

CHEMICAL PRODUCT SAFETY DATA SHEET

Entered in the Register of Safety Data Sheets

RPB № 4 8 6 7 1 4 3 6 . 2 0 . 7 1 4 9 3 from "30" November 2021
Valid until November 30, 2026.

Association "Non-Profit Partnership "Coordination and Information Center of the CIS member States on convergence of regulatory practices"



technical name (according to ND) Technical gas granular sulfur

chemical (according to IUPAC) _____

Commercial sulfur Technical gas granular sulfur grades 9998 and 9995

synonyms Doesn't have

OKPD Code 2 2 0 . 1 3 . 6 6 . 1 2 0 HS Code 2 5 0 3 0 0 1 0 0 0

Symbol and name of a normative, technical or information document for products (GOST, TU, OST, STO, (M)SDS)

TU 2112-096 -31323949-2003 Technical gas granulated sulfur of JSC Nizhnekamsk Refinery

hazard characteristics

Signal word Caution

Brief (verbal): Low-risk substance in terms of the degree of exposure to the body in accordance with GOST 12.1. 007-76 . Irritates the upper respiratory tract and skin. In case of contact with the eyes, it causes severe irritation. May affect the lungs as a result of prolonged or repeated exposure by inhalation. A combustible substance. May pollute environmental objects.

Detailed: in the 16 attached sections of the Safety Data Sheet

The main dangerous components	MPC R.Z., mg/m3	mg/m3 Hazard class	№ CAS	EU No.
Sulfur	-/6	4	7704-34-9	231-722-6

Applicant JSC "TaIF-NK" _____
(name of the organization)

Nizhnekamsk
(city)

Type of applicant manufacturer, supplier, seller, exporter, importer
(cross out unnecessary)

OKPO code 4,8,6,7,1,4,3,6,

Emergency telephone number (8555) 38-55-55

Head of the applicant organization


 (signed 07-8827)



M.A. Novikov / _____

1/23(digitization)

The Safety Data Sheet (SDS) complies with the UN Recommendations [ST/SG/AC.10/30 "GHS (GHS)"]

IUPAC	- International Union of Pure and Applied Chemistry (International Union of Theoretical and Applied Chemistry)
GHS (GHS)	- Recommendations of OOO ST/SG/AC.10/30 "Globally Harmonized System of Classification and Labelling of Chemicals (Globally Harmonized System of Hazard Classification and Labelling of Chemical Products (GHS))"
OKPD 2	- All-Russian classifier of products by types of economic activity
okpo	- All-Russian classifier of enterprises and organizations
tnved of the EAEU	- Commodity Nomenclature of Foreign Economic Activity of the Eurasian Economic Union
№ CAS	- the number of the substance in the Chemical Abstracts Service registry
EU No.	- the number of the substance in the register of the European Chemical Agency
MPC R.Z.	- maximum permissible concentration of the chemical in the air of the working area, mg/m ³
Signal word	- the word used to emphasize the degree of danger of chemical products and selected in accordance with GOST 31340-2013

1 Identification of chemical products and information about the manufacturer and/or supplier

1.1 Identification of chemical products

1.1.1 Technical name

Technical gas granular sulfur [1]. Sulfur

1.1.2 Brief recommendations for use

is intended for the production of sulfuric acid, carbon disulfide, dyes and applications in cellulose-paper, textile and other industries and exports [1].

(including restrictions on use)

1.2 Information about the manufacturer and/or supplier

1.2.1 Full official name

Joint Stock Company "TAIF-NK"

of the organization

1.2.2 Address

423570, Republic of Tatarstan, Nizhnekamsk, OPS-11, a/z 20

(postal

and legal)

423574, Republic of Tatarstan, Nizhnekamsk district, Nizhnekamsk, Sobolekovskaya str., building 45, office 108

1.2.3 Telephone, including for emergency consultations and time limits

(8555) 38-16-16

1.2.4 E-mail

delo@taifnk.ru

2 Identification of the hazard(s)

2.1 The degree of danger of chemical

production in general:

(information on the classification of hazards in accordance with in accordance with the legislation of the Russian Federation (GOST 12.1.007-76) and the GHS (GOST 32419-2013, GOST 32423-2013, GOST 32424-2013, GOST 32425-2013)

Low-risk substance in terms of the degree of exposure to the body (hazard class 4) in accordance with GOST 12.1.007-76 [1-4].

