

4.2.5 Contraindications: N/A /10/

5 Fire-fighting measures and fire safety means

5.1 General characteristic of fire and explosion safety (acc. to GOST 12.1.044-89): Combustible substance. /11/

5.2 Fire and explosion hazard indices (indices list in accordance with GOST 12.1.004 and GOST 12.1.-2002): Inflammability point 223°C.

Flash point 182°C.

Autoignition temperature of aerosuspension: 470°C.

	Lower flammability level of air suspension: 70 g/m^3. Maximum explosion pressure 590 kPa. Minimum ignition energy 80 mJ. /10,11/
5.3 Products of combustion and/or thermal destruction and associated hazard	Possible thermal destruction, producing nitrogen oxides, ammonia, carbod dioxide. /10/
5.4 Recommended fire-extinguishing means	Water (with wetting agent), foam, dry powder. /10,11/
5.5 Prohibited fire-extinguishing means	N/A /11/
5.6 Personal protection equipment used in fire fighting (PPE for firefighters)	Combustion: fire-protection suit complete with a self-rescuer SPI-20. /23/
5.7 Particularity of fire extinguishing	N/A /10/

6 Measures for prevention and liquidation of emergency and critical situations and consequences thereof

6.1 Measures for prevention of adverse effect on people, environment, buildings, structures etc. in critical and emergency situations.

6.1.1 Urgent general measures in emergency and critical situations	In case of fire isolate hazardous zone within the radius not less than 50 m. Remove the personal not involved in liquidation of the emergency situation out of the area. Observe fire safety measures. No smoking. Eliminate fire and sparkle sources. Apply first aid to victims. Enter the hazardous zone in PPE. /23/
6.1.2. Personal protection equipment for emergency situations (Rescue teams PPE)	all-service protective suit of L1 or L2 type complete with industrial gas mask with A or B cartridge. Protective clothing. Oil-and-petrol-resistant gloves, butyl rubber gloves, safety shoes. /23/

6.2 Operating procedure during the liquidation of the emergency and critical conditions

6.2.1 Actions in case of leakage, spillage, scattering (incl. liquidation measures and precautionary measures for environment protection)	Collect scattered substance into containers and send it for reprocessing or use according to its purpose as agreed with the manufacturer. The contaminated product unfit for processing (use) is subject to burial ground disposal in places agreed upon with local branch of Federal Service on Customer's Rights Protection and Human Well-being Surveillance (Rospotrebnadzor). Wash contaminated surface with water. Prevent the ingress of the product in drainage system, sewerage, water basins. /3/
6.2.2 Actions in case of fire	Enter the hazardous zone only in protection clothes and breathing apparatus. Extinguish with water with wetting agent, foam, dry powder. Cool down piles and open heaps of Urea with water from maximum distance. /23/

Rules of storage and handling for chemical products

7.1 Safety measures in handling of chemical products

7.1.1 Engineering safety measures systems	The equipment should be leak-tight. Provide trouble-free operation of dilution ventilation, places of possible dust pollution must be furnished with local suction devices, which air before release into the atmosphere must be subjected to purification. /1,3/
7.1.2 Environmental protection measures	Prevent scattering of Urea. Prevent entering into water reservoirs, drainage, sewerage in concentrations exceeding MAC (see section 12 of MSDS). /1,3/ Fertilizer distribution in the primary restriction are of a sanitary protection zone for sources of utility and drinking water supply and during immediate threat of a flood in the secondary restriction area of a sanitary protection zone is prohibited. Usage in fisheries water-preserved zone is prohibited. /20/
7.1.3. Recommendations on safety conveyance and carriage	Urea is subject to transportation by all means of transport in accordance with shipping rules applicable to the transportation by the given means of transport. /1.5/ Urea subject to retail sales shall be shipped only in packages. Urea in bulk is subject to transportation in covered special-purpose cars (hoppers) for mineral fertilizers. Temperature of granulated (prilled) Urea if shipped in bulk shall not be higher than 50 °C. Urea in bulk is also subject to transportation by covered marine and river decked vessels and by road transport equipped with means for covering the product in carriage body. Urea packed in bags (including for retail sales) is subject to transportation by the railroad in covered railway cars by carload shipments, covered decked vessels and by road transport equipped with means for covering the product in carriage body. Projected parts of fixed equipment shall be upholstered or pasted over with paper or other upholstery materials. Transportation of Urea packed in bags by covered cars not belonging to the carrier by means of carload shipment without collecting unitized loads is allowed as agreed with the client's. Transportation of Urea packed in bags on board of cargo vessels and by road transport in fixed and thoroughly covered piles is allowed. Packed Urea is subject to transportation by general-purpose containers not belonging to the carrier. Transportation of Urea packed in soft containers (of MKR type) by carload shipment in high-sided wagons not

