

MATERIAL SAFETY DATA SHEET

Entered to the Register	
Registration number 52420467•03•43930	dtd. October 13, 2018
Valid to October 13, 2023	
Rosstandard (Federal Agency on Technical Regulating and Metrology)	
Information and analytical center	
“Safety of substances and materials”	The head /signed/ A.A. Toporkov
FGUP VNII SMT (Federal State Unitary Enterprise Russian National Research Institute of Standardization, Materials and Technologies)	
Seal: <i>[Federal State Unitary Enterprise Russian National Research Institute of Standardization, Materials and Technologies]</i>	

DESCRIPTION

Technical (acc. To regulatory documents)	'Humic fertilizer Edagum SM'
Chemical (acc. To IUPAC)	N/A
Trade	'Humic fertilizer Edagum SM'
Synonym	N/A
OKPO (Russian Classifier of Businesses and Organizations) 039200	
Customs commodity code of Russia: 3101000000	

Reference character or nomination of a regulatory, technical or information document for the products (GOST, TU (technical requirements), OST (Industrial standard), STO (Corporate standard), (M)SDS)

TU 0392-001-52420467-2005 'Humic fertilizer Edagum SM'

HAZARD STATEMENT

Signal word: None
Shortly (in words): the agrochemical relates to low-hazard substances in terms of effect on human body. It may be slightly irritative to eyes. It can be contaminating to water basins, if handling rules are violated.
More detailed: see 16 attached parts of the Safety Data Sheet.

MAIN HAZARDOUS COMPONENTS	Threshold limit value, mg./m3	Hazard class	CAS No.	EC No.
Humic acids	Not rated	No	141-93-6	215-809-6

APPLICANT "EDAGUM SM RUS" LLC Moscow (city)
(Name of the organization)

Type of applicant Manufacturer, supplier, seller, exporter, importer
(Cross out what is non-applicable)

OKPO (Russian Classifier of Businesses and Organizations) 52420467

Telephone for emergency cases +7 495 660 52 22

The head of the applicant's organization /signed/ T.A. Komleva

Seal: [Limited Liability Company "Edagum SM Rus"]

The Safety Data Sheet (SDS) conforms to the recommendations of UN ST/SG/AC.10/30 "GHS"

IUPAC International Union of Pure and Applied Chemistry

GHS	Recommendations of UN ST/SG/AC.10/30 “Globally Harmonized System of Classification and Labelling of Chemicals
OKP	Russian National Classifier of Products
OKPO	Russian Classifier of Businesses and Organizations
TN VED	Customs commodity code of Russia
CAS No.	Number of substances in the Register of Chemical Abstracts Service
EC No.	Number of substances in the Register of European Chemicals Agency
Threshold limit value	Threshold limit value of chemical substance in air of working area, mg/m ³ .
Signal word	Word used to focus attention on level of hazard of chemical product and which is chosen according to GOST 31340-2013.

1. Identification of chemical product and manufacturer or supplier

1.1. Chemical product identification	
1.1.1. Technical name	Humic fertilizer “Edagum SM”
1.1.2. Short recommendations for application (including application restrictions)	Based on humic acids and used as a fertilizer for pre-seeding (pre-planting) treatment of seeds (planting material), for foliar and plant-root fertilizing of all agricultural crops and decorative plants cultivated on various types of soils.[31] Application restrictions: strictly follow recommendations concerning transportation, application and storage of agrochemical. Application of this agrochemical in water preserved zones as well as in fishery water basins is prohibited [27, 32, 33].
1.2. Data about manufacturer or supplier	
1.2.1. Full registered name of the organization	Limited Liability Company “Edagum SM Rus”
1.2.2. Location address:	of. 2, premise VI, h. 28, Petrozavodskaya str. Moscow, 125475
Postal address:	h. 2 Godovikova str., Moscow 129085
1.2.3. Telephone including for emergency cases and call time limits	+7 495 660 52 22
1.2.4. Fax	+7 495 660 52 22
1.2.5. E-mail	info@edagum-sm.ru