Hazard classification in accordance with the GHS:

- chemical products that are a flammable solid - Class 2; - chemical products that cause damage (necrosis)/skin irritation - Class 2; - chemical products that cause serious eye damage/irritation - subclass 2A; - chemical products with selective toxicity to target organs and/or systems with repeated and/or prolonged exposure: Class 2 [6].

2.2 Information about the warning label

according to GOST 31340-2013

2.2.1 Signal word

Be careful [7].

2.2.2 Hazard symbols



2.2.3 Brief description of the danger (H-phrases)

H228: Flammable solid.

H315: Causes skin irritation. H319: Causes severe irritation in contact with eyes.

H373: May affect the lungs as a result of prolonged or repeated exposure by inhalation [7].

3 Composition (information about components)

3.1 Product information in general

3.1.1 Chemical name

(according to IUPAC)

Sulfur [1,2].

3.1.2 Chemical formula

Ss [2,8].

3.1.3 General characteristics of the composition
(taking into account the branded assortment; method
of preparation)

Technical gas granular sulfur is produced from liquid gas sulfur on the granulation line of the Nizhnekamsk Oil Refinery.

Granular gas sulfur in accordance with the technical specifications 2112-096 -31323949-2003 grades 9998 and 9995 are produced, differing in the content of the main substance (sulfur) in the products (99.98 and 99.95%, respectively) [1].

3.2 Components

(name, CAS and EU numbers, mass fraction (in total should be 100%), MPC of R.Z. or FOOTWEAR of R.Z., hazard classes, links to data sources)

Table 1 [1,4,5]

Components (name)	Mass Hygiene standards percentage, %	% in the air of the working area		№ CAS	EU No.
		MPC R.Z., mg/m ³	Class dangers		
Sulfur	99,95-99,98	-/6 (a)	4 (F)	7704-34-9	231-722-6

Notes: a - aerosol, F - fibrogen, the mass fraction of ash is not more than 0.4%, the mass fraction of organic substances is not more than 0.5%, the mass fraction of acids in terms of sulfuric acid is not more than 0.02%, the mass fraction of water is not more than 1.0% [1].

4 First aid measures

4.1 Observed symptoms

4.1.1 In case of inhalation poisoning (if inhaled)

Weakness, headache, shortness of breath, palpitation, nausea, cyanotic skin, convulsions, loss of consciousness [2,12,13].

4.1.2 When exposed to the skin

Swelling, redness, itching. In contact with the melt with flax sulfur (in case of fire), thermal burns are possible [2,13].

4.1.3 In case of contact with eyes

Burning, lacrimation, photophobia, redness of the conjunctiva, sometimes its

4.1.4 In case of oral poisoning (if swallowed)

ulceration [2,13,14]. Sharp pain in the stomach, fever, nausea, vomiting [2,13].

4.2 First aid measures for victims

4.2.1 In case of inhalation poisoning

For mild poisoning: fresh air, peace, warmth. Free from embarrassing clothes. Give reassuring drugs and sedatives. In case of loss of consciousness - to give the victim a horizontal position with a slightly lowered head. Inhalation of ammonia from cotton wool. Seek medical attention immediately. In case of a sharp weakening or stopping of breathing - artificial respiration by mouth-to-mouth or mouth-to-nose methods, continue continuously until the SA is restored - constant breathing. Urgent hospitalization [2,12,13,15].

4.2.2 When exposed to the skin

Wash the contaminated areas of the skin with soap and water. In case of a burn, an aseptic dressing is used. Seek medical help if necessary [2,12,13,15].

4.2.3 In case of contact with eyes

Immediately rinse the eyes with clean water with the eye slit wide open (10-15 minutes), consult an ophthalmologist [2,12,13,15].

4.2.4 In case of oral poisoning

Give 2-3 tablespoons of vaseline oil, activated charcoal, copious drinking; salt laxative (sodium sulfate, 1 tablespoon per glass of water). Cause vomiting. Urgent hospitalization [2,12,13,15].

4.2.5 Contraindications

No data available [1,2]

5 Measures and means of ensuring fire and explosion safety

5.1 General characteristics of

fire and explosion hazards

(according to GOST 12.1. 044-89)

A combustible substance. Easily ignited by sparks and open flames [1,9,10].