belonging to the carrier is allowed providing handling at railway tracks of uncommon use.

Placing and fixation of cargo in cars and containers shall be made in accordance with technical conditions of loading and fixation of cargo applicable at railway transport.

Special-purpose soft containers and general-purpose containers loaded with Urea are allowed for transportation by road transport without coverage.

Cabamide packed in tare equipment is subject to transportation by road transport. /1/

7.2. Storage regulations for chemical products

7.2.1. Safety storage conditions and terms (incl. guaranteed storage time, shelf life, substances and materials incompatible in storage)

Urea shall be stored in closed well ventilated storehouses protecting the product from atmospheric precipitates. /1.5/

If the product is stored in bulk, mixing of Urea with ammonium nitrate and other kinds of fertilizers is not allowed. /1,9/

Long-term bulk storage of urea in warehouses at high temperatures is dangerous due to possible conglomeration and partial decomposition of the product with formation of biuret and combustible gaseous ammonia. /11/

Containers with Urea and unitized loads, secured by polyethylene film, are allowed to be stored in open areas.

Observe sanitary rules, setting hygienic requirements for storage, application and transportation of agricultural chemicals during storage.

Substances and materials: incompatible in storage oxidizers, acids, alkali, other mineral fertilizers.

Guaranteed storage life of Urea is six months from the date of manufacture; for retail sale – 2 years from the date of manufacture.

Useful life is unlimited. /1,10/

7.2.2 Tare and packaging (incl. materials, from which they are manufactured)

Urea is packed in tare, made of waterproof materials. The following kinds of transportation tare are used:

- five-ply, six-ply paper bags, bitumen-impregnated of laminated;

- polyethylene bags;

- polypropelene bags, sewn together with inner polyethylene lining;

It is allowed to package Urea in imported bags or other transportation tare (not inferior to the aforementioned in strength and quality).

It is allowed to package Urea in soft containers (of MKR type) for granular products, as well as in special metal containers for bulky goods, as agreed with the consumer.

	Bag openings shall be sewn up by a sewing machine, and polyethylene bags shall be sealed. MKR container openings shall be sealed or tied. /1/
7.3 Safety measures and domestic storage regulations	Th product shall be stored in manufacturer's (tare) package, out of reach of children and animals, situated in household outbuildings (utility rooms), isolated from storage places for food products, drinking water and other consumer goods. /5/