2. Hazard(s) identification

2.1. Rate of hazard of chemical product in whole (information about hazard classification according to legislation of RF (GOST 12.1.007-76) and GHS (GOST 32419-2013, GOST 32423-2013, GOST 32424-2013, GOST 32425-2013))	The product relates to low-hazard substances in terms of effect on human body (hazard class 4 according to GOST 12.1.007) The product is no classified according to GHS (GOST 12.1.007, GOST 32419-2013)
2.2. Information on warning marks according to GOST 31340-2013	
2.2.1. Signal word	N/A
2.2.2. Signals (signs) of hazard	N/A
2.2.3. Short characteristics odd hazard (H-phrases)	The product does not conform to criteria and is not covered with GOST 31340-07

3. Composition (information on components)

3.1. General information on product	
3.1.1. Chemical name (according to IUPAC)	N/A [1]

3.1.2. Chemical formula	No formula exist as the humic fertilizer “Edagum SM” is produced on basis of fen peat by method of fen peat treatment with potassium hydrate including further adding of macro- and micro elements. It relates to organo-mineral fertilizers [1].
3.1.3. General characteristics of composition (including brand assortment, production methods)	It is water solution of mix of natural humic acids, active form of nutrient substances (NPK) and microelements (Fe, 2π, Mn, Mo, Co, B), which is contained in peat. Production method: by extraction with water solution of potassium hydrate (concentration 0.3-0.8%, hazard class 2) from natural raw material – fen peat and intended for agricultural use. Peat is not a toxic product in terms of effect on human body; a peat dust relates to substances of 4 th class of hazard and has fibrogenic effect. [1, 3, 5, 6]

3.2. Components

(Nominations, CAS and EC numbers, mass fraction (in the aggregate it should be 100%), threshold limit value or SRLI (Safe Reference Level of Impact), hazard classes, references)

Components	Mass friction, %	Occupational exposure standard	CAS No.	EC No.
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(nomination)		Threshold limit value, mg./m ³	Hazard class		
Humic acids	2	N/A	4	CAS No. 1415-93-6	EC No. 215-809-6
Water	The rest up to 100	N/A	N/A	[1, 19, 28]	

4. First aid

4.1. Symptoms

4.1.1. If inhaled	Intoxication by inhalation is impossible [30].
4.1.2. In case of skin contact	Irritation of skin is not observed [30].
4.1.3. In case of eyes contact	Cases of eyes contact: when conjunctiva of eyes of laboratory rabbits were affected with liquid humates, the later resulted irritation, which stops within 3-6 hours without causing any complications. [34, 35]
4.1.4. When swallowed	No cases of intoxication, when swallowed, were revealed. [34, 35]

4.2. First aid measures

4.2.1. In case of intoxication caused by inhalation	Intoxication by inhalation is impossible [30].
4.2.2. In case of eyes contact	In case of contact of the fertilizer with skin of user, the place of contact shall be carefully rinsed with water including soap. [30].

4.2.3. In case of eyes contact	In case of eyes contact, rinse eyes with large amount of water. [30].
4.2.4. In case of intoxication caused by swallowing	No cases of intoxication, when swallowed by chance, were revealed. Wash mouth with water, in case of need call doctor or bring affected person to hospital, keep a package label in your possession. [34, 35]
4.2.5. Contra-indications	Not revealed [30].

5 Fire-explosion safety measures

5.1. General characteristics of fire-explosion safety (according to GOST 12.1.044-89)	The agrochemical is a fire-exposure proof substance
5.2. Indicators of fire-explosion safety (indicators list according to GOST 12.1.044-89 and GOST 30852.0-2002)	Non-flammable [1, 11].
5.3. Combustion products and/or thermal destructions and caused hazard	None [1].
5.4. Recommended means of fire suppression	Depending on source and nature of fire, the following means and methods of fire suppression shall be applied (foam, CO ₂ , sand, sprayed water, Melio water) [1, 11].
5.5. Prohibited means of fire suppression	No data [1].
5.6. Individual protection means for fire suppression (individual protection means for firemen)	No any special means for individual protection required [1].
5.7. Specific features of fire suppression	There are not any specific features [1].