5.2 Fire and explosion hazard indicators

(nomenclature of indicators according to GOST 12.1. 044-89 and GOST 30852.0-2002)

The self-ignition temperature of the air suspension is 190 °C, the aerogel is 220 °C [1,2,10].

The lower concentration limit of ignition is 17 g/m³ [1], according to other data - 35 g/m³ [1,2,10].

The maximum explosion pressure is 560 kPa [10]. The maximum pressure rise rate is 32.4 MPa/s [10].

The minimum ignition energy is 15 MJ [10]. MVSK 12% (vol.) when diluting the dust -air mixture with carbon monoxide [10].

5.3 Products of gorenje and/or

thermal structures and the danger caused by them

Dangerous products of thermal degradation and gorenje: oxides of sulfur [2].

Sulfurous anhydride (sulfur dioxide) is a strong irritating substance. On the moist surface of the mucous membranes, it successively turns into sulfuric acid and sulfurous acid. Causes cough, nosebleeds, bronchial spasm, disrupts metabolic processes, promotes the formation of methemoglobin in the blood, acts on hematopoietic organs [14].

5.4 Recommended extinguishing

agents for fires

Air-mechanical foam, thinly sprayed water [1,2,10].

During volumetric quenching - carbon dioxide, refrigerants, powders [1,10]. The best fire extinguishing agent is sprayed water with a wetting agent, foam, PF powder [10].

5.5 Prohibited fire extinguishing agents-

moat

Compact water jets [10].

5.6 Personal protective equipment for extinguishing fires

(PPE of firefighters)

Firefighter's combat kit. Insulating anti- gas of the ASV-2 type or the RPG-67A respirator, boots [12].

5.7 Specifics of extinguishing

Thermal degradation products are toxic. Vapors and dust can form explosive mixtures with air. Containers may explode in case of fire. Finely ground sulfur is prone to chemical spontaneous combustion in the presence of moisture, in contact with oxides, as well as in a mixture with coal, fats, oils. It forms explosive mixtures with nitrates, chlorates and perchlorates, ignites spontaneously upon contact with chlorine lime [10,12].

page b) out of 13	Technical gas granular sulfur TU 2112-096 -31323949-2003	BPB No. 48671436.20.71493 Valid until November 30, 2026.
----------------------	---	---

6 Measures to prevent and eliminate emergency and emergency situations and their consequences

6.1 Measures to prevent harmful effects on people, the environment, buildings, structures, etc. in case of emergency and emergency situations

6.1.1 Necessary actions of the general character in emergency and emergency situations :

Isolate the danger zone within a radius of at least 200 m. Adjust the specified distance according to the results of chemical exploration. Remove outsiders. To enter the dangerous zone in protective equipment. Keep to the windward side. Avoid low places. Observe fire safety measures. No smoking. Eliminate sources of fire and sparks. Provide first aid to the victims. Send people from the lesion to a medical examination [12].

6.1.2 Personal protective equipment in emergency situations (PPE of emergency crews)

For emergency crews - an insulating protective suit KIH-5 complete with an insulating gas mask IP-4M. In the absence of the specified sample - for-shield combined arms suit L-1 and L-2 complete with an industrial gas mask of the RPG type with a cartridge A. Industrial gas mask of small size PFM-1, respirator "Snowball-KU-M" [12].

6.2 Procedure for emergency and emergency response situations

6.2.1 Actions in case of leakage, spillage, dew-rash (including measures to eliminate them and precautions to protect the environment)

Inform the sanitary and epidemiological surveillance authorities. Stop the movement of vehicles (except special) and maneuvering in the danger zone. Do not touch the spilled substance. To protect the spills with an earthen rampart, to fall asleep with an inert material, to collect in containers. Do not allow the substance to enter aquifers, water supply sources and other important objects of economic activity [12].

6.2.2 Actions in case of fire

Call the fire department. Keep to windward. Remove the product from the fire zone if it does not pose a danger, otherwise do not approach burning containers. Extinguish the fire from the maximum possible distance. If it is impossible to stop gorenje or reduce its intensity, throw the danger zone. To organize the evacuation of people from the nearest buildings, taking into account the direction of movement of toxic gorenje products [12].