8 Hazardous exposure control means and personal protection equipment

8.1 Parameters of the working zone, subject to mandatory control (MAC w.z. or SRLI (safe reference level impact) (w.z))	MAC w.z. (aerosol) – 10 mg/m^3 (vapors), 3rd class of hazard /7,10/ Method of detection: photocolorimetric, by reaction with sodium nitrite. /1/
8.2 Measures to maintain concentration of hazardous substances within allowable concentrations:	Maximum technological process mechanization and automation. Operating practice parameters observation. The equipment shall be leak-tight. Extract - and - input ventilation trouble-free operation. Installation of ventilation exhausts in places of dust pollution. /1,3/
8.3 Personal protection equipment of personnel	
8.3.1. General recommendations	Avoid any direct contact with the product, use PPE. Observe operating practice norms, safety protection rules and personal hygiene. Personnel shall undergo periodical medical examinations. /1,3,5/
8.3.2. Respiratory protection: (types of PRPM)	While handling the product - dust-fighting respirators RU-60 mV, RU-60 mu, RPG-67; anti-aerosol respirators Y-2k and "Lepestok", bulky dressings. In emergency situations: filter gas mask if concentration of hazardous substances is not over 50 mg/m^3. If concentration of hazardous substances is high (over 50 mg/m3) in the atmosphere with lack of oxygen use isolating gas masks of IIIII type or isolating self-contained breathing apparatus of ABX type. /1, 3/
8.3.3 Protection equipment (material, type) (protective clothing, safety shoes, hand protection, eye protection)	Protective clothing, rubber-knitted mittens or gloves, shoes or boots. /1,3/
8.3.4 Personal protection equipment for extraoccupational activity	Respirators or bulky dressings, rubber-knitted mittens or gloves. /5/

9. Physical and chemical properties

9.1 Physical state (aggregative state, color, odor):	White or achromatous granules. /1/ Faint odor. /10/
9.2 Parameters, characterizing the basic product properties (temperature indices, pH, solubility, log-kow coefficient and other parameters, characteristic of this type of product)	Melting point 132.7°C at 0,1 MPa. /2/ Melt density 1.330 g/cm^3 at 25°C /2,10/ Bulk density 0.67-0.74 g/cm3 /3/ Solubility in water: at 20 °C – 1000000 mg/l /10/ at 40 °C – 1653000 mg/l /10/ Breakdown temperature >135°C /10/ Urea shows good solubility in liquid ammonia. /4,6/ Soluble in fats, ethanol, methanol, glycerin, acetic acid, pyrimidin, concentrated hydrochloric acid. /10/ Almost insoluble in chloroform, diethyl ether, benzene. /10/ Log-kow coefficient (minus 2.59 – minus 2.11) . /10/ pH = 9.2-9.5 at concentration 100000 mg/l of water. /10/

10 Stability and reactivity

10.1 Chemical stability (specify decomposition products for unstable products)	Urea is chemically stable at ambient temperature. Urea heated in vacuum up to (120-130) °C, is sublimed without decomposition. At higher temperatures (160-190)°C decomposes with formation of ammonium cyanate. At atmospheric pressure and a temperature of (180-190)°C Urea decomposes with formation of biuret, cyanuric acid and ammelide. At temperatures above 200°C Urea decomposes into ammonia and cyanuric acid. Urea in solution is practically stable at a temperature not over 80°C. /2/
10.2 Reactivity	Urea is hydrolysable, reacts with acids and their anhydrides, oxidizes, deaminates. Especially hazardous is the interaction of Urea with nitric acid resulting in formation of Urea nitrate. Under certain conditions Urea reacts with ammonium nitrate with a formation of Urea nitrate. When heating Urea nitrate decomposes with an explosion. Dry Urea mixture with ammonium nitrate, especially with ammonium nitrate content 30-50 %, should be considered hazardous so far as it is prone to to explosive combustion. /1, 4, 6/
10.4 Conditions to avoid (incl. hazardous effects in contact with incompatible substances and materials)	Prevent decomposition and thermal destruction. Thermal destruction products: nitric oxides, ammonia, carbon dioxide. /10/ Prevent mixing with ammonium nitrate and nitric acid. /4,6/