6 Accidental release measures

6.1. Measures preventing hazardous effect to people, environment, buildings, structures, etc. in case of accidents and emergency events

6.1.1. Necessary measures of general nature in case of accidents and emergency cases	All production premises shall be equipped with common exchange suction and exhaust ventilation and local exhaust systems. [7] Equipment and tanks for product storage shall be hermetically sealed. Automation and mechanization of production processes. Maintenance and adjustment shall be performed only on completely stopped equipment. In case of wiring damage, any operations are prohibited. Fire extinguishers and other means of fire suppression shall be easily accessed. [1].
6.1.2. Individual protection means for emergency events (Individual protective means for emergency response teams)	Kit of means for individual protection: glasses, respirators Y-2K or IIIБ-1 “Lepstok”; gloves, protective overall made from dustproof material; safe shoes (rubber boots or leather boots) [8, 9, 10].
6.2. Emergency response actions	
6.2.1. Measures in case of leakage or spills (including preventive and response measures, which provide protection for environment)	Spilled fertilizer shall be washed with large amount of water or powdered with sand, sawdust or other adsorbing agents and removed from storage site. Spilled solid components of critical raw material shall be gathered by dry method and used again for production needs. Spilled alkaline solution or ready made humic fertilizers “Edagum SM” shall be rinsed with water. [1]
6.2.2. Measures in case of fire	In case of fire the following measures to be taken: <ul style="list-style-type: none"> - notify the fire inspection authorities about fire; - take measures to evacuate people and suppress fire. Depending on source and nature of fire, the following means and methods of fire suppression shall be applied (foam, CO ₂ , sand, sprayed water, Melio water) [1, 11].
7. Rules for storing and handling chemical products	
7.1. Safety measures, when handling chemical products	
7.1.1. Systems of engineering safety measures	To prevent hazardous and harmful effect, when use fertilizer, please follow general safety rules: <ul style="list-style-type: none"> - those, who manufacture, package or apply fertilizer shall wear special protective clothes and, if necessary, respirators and follow rules of personal hygiene; - when operations with fertilizer have been completed, it is necessary to wash hands with soap and water and take a shower; - when making operations with fertilizer, smoking and eating is prohibited; - in case of fire, use means of fire suppression: foam, CO₂, sand, sprayed water; - all production premises shall be equipped with fire suppression means and first aid kit [1, 30].
7.1.2. Measures to protect environment	Application of this agrochemical in water preserved zones as well as in fishery water basins is prohibited [27].
7.1.3. Recommendations on safe transportation and handling	Liquid humic fertilizer “Edagum SM”, packaged in shipper containers, can be transported by all means of covered transport vehicles according to transportation rules valid for these transport means. [1, 19, 20].
7.2. Storage rules for chemical products	
7.2.1. Terms and conditions for safe storing (including guaranteed shelf life, expiration date, incompatible substances and materials)	Liquid humic fertilizer “Edagum SM”, packaged in shipper containers, shall be stored in closed premises placed on pallets or storage stands under the temperature -4C° or above [1]. Manufacturer guarantees conformity of fertilizer’s quality to the specification within a year from manufacturing date, providing that