7 Rules of storage of chemical products and handling during loading and unloading operations:

7.1 Safety measures for handling chemical products

7.1.1 Systems of engineering safety measures

General exchange supply and exhaust ventilation of industrial premises.

The equipment must be sealed and protected. protected from static electricity.

Exclusion of the possibility of overheating of the product and contact with open flame sources. Compliance with fire safety measures. Smoking is prohibited in warehouses. It is forbidden to use instruments that give a spark on impact.

Use of personal protective equipment (see section 8) [1].

7.1.2 Environmental protection measures

To exclude entry into the environment, first of all getting into sewers, reservoirs and soil. If this has happened, then immediately inform the regional water organizations

7.1.3 Recommendations for safe transportation and transportation

Dangerous cargo of class "4". Transport in compliance with fire safety measures and in accordance with the rules for the transportation of dangerous goods operating on the appropriate mode of transport.

By rail, sulfur is transported in bulk in semi-wagons, in mineral wagons, grain wagons transferred to the category of mineral carriers; in transport containers - in covered wagons and universal cargo containers. By road and water transport - under a tarpaulin in bulk and in bags, as well as in universal cargo containers [1].

7.2 Rules for the storage of chemical products

7.2.1 Conditions and terms of safe storage-

(including the warranty period of storage, shelf life; incompatible substances and bags during storage, ly)

The following methods of storage of granular sulfur are provided: - in bulk and packed, except for paper

- in an open area;
- in paper bags under a canopy;
- indoors - packed and in bulk [1].

The warranty period of storage is 12 months from the date of shipment

[1]. Exclude sources of ignition and prevent smoking in the workplace.

Avoid contact with strong oxidizing agents, substances capable of forming explosive mixtures; compressed and liquefied gases, self-igniting and self-igniting substances from water and air; flammable substances, fats, oils [2,11].

7.2.2 Containers and packaging

(including the materials from which they are made)

Granulated sulfur is packed in soft specialized containers for bulk cargo, in bulky bags of the following brands: NM, VM, PM, BMP, VMP, VMB or in polyethylene bags for the chemical industry.

The weight of the bag is not more than 50 kg.

The paper bags are sewn up and transported in a bagged form. It is allowed, in agreement with the consumer, to ship sulfur in bags in unpackaged form [1].

7.3 Safety measures and rules

of storage at home

It is not used in everyday life.

8 Means of controlling dangerous exposure and personal protective equipment

8.1 Parameters of the working area subject to

mandatory control (MPC R.z or SHOE R.z)

MPC r.z. = -/6 mg/m³ [1,4].

8.2 Measures to ensure the content of harmful substances in permissible concentrations of industrial premises, sealing of equipment-

Supply and exhaust and local exhaust ventilation

page 8 of 13	Technical gas granular sulfur TU 2112-096 -31323949-2003	BPB No. 48671436.20.71493; Valid until November 30, 2026.
-----------------	---	--

yah.

equipment and communications, periodic monitoring of the working area [1].

8.3 Personal protective equipment for personnel

8.3.1 General recommendations

Avoid direct contact with the substance. Do not smoke, eat or drink in the workplace. Before eating, smoking and after finishing work, wash your hands with warm water and soap.

Use personal protective equipment with the volume of hygienic working conditions and the degree of pollution at each specific enterprise.

All those working with sulfur must undergo preliminary and periodic medical examinations according to the requirements of the Ministry of Health of the Russian Federation. Persons at least 18 years of age are allowed to work [1,14,15].

8.3.2 Respiratory protection (SI-ZOD types)

In the presence of dust, respirators, gas masks should be used (brands are selected in accordance with the gases released, the duration of work in conditions of high concentrations and the level of concentration) [14].

8.3.3 Protective equipment (material, type) (overalls, safety shoes, hand protection, eye protection)

Gloves (rubber, fabric, biological); overalls, safety shoes, safety glasses [14].

8.3.4 Personal protective equipment when used at home

It is not used in everyday life [1].

9 Physico-chemical properties

9.1 Physical condition (aggregate state, color, smell)

Granules of yellow color with a characteristic odor [1,2,8].