11 Toxicological information

11.1 General characteristic of exposure (Evaluation of a hazard level (toxicity) of human exposure and most typical hazard manifestations)	Medium hazard substance. /1,10,26/ Causes eye irritation. /21,24/
11.2 Routes of exposure (inhalation, ingestion, skin and eye contact)	By aerosol inhalation, contact with skin and eye mucosa, ingestion (accidental swallowing). /10/
11.3 Target organs, tissues and systems of human body	Central and peripheral nervous and respiratory system, liver, pancreas, kidneys, skin, eyes. /10,13,21/
11.4 Information about hazardous effects as a result of direct contact with the material and its consequences (irritation of upper air passages, eyes, skin, including skin - resorptive effect, sensitizing effect)	Causes eye irritation. /21/ Produces a skin-resorbtive and sensitizing effect. /10/ Sensitizing effect of urea is nonspecific, associated with calciferous penetrance increase and increase of incoming flow of calcium ions on exposure to spasmogenic agents. /10/
11.5 Information about long-term effects of the product on a human body (reproductive toxicity, carcinogenicity, mutagenicity. cumulativeness and other chronic effects)	Causes reproductive toxicity effects with non-standard routes of exposure (intraplacental, intrauterine). /10/ Teratogenic effect – has not been studied. /10/ Mutagenic effects have been detected (Evaluation of MAIR: not confirmed) Mutagenicity is observed at high doses and concentrations in animal testing and mammal cells "in vitro" tests. /10/ Carcinogenecity effect on human has not been studied. Carcinogenic effects have been detected in animals (Evaluation of MAIR: not confirmed) Low cumulativity. /10/ Urea is listed as a potential endocrine system disruptor by the World Health Organization. /10/
11.6 Acute toxicity indices (DL50, route (ingestion, skin) animal species; CL_{50}, time of exposure (h), animal species	DL_{50}(мг/кг) Route of exposure Animal species 8471-16300 ingestion rats 11000-18000 ingestion mice 10000 ingestion rabbits /10/ CL50 (mg/m3) time of exposure (h) animal species Not reached 4 rats /10/

12 Environmental effect information

12.1 General characteristics of environmental effects (atmospheric air, water basins, soil, including observable signs of exposure)	After entering water reservoirs, the product may change organoleptic properties of water, affect sanitary conditions of water facilities, self-purification process disruption,

eutrofication and biodeterioration of water bodies. /22/

12.2 Routes of environmental impact — Violation of storage and transportation rules. In case of accidents and emergency situations.

12.3 The most important characteristics of environmental effect

12.3.1 Hygienic regulations

(allowable concentrations in atmospheric air, water, including fishery waters, soil)

Table 2 /10,14,15.18/

Components	MAC for atm.air SRLI atm.air., mg/m3 (HLV[1], class of hazard)	MAC for water[2] or APL for water, mg/l , (HLV, hazard class)	MAC fish.[3] or SRLI fish., mg/l (HLV, class of hazard)	MAC for soil or APC for soil, mg/kg (HLV)
Urea (urea)	--/0,2 (res., 4 cl. of hazard)	Within the limits permissible by calculations for content of organic substances in water and by indices of biological oxygen demand and dissolved oxygen. Dissolved oxygen content must be not lower than 4 mg/dm3 in any season of the year, in a sample taken before midday. Biochemical oxygen demand (BOD5) must not exceed at 20oC: 2mgO2/dm3 for potable water and public water supplies, as well as for food processors, and 4 mgO2/dm3 for recreational use of water as well as water basins in the boundaries of populated areas.	80 (tox., 4 cl. of hazard)	N/A

12.3.2 Ecotoxicity indices
(CL, EC, NOEC for fishes, daphnias Magna, algae etc.)

Stable ($\tau_{1/2}$) 1 – 15 days.
COD – 1.15 mgO_2/dm^3.
Acute toxicity to fish:

CL_{50} (mg/l)	Species	Exposure time (h)
12000	rasbora heteromorpha	96
>10000	Leuciscus idus	48
>6810	Leuciscus idus	96
22500	Oreochromis mossambicus	96

Daphnia Magna toxicity:

EC_{50} (mg/l)	Exposure time ()
>10000	24

Algae toxicity:

[1] HLV - hazard limiting value (tox. - toxicological; s.-t. (san. tox.) - sanitary - toxicological; org. - organoleptic with organoleptic water properties change interpretation (od. - changes odor of water, opac. - increases water opacity, col. - colors water, foam - causes foam formation, film - forms a film on water surface, flav. - causes flavor in water, opal. - causes opalescence); refl. - reflectory, res. - resorptive; refl.-res. - reflectory-resorbtive; fisher. - fishery-related (changing commercial properties of fishery aquatic life); gen. – general sanitary).
[2] Water of water objects of household water and cultural and general use.
[3] Water of fishery water bodies (including sea)

EC_{50} (mg/l)	Species	Exposure time (h)
>10000	Blue-green algae	168

Revealed effects on model ecological system:

EC_{50} (mg/l)	Species	Exposure time (h)
24	Photobacterium luminescence	5

12.3.3. Migration and environmental fate due to biological degradation and other processes (oxidation, hydrolysis etc.)	Transforms in the environment. The transformation products are not described. /10/

13 Recycling and waste disposal recommendatiuons

13.1 Safety measures while handling waste of consumption, storage, transportation.	Analogous to measures taken during operation with main products (see section 6, 7, 8 of MSDS).
13.2 Information on places and methods of substance waste neutralization, recovery and disposal, including package (containers)	Solid waste of production or usage of the Urea (after cleaning of the equipment and communications), unsuitable for intended use of the product should be sent to technological recycle or burial. Polluted waste (deposits) of Urea and used package should be buried in places agreed with with local branch of Federal Service on Customer's Rights Protection and Human Well-being Surveillance (Rospotrebnadzor) or environmental agencies.
13.3 Disposal recommendations for extraoccupational waste	Waste is to be buried in excavation with waterproof bottom and side walls. /1,16/ Equipment, ware and accessories used during treatment, shall be thoroughly washed with soap and sodium solution and drained into sewerage. If it's not available, use special pit, which shall be situated at least 200 m far from wells and drain melioration system. /5/

14 Shipment (transportation) information

14.1 UN number (according to UN Recommendation on transportation of hazardous goods)	No
14.2 Required shipping name and transportation name	Agricultural chemical Urea, Grade B
14.3 Transport means used:	Urea is subject to transportation by all means of transport in accordance with shipping rules applicable to the transportation by the given means of transport. /1/
14.4 Hazardous cargo classification acc. to GOST 19433-88:	Not classified as hazardous cargo. /12/
14.5 Hazardous cargo classification acc. to UN recommendations on hazardous cargo transportation:	Not classified as hazardous cargo. /25/
14.6 Transport marking (manipulation signs acc. to GOST 14192--96)	"Keep in dry place" /8/
14.7 Emergency cards (railways, sea and other transportation)	No

15 International and national legislation information

15.1 National legislation

Standards, 1988.
13. Expert conclusion in accordance with the results of toxic – hygienic evaluation of fertilizer "Urea". – M.: Federal Scientific Center of Hygiene named after F.F. Erisman, 2013.
14. GN 2.1.6.1338-03 MAC of pollutant in the atmosphere air of settlements. – M.: Ministry of Health of the Russian Federation, 2003
15. GN 2.1.5.1315-03 MAC of chemical substances in the water of water objects of household water and cultural and general use. – M.: Ministry of Health of the Russian Federation, 2003
16. Sanitary regulations and norms 2.1.7.1322-03 Hygienic requirements to allocation and disposal of industrial and consumption waste. – M.: Ministry of Health of the Russian Federation, 2003
17. GOST (State Standart) 31340-2013 – Warning marking of chemical products. –M: Standardinform, 2013.
18. Standards for water quality of fishery water bodies, including established standards for maximum allowable concentrations of hazardous substances in water of fishery water bodies. App. by Order No. 20 dated 18.01.2010 of Federal Agency for Fishery.
19. Chemical Safety Report (CSR) data accepted in 2014 for registration of the substance under EU Regulation No 1907/2006
20. Conclusion of state ecological expert examination dated 28.07.2014 No. 130-Э. – M.: CFD Federal Service for Supervision of Natural Resource Usage, 2014
21. Tests report for products liable to check on the territory of Customs Union (Urea) No. 0115/8697/08-01. - Minsk, GU Republic's Scientific and Practical Hygiene Center, 2012.
22. Expert conclusion on evaluation of environmental effects of Urea Grade B. – M.: Soil Sciences Dept., MSU, 2013.
23. Emergency card No.902.
24. GOST 32419-2013 – Classification of hazardous chemical products. – M.: Standardinform, 2014.
25. Dangerous goods transportation regulation. Annex 2 to the Agreement on International railroad freight traffic. – M.: RF Ministry of Railways, 2005
26. SANPIN (Sanitary norms and regulations)1.2.2584-10 Hygienic requirements to testing, storage, transportation, usage and disposal of pesticides and agrochemicals. – M.: RF Department for State Sanitary and Epidemiological Supervision Regulations, 2010.