	storage and transportation rules are followed; agrotechnical expiry date is not limited [1].
7.2.2. Transport containers and packaging (including materials, tare and package made from)	Consumer packaging – tightly closed polyethylene canisters, polymer barrels, PE bottles, polymer cans. Upon agreement with customer, application of other types of package is allowed providing that such package conforms to the requirements in terms of strength properties. [1, 13].
7.3. Storage and safety rules in household use	Take care of package integrity, store in dry closed premises under the temperature -4C° or above isolated from food, medications, fodders. Keep away from children. [1, 30].
8. Exposure control and means of personal protection	
8.1. Working area parameters subjected to obligatory control (threshold limit value or SRLI (Safe Reference Level of Impact))	Threshold limit value is not rated for humic fertilizer “Edagum SM”. In process of fertilizer manufacture, threshold limit value of peat dust does not exceed 4mg/m3.
8.2. Exposure controls	All production premises shall be equipped with common exchange suction and exhaust ventilation and local exhaust systems. [7]
8.3. Individual protective means for personnel	
8.3.1. General recommendations	Those, who manufacture, package or apply fertilizer shall wear special protective clothes and, if necessary, respirators and follow rules of personal hygiene; when operations with fertilizer have been completed, it is necessary to wash hands with soap and water and take a shower; when making operations with fertilizer, smoking and eating is prohibited; [30] Any operations are prohibited, if wiring or hoses are damaged, pipe joints are not hermetically sealed. Occupational safety instructions shall be followed; collective and individual protective means shall be used correctly; safety requirements shall be followed prior to start work, during work and after work is completed. [5, 21]
8.3.2. Protection of breathing organs (RPE – Respiratory Protective Equipment)	Respirators Y-2K or IIIБ-1 “Lepestok” [1, 10]
8.3.3. Protective means (material, type) (special clothes, special shoes, protection for hands, protection for eyes)	Kit of individual protective means: glasses, gloves, protective overall made from dustproof material; safe shoes (rubber boots or leather boots) [8, 9].
8.3.4. Individual protective means for household use	Kit of individual protective means: glasses, respirators Y-2K or IIIБ-1 “Lepestok” type, gloves, protective overall made from dustproof material; safe shoes (rubber boots or leather boots) [8, 9, 10].
9. Physical and chemical properties	
9.1. Physical condition (aggregate state, color, odor)	Liquid of dark-brown color without odor with density 13sm. [1]
9.2. Parameters characterizing main properties of products (temperature, pH, solubility, n-octanol/water rate and other parameters peculiar for this kind of products)	Content of heavy materials, maximum: Cuprum – 33.0 mg/kg Zinc – 55 mg/kg Arsenic – 2.0 mg/kg Mercury – 2.1 mg/kg Lead – 20.0 mg/kg Cadmium – 0.5 mg/kg 3.4 benzapyrene – 0.02 mg/l Residual amount Pesticides – 0.002 mg/l pH 9.1 Content of radionuclides: Potassium – 40:69.3 mg/kg Radium – 226: 3.6 mg/kg Thorium – 232: 2.8 mg/kg Cesium – 137: < 3.0 mg/kg; Strontium – 90: < 1.6 mg/kg

	<p>Effective specific activity of radioactive nuclides $A_{eff} < 0.25$ (value of A_{eff} parameter (relating to units) = $ACs/100 + ASr/1000$, Effective specific activity of natural radioactive nuclides in fertilizer does not exceed average level of their content in agricultural soils at the territory of Russia.</p> <p>The fertilizer is soluble in water in all proportions. [1, 29, 30, 35].</p>
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10. Stability and reactivity

10.1. Chemical stability (indicate decomposition products for non-stable products)	Product is stable
10.2. Reactivity	Key quality of the agrochemical – high biological reactivity [1, 30].
10.3. Conditions to avoid (including signs of hazard, when contacted with incompatible substances and materials)	No signs of hazard were observed, when used in accordance to recommendations [1, 30].

11. Information about toxicity

11.1. General characteristics of exposure (evaluation of hazard (toxicity) rate caused by effect on human body and typical signs of hazard)	The product relates to low-hazard substances. [2, 30].
11.2. Ways of exposure (inhalation, swallowing, contact with skin and eyes)	By contacting with skin, eyes, digestive organs (by swallowing), breathing organs (by inhaling).
11.3. Organs, tissues, and systems of human body, which can be injured	<p>Control of subchronic toxicity revealed that the agrochemical had no negative effect on internal organs (heart, liver, kidneys, lien, gastrointestinal tract) and blood of laboratory animals. Long-term experiment showed that use of “Edagum SM” improved growth and morphological blood values of rats and chicks. [30].</p> <p>No available data on injury of organs, tissues and systems of human body.</p>
11.4. Exposures harmful for health resulted by direct contact with products and results of exposure (irritation of upper respiratory tracts, eyes, skin, dermato-resorptive and sensibilizing action)	<p>When conjunctiva of eyes of laboratory rabbits were affected with liquid humates, the later resulted irritation, which stops within 3-6 hours without causing any complications. [34, 35]</p> <p>Repeated and long-term contact of 1.0%, 5.0% and 10.0% liquid humates with skin of laboratory animals (rabbits) using application test and tube test methods did not result death of animals or damaging effect on skin contacted with fertilizer. [35, 36]</p>