9.2 Parameters characterizing

the main properties of the product (temperature parameters, pH, solubility, n-octanol/water ratio, etc. parameters, ha-characteristic for this type of product)

Boiling point:

445 °C [2]

Melting point:

113-119 °C [2]

Mass fraction of granules with a diameter of 2.0 - 5.0 mm, %, not less:

92.0 [1]

Bulk density:

1.1+1.3 g/cm³ [1]

Solubility:

Sulfur is insoluble in water, poorly soluble in ethanol, heptane, hexane, better in toluene, benzene. The best solvents are liquid ammonia (under pressure), carbon disulfide, S₂Cl₂ [8].

10 Stability and reactivity

10.1 Chemical stability

(for unstable products, specify decomposition products)

Stable substance under normal environmental conditions and compliance with the conditions of handling, storage, transportation

10.2 Reactivity

[8]. Ignites from sources of open flame.

It is oxidized. Sulfur is directly combined with almost all elements, except for inert gases, iodine, nitrogen, platinum, gold [2,8].

10.3 Conditions to avoid

(including dangerous manifestations in contact with incompatible substances and materials)

Avoid contact of sulfur with strong oxidizing agents [2]. Gorenje in air occurs at high temperatures (above 360 °C) with the formation of sulfur oxides [8].

11 Information on toxicity

11.1 General characteristics of exposure

(assessment of the degree of danger (toxicity) of the effect on the body and the most characteristic manifestations of danger)

Granular sulfur is classified as low-hazard products by its effect on the body. Irritates the upper respiratory tract and skin. In case of contact with the eyes, it causes severe irritation. May affect the lungs as a result of prolonged or repeated exposure by inhalation [1-3].

11.2 Ways of exposure

(inhalation, oral, in contact with skin and eyes)

By inhalation, contact with the skin and mucous membranes of the eyes, into the digestive organs with accidental ingestion (orally).

11.3 Affected human organs, tissues and systems

Nervous and respiratory systems, gastrointestinal tract, morphological composition of peripheral blood, skin, eyes [2,14,15].

11.4 Information about health hazards in direct contact with products, as well as the consequences of these impacts

(irritating effect on the upper respiratory tract, eyes, skin; skin-resorptive and sensitising-leasing action)

Sulfur causes inflammation of the mucous membranes of the eyes and upper respiratory tract, irritation of the skin, gastrointestinal tract disease.

Prolonged skin contact can cause acute inflammation and chronic eczema [1,2,15].

Sulfur can cause chronic intoxication when prolonged inhalation in production conditions. The damaging effect of sulfur in chronic exposure - This is explained by a general toxic effect - a violation of a number of metabolic processes and the course of oxidative-reducing enzymatic reactions, blocking of SH-groups, disorders of the nervous system, gastrointestinal tract, bronchopulmonary system, irritation

of hematopoietic organs.

With chronic exposure to sulfur - complaints of nasal discharge, burning in the eyes, lacrimation, photophobia, irritability, periodic headaches, more often in the occipital and frontal-parietal areas, dizziness, sweating, poor sleep and appetite, dyspeptic disorders, unpleasant pain in the heart. There are many complaints of pain in the right hypochondrium - periodic haraktera, which increase with physical exertion.

Objectively - conjunctival hyperemia, injection of the cornea, soreness in the epigastrium and right hypochondrium, liver enlargement, leukocidosis, decrease in the level of SH-groups, glutathione and Hb in peripheral blood, tremor of the fingers of outstretched hands. The acid-forming function of the stomach is changed towards the secretion of hydrochloric acid.

With prolonged inhalation of sulfur dust, pneumoconiosis is possible. There is atrophy of the gums, exposure of the necks and roots of the teeth, deposition of tartar, catarrhal and ulcerative stomatitis, anemia of the oral mucosa.

Local action: vesicular rashes on the hands and peeling of the skin, completely disappearing in the absence of contact with sulfur [14].

11.5 Information about dangerous remote software-
the consequences of the impact of products on the
organization [
(effect on reproduction function, carcinogenicity
, mutagenicity, cumulativeness and other
chronic effects)

11.6 Acute toxicity indicators
(DL50 (LD50), route of entry (v/w, n/a), type
of animal; CL50 (LC50), exposure time (h), type
of animal)

For sulfur, a skin-resorptive and sensitive-
bilizing effect [2].