15.1.1. Russian Federation legislation	Russian Federation law No. 184-FZ dated 27.12.2002 On Technical Regulation; Russian Federation law No. 109-FZ dated 24.06.1997 Safety handling of pesticides and agricultural chemicals; Russian Federation law No. 7-FZ dated 10.01.2002 On Environmental Protection; Russian Federation law No. 89-FZ dated 18.07.1998 Concerning Production and Consumption Waste.
15.1.2 Documents, regulating the requirements of protection of people and the environment	Declaration of Conformity РОСС RU.АЕ41.Д04699, valid till 06.11.2017 (Urea, Grade B) Declaration of Conformity No РОСС RU.АЕ41.Д04700, valid till 06.11.2017 (Urea acc. to ТС 2181-052-05761643-2013) Certificate of State Registration (of agricultural chemical) of Urea, grade B No.422, valid till 01.10.2024 Certificate of State Registration (of agricultural chemical) of Urea acc. to ТС No.422, valid till 01.10.2024
15.2 International conventions and agreements (is the product subject to Montreal protocol, Stockholm Convention etc.)	Not regulated.

16 Additional information

16.1 Information on revision (re-edition) of MSDS (to be specified: "First edition of MSDS" or "MSDS rewritten due to expiration of validity. Previous MSDS No." or "The following paragraphs altered..., alteration date...")	The Material Safety Data Sheet has been revised due to its expiration. Previous MSDS No. 05761643.21.24898.

16.2. Reference literature used in drawing up the Material Safety Data Sheet[4]

1. GOST (State Standard) 2081-2010 Urea. Technical conditions. -M.: Standardinform, 2010.
2. Nitrogen maker reference book, 2nd edition, revised. - M.: Khimiya, 1987.
3. Constant technological regulations No. 16 of Urea - 2 plant and No. 31 of Urea –3 plant
4. Urea production, under the editorship of V.V. Lebedev - M.: Khimiya, 1970.
5. SANPIN (Sanitary norms and regulations)1.2.2584-10 Hygienic requirements to testing, storage, transportation, usage and disposal of pesticides and agrochemicals. - M.: Ministry of Health of the Russian Federation, 2010.
6. Journal "Chemical industry", No. 2, 1988.
7. GN 2.2.5.1313-03 MAC of harmful substance in the working zone area. – M.: Ministry of Health of the Russian Federation, 2003
8. GOST (State Standard) 14192-96 Cargo marking - M.: Publishing House of Standards, 1996.
9. Technical Conditions ТС 2181-052-05761643-2013 Urea. – Novomoskovsk, OJSC NAK AZOT, 2013.
10. Information card of potentially hazardous chemical and biological substance. Carbonyldiamide. Certificate of Registration BT No. 000038. – M.: RPOHV, 1994. (2015 revision)
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[4] Data source numbers are given in every MSDS paragraph as references.

ПРОНУМЕРОВАНО, ПРОШНУРОВАНО, СКРЕПЛЕНО ПЕЧАТЬЮ

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