11.5. Long-term hazardous effects on human body caused by product (impact on fertility, carcinogenicity, mutagenicity, cumulativity, chronic exposure)	<p>Cumulativity: in terms of agrochemical “Edagum SM” – no need as all known humates’ parameters of acute toxicity shows low probability of chronic intoxication.</p> <p>Upon the results of humate testing, cumulation coefficient by Lima exceeds 12, that proves lack of cumulative effect.</p> <p>Agrochemical “Edagum SM” does not contain toxically significant components. [30, 35]</p>
11.6. Indicators of acute toxicity (DL_{50} , way of contact (intragastrically or on skin), kind of animal, CL_{50} , time of exposure (h), kind of animal)	Experiments on mice by Kerber’s method did not reveal DL_{50} for Edagum SM as there was not 100-% death of laboratory mice even under dose 25000mg/kg of body weight. [35]

12. Ecological information

12.1. General characteristics of exposure to environment (atmospheric air, water basins, soils, including signs of exposure)	<p>Surplus use of fertilizer as well as fertilizer insertion to water basins, violation of rules of storage and transportation, damage of package can cause harm for environment.</p> <p>If inserted to a water basin: water becomes muddy and processes of water self-purification slowdown.</p> <p>Composite elements of fertilizer are nonvolatile substances.</p>
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		Contamination of atmospheric air is impossible. [32] Contamination of soil is impossible. [32]		
12.2. Ways of exposure to environment		Violation of rules of use, handling, transportation, storage, in case of discharge to water and as a result of accidents and emergency events.		
12.3. The most important characteristics of exposure to environment				
1.2.3.1. Hygienic standards (threshold concentration in air, water including in fishery basins, soils)				
Components	Threshold limit values of air or SRLI of air (LHI ¹ , hazard class)	Threshold limit values of water or APL _{water} (approximate permissible level)mg/l, (LHI ¹ , hazard class)	Threshold limit values of fishery basin or SRLI of fishery basin (LHI ¹ , hazard class)	Threshold limit values of soil or approximate permissible concentration of soil, mg/kg (LHI ¹)
Humic acids	Specified medium does not require rating	Specified medium does not require rating	For basins with water of high and moderate hardness 1) Soluble light fractions - Threshold limit values of fishery basin – 2.0 mg/l	Specified medium does not require rating

1 LHI – Limiting harmful index (tox. – toxicological; san-tox. – sanitary-toxicological; org. – organoleptic including description of changes of organoleptic parameters of water (od. – changes odour of water; mud. – increases muddiness of water, color – give color to water, foam – causes foam formation; film – causes film formation on surface of water; taste – gives taste to water; opal. – causes opalescence); refl. – reflectory, res. - resorptive; refl.-res. – reflectory-resorptive; fishery – fishery basin (change of commercial properties of industrial aquatic organisms); gener. – general sanitary)

2 water of water basins for public water supply and common water use

3 water of fishery basins (including sea water areas)

			2) Total content including heavy fractions - Threshold limit values of fishery basin – 3.7 mg/l (LHI san.tox, hazard class -4)	
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12.3.2. Indicators of ecotoxicity (CL, EC, NOEC and etc. for fishes (96h.), daphnia (48h), seaweeds (72 or 96h) etc.	Not rated [34]
12.3.3. Environmental migration and transformation due to biodestruction and other processes (oxidation, hydrolysis, etc.)	Components of “Edagum MS” are natural substances, do not form hazardous metabolites in environment. [32]

13. Recommendations on waste (residues) disposal

13.1. Measures of safe handling of wastes resulted by application, storage and transportation	No wastes rest, while applying, storing and transporting product in conformity with recommendations [1]
13.2. Information on methods and places for detoxification, disposal or removal of product residues including package (container)	Empty containers shall be duly disposed to specially designated places together with household wastes; detoxification is not required. [1]
13.3. Recommendations for disposal of residues of product in household use	Spilled fertilizer shall be washed with large amount of water or powdered with sand, sawdust or other adsorbing agents and removed from storage site.