It is possible to develop pulmonary fibrosis as a result of multiple
or prolonged exposure [2,4,15]. A mutagenic
effect has been established, not confirmed by
IARC. Gonadotropic, embryotropic, teratogenic
effects have not been studied; carcinogenic effects have not
been established. Cumulativeness is weak [2].

DL50 = 8437 mg/kg (in/w, rats),
DL50 > 2000 mg/kg (n/a, rabbits) [2].

The lethal dose for humans when administered by mouth
is 500 mg/kg [2].

12 Environmental impact information

12.1 General characteristics of the impact
on environmental objects [
(atmospheric air, reservoirs, soils, including
observed signs of impact)

During production, use and in emergency
situations, pollution of atmospheric
air, soils and reservoirs with sulfur and its
compounds (hydrogen sulfide and sulfur
dioxide) may occur. Most of the sulfur enters the
atmosphere in the form of sulfur dioxide (sulfur
dioxide), which, when interacting with water
droplets of clouds, leads to the formation of acid
rain. The latter have a harmful effect on
biota, being deposited on the green mass of plants,
and cause acidification of soils and reservoirs.

The appearance of a film on the surface of wastewater and
reservoirs, violation of the processes of self-purification and
biodegradation of reservoirs, accumulation of bottom
sediments is possible [14].

12.2 Ways of environmental
impact

In case of violation of the rules of use, storage and
transportation; in case of unorganized
incineration or disposal of waste; as a result
of emergencies and emergencies.

12.3 The most important environmental impact characteristics

12.3.1 Hygienic standards I
(permissible concentrations in atmospheric air, water, including fishery reservoirs, soils)

Table 2 [4.16]

Components	MPC atm. v. or MAXIMUM atm.v., mg/m ³ (LPV, hazard class)	MPC: water or ODE to the MPC of fish. household. ³ or water, mg/l, (HDL, SHOES of fish. household, mg/l hazard class) (LPV, hazard class)	MPC or soil ODC, mg/kg (HDL)
Sulfur	: 0.07	Not installed : 10 (tox. , 4)	160 (total.)

12.3.2 Ecotoxicity indicators
(CL, EC, NOEC for fish, daphnia Magna,
algae, etc.)

Indicators of acute toxicity for fish: CL50
> 10000 mg/l, 96 h., Gambusia;
CL50 = 866 mg/l, 96 h., striped Danio.
Protozoa: CL50 = 1.54 mg/l, 168 h. [2].

¹ HDL is a limiting indicator of harmfulness (tox. - toxicological; S.-T. (san.-tox.) - sanitary-
toxicological; organ. - organoleptic with a decoding of the nature of changes in the organoleptic properties of water
(zap. - changes the smell of water, turbidity. - increases the turbidity of the water, ocd. - gives the water
color, foam - causes the formation of foam, pl. - forms a film on the surface of the water, smack. - gives
the water a taste, op. - causes opalescence); refl. - reflex; res. - resorptive; refl.-res. - reflex-resorptive; fish
farm. - fishery (change of commercial qualities of commercial aquatic organisms); total. - general sanitary).

² Water of water bodies of economic and drinking and cultural and household water

³ Water of water bodies of fishery importance (including marine ones)

Acute toxicity for Daphnia Magna:
EC0 > 10000 mg/l, 24 h. [2].

12.3.3 Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.)

Slowly transformed in the environment [2].

13 Recommendations for disposal of waste (residues)

13.1 Safety measures for handling are similar to those used for handling the main waste generated during the use of products and set out in Sections 7 and 8 of the PB. research institute, storage, transportation

13.2 Information on places and methods of disposal, disposal or disposal of waste products, including packaging (packaging)

The waste should be collected in separate closed metal containers and sent for regeneration. If disposal is not possible, thermal neutralization (burning) in special installations at landfills of toxic industrial waste or in specially designated places agreed with sanitary and environmental authorities [17].

The issues of recycling and disposal of waste products should be coordinated with regional environmental and natural resources protection committees, sanitary and epidemiological surveillance bodies, as well as guided by SanPiN 2.1.3684-21. The waste products are subject to collection in special containers, which are sent for liquidation to special enterprises that have a license.

13.3 Recommendations for the disposal of waste generated by the use of products in everyday life

It is not used in everyday life [1].

14 Information during transportation (transportation)

14.1 OOO (UN) number
(in accordance with the UN Recommendations on the Transport of Dangerous Goods)

It is not used for sulfur in the form of lumps, granules, tablets, balls or flakes (see paragraph 242 of the UN Recommendations) [18].

This provision does not apply when transporting granulated sulfur by rail through the territory of the CIS, the Republic of Latvia, the Lithuanian Republic, the Republic of Estonia. In this case, the UN number is used - 1350 [1,12].

14.2 Proper shipping and shipping names

Proper shipping name:

SULFUR [18].

Transport Name:

Technical gas granular sulfur (grades 9998, 9995) [1].

14.3 Types of transport used

Automobile, water and railway transport [1].

14.4 Cargo hazard classification according to GOST 19433-88

- class

4 [1,19]

- subclass

4.1

- classification cipher

4133 (according to GOST 19433-88);

(according to GOST 19433-88 and for railway transportation)

4113 (for rail transport) [1,12,19].

- number(s) of the drawing(s) of the sign(s) dangerous-sti :	4a [1,19]
14.5 Classification of cargo hazards by UN Recommendations on the Transport of Dangerous Goods:	Only in the case specified in clause 14.1 of the PB.
- class or subclass	4.1 [18]
- additional danger	Absent
- UN packing group [III
14.6 Transport marking (handling signs according to GOST 14192-96)	The manipulation sign according to GOST 14192 is "Protect from moisture" [20].
14.7 Emergency cards (for rail, sea and other transportation)	No. 404 (for rail transportation in the territory of the CIS, the Republic of Latvia, the Republic of Lithuania , the Republic of Estonia) [12]. In case of transportation by road and in case of international freight traffic, emergency car- points are not used (see paragraph 14.1 of the PB).

15 Information on national and international legislation

15.1 National legislation

15.1.1 Laws of the Russian Federation

"On environmental protection"; "On sanitary and epidemiological welfare of the population";

"On technical regulation";

"On production and consumption waste";

"On the protection of atmospheric air".

Missing.

15.1.2 Information about

the documentation regulating the requirements for the protection of human and the environment.

15.2 International conventions and agreements regulated by the Montreal Protocol and the Stockholm Convention.

(are the products regulated

by the Montreal Protocol, the Stockholm Convention, etc.)

16 Additional information

16.1 Information about the revision (reissue) of the PB re-registered after the expiration date.

PB

Previous BPB No. 48671436.21.44404.

(specified: "The PB is developed for the first time" or "the PB is re-registered upon expiration. Previous BPMN No. ..." or "Amendments have been made to paragraphs ..., date of introduction ...")

16.2. List of data sources used in the preparation of the safety data sheet

1. TU 2112-096 -31323949-2003 . Technical gas granulated sulfur of JSC "Nizhnekamsk The refinery".
2. Information card of a potentially dangerous chemical and biological substance. Sulfur. Registration number AT-000001 dated 01.09.93.
3. GOST 12.1. 007-76 . SSBT. Harmful substances. Classification and general requirements.
4. SanPiN 1.2.3685-21. Hygienic standards and requirements for ensuring the safety and (or) harmlessness of environmental factors for humans.
5. Information database of registered substances of the European Chemical Agencies (ECHA). Access mode: <http://echa.europa.eu/information-on-chemicals> .
6. GOST 32419-2013. Interstate standard. Classification of chemical safety hazards-

⁴ The serial numbers of data sources are given in each item of the PB in the form of links

ductions.

7. GOST 31340-2013. Interstate standard. Preventive labeling of chemical products. General requirements.
8. Chemical Encyclopedia: In 5 vols.: vol.4 - M.: Scientific publishing house "Big Russian Encyclopedia".
9. GOST 12.1. 044-89 . SSBT. Fire and explosion hazard of substances and materials. Nomenclature for now-indicators and methods of their determination.
10. Korolchenko A.Ya. Fire and explosion hazard of substances and materials and means of extinguishing them. Spr. in 2 parts. - M.: Association "Pozhnauka", 2000 and 2004.
11. GOST 12.1. 004-91 . Fire safety. General requirements.
12. Safety rules and procedure for the elimination of emergency situations with dangerous goods when transporting them by rail. - M.: MPS, 1997. Emergency cards for dangerous goods transported by railways of the CIS, the Republic of Latvia, the Republic of Lithuania , the Republic of Estonia. - M.: Transport