14. Information for shipping (transportation)

14.1. UN number (according to UN recommendations on transport of dangerous goods)	N/A as it is not classified as dangerous goods
14.2. Proper shipping (transportation) name	Humic fertilizer “Edagum SM”
14.3. Transport means	Liquid humic fertilizer “Edagum SM”, packaged in shipper containers, can be transported by all means of covered transport vehicles

	according to transportation rules valid for these transport means. [1, 19, 20].
14.4. Classification of goods hazard according to GOST 19433-88	It is not classified as it is not hazardous substance.
- class	
- sub-class	
- classification code (according to GOST 19433-88 for carriage by rail transport)	
- number(s) of drawing(s) of hazard signs	
14.5. Classification of goods hazard according to UN recommendations on transport of dangerous goods:	It is not classified as dangerous goods according to UN classification
- class or sub-class	
- additional hazard	
- group of UN package	
14.6. Transport marking (handling instructions according to GOST 14192-96)	Transport marking according to GOST 14192-96, handling instructions or writings, if available, "Top", "Temperature limits" – minus 4 C° or above, number of state registration, registration number of package label [1]
14.7. Emergency cards (for carriage by rail or sea)	Not required
15. Information concerning National and International Legislation	
15.1. National legislation	
15.1.1. Laws of RF	RF Law "On standardization" RF Law "On Consumer Protection" RF Law "The Fundamental Principles of Labor Legislation of the Russian Federation" RF Federal Law "On Sanitary and Epidemiological Welfare of Population" RF Law "On Technical Regulation" RF Law "On Nature Protection"
5.1.2. Data on documentation regulating requirements to protection of human and environment	Letter from Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing No. 01/15376-15-31 dtd. 11.12.2015 "Concerning sanitary epidemiological expertise of agrochemical"
15.2. International conventions and agreements (if the product is regulated with Montreal Convention, Stockholm Convention, etc.)	The product is not covered by international conventions and agreements
16. Additional information	
16.1. Data concerning review (reedition) of MSDS (here should be noted the following: "MSDS is developed for the first time" or "MSDS is re-registered after validity term expired. Prior MSDS No. ..." or "the sections ... were amended on ... (date of amendment)")	This MSDS is subject for reedition due to expiration of validity term. Prior MSDS No. 52420467.03.25284 Data stated in this MSDS is intended to describe agrochemical in terms of safety and health of human in a workplace, protection of environment. This data does not disclose other specific features of the agrochemical.
16.2. The list of references used for this Material Safety Data Sheet	
1. TU 0392-001-52420467-2005 Liquid humic fertilizer "Edagum SM"	

4 Sequence numbers of references are stated in each section of MSDS in form of reference

Number of state registration of the agrochemical Humic fertilizer "Edagum SM" No. 384-18-1204-1

Number of brand label for private farm households:

- 620-18-1204-0,25-16-7051
 - 620-18-1204-0,5-16-7051
 - 620-18-1204-1-16-7051
 - 620-18-1204-2-16-7051
 - 620-18-1204-5-16-7051
 - Number of brand label for agricultural industry:
 - 620-18-1204-10-16-7051
 - 620-18-1204-50-16-7051
 - 620-18-1204-100-16-7051
 - 620-18-1204-200-16-7051
 - 620-18-1204-1000-16-7051
2. GOST 12.1.007-76 Occupational Safety Standards System. Harmful substances. Classification and general safety requirements.
 3. GOST 12.1.005-88 Occupational safety standards system. General sanitary requirements for working zone air
 4. GOST 12.1.044-89 Occupational safety standards system. Fire and explosion hazard of substances and materials. Nomenclature of indices and methods of their determination.
 5. GOST P 51661.1-2000 Peat for compost preparation. Specifications.
 6. GOST 9285-78 Potassium hydroxide for industrial use. Specifications
 7. GOST 12.4.021-75 Occupational Safety Standards System. Ventilation systems. General requirements.
 8. GOST 12.4.010-75 Occupational safety standards system. Personal safety means. Special mittens. Specifications.
 9. GOST 12.4.253-2013 Occupational safety standards system. Personal eyes protection means. General technical requirements.
 10. GOST 12.4.028-76 Occupational safety standards system. Respirators IIIБ-1 "Lepestok". Specifications.
 11. GOST 12.1.004-91 Occupational safety standards system. Fire safety. General requirements.
 12. GOST 12.2.003-91 Occupational Safety Standards System. Industrial equipment. General safety requirements
 13. GOST 22752-84 Industrial packing made of plastic. Types.
 14. GOST 31340-2013 Labelling of chemicals. General requirements.
 15. GOST 14192-96 Marking of cargoes.
 16. GOST 19433-88 Dangerous goods. Classification and marking.
 17. GOST 32424-2013 Classification of chemicals for environmental hazards. General principles.
 18. GOST 32419-2013 Classification of chemicals. General requirements.
 19. SanPin (Sanitary Rules and Regulations) 1.2.2584-10 "Hygienic requirements to safety of testing, storage, transportation, sell, application, detoxification and disposal of pesticides and agrochemicals".
 20. SP (Sanitary Regulations) 1.2.1170-02 "Hygienic requirements to safety of agrochemicals"
 21. SanPin 1.2.1330-03 Hygienic requirements to manufacturing of pesticides and agrochemicals.
 22. SanPin 2.3.2.1078-01 Hygienic requirements to safety and nutrient value of products
 23. SanPin 2.6.1.2523-09 Radiation safety standards
 24. HN (Hygienic Norms) 2.1.7.2041-06 Soil, cleaning of inhabited localities, industrial and household wastes,
 25. sanitary control of soils, threshold allowable concentration of chemical substances in soils.

- 26 HN (Hygienic Norms) 2.1.7.2511-09 Threshold allowable concentration of chemical substances in water of water basins for public water supply and common water use
- 27 Order of Russian Federal Fishery Agency dtd. 18.01.2010 No. 20 "Concerning approval of quality of water of fishery basins including standards threshold allowable concentration of harmful substances in water of fishery basins"
- 28 Water Code of the Russian Federation No. 74-ФЗ
- 29 FBEPH "Russian Register of Potentially Hazardous Chemical and Biological Substances" - <http://www.rpohv.ru/>
- 30 Test reports No. 074, No. 074/1 dtd. 13.02.2015 Accredited test laboratory of Autonomous Non-Profit Organization "Center of shared-use of devices and certification. Research Institute of Agriculture of Central Areas of non-black earth zone" (ANO CKPS) (Accreditation certificate No. POCC RU.0001.516751)
- 31 Expert conclusions based on toxicological hygienic assessment of agrochemical Humic fertilizer "Edagum SM" (FGBUN NtS FMBA of Russia (Research center of toxicology and hygienic rating of biological products, Branch of Federal Budget-Funded Institution "State Research Center 'Institute of Immunilgy' of Federal Medical and Biological Agency)

- 32** Expert conclusion concerning determination of biological efficiency of agrochemical Humic fertilizer “Edagum SM” (FGBNU VNII (Federal State Budget Funded Research Institute Russian National Research Institute) of Agricultural Chemistry named after D.N. Pryanishnikov)
- 33** Expert conclusions based on assessment of exposure on environment of agrochemical Humic fertilizer “Edagum SM” (MGU (Moscow State University) named after M.V. Lomonosov)
- 34** Recommendations concerning transportation, use and storage of agrochemical Humic fertilizer “Edagum SM”, manufactured by “Edagum SM Rus” LLC
- 35** Report provided by FGU VGNI (Federal State Organization Russian National State Center of Quality and standardization of veterinary medications and fodder) dtd, 30.03.2009, 30.10.2008 under the Agreement M932-6 testing of additives “Edagum SM” (manufactured by “Specosnastka M Service” LLC, Moscow) on acute and sunchronic toxicity, that was performed using laboratory animals and chicks.
- 36** S.V. Buzlama. Pharmacology of drugs of humic substances and their use to improve the resistance and productivity of animals / abstract of a thesis to obtain academic title of Doctor of Veterinary., Voronezh, 2008.
- 37** D.S. Orlov. Humic substances in the biosphere. Jurowski Educational Journal, M-22,1997, p. 56-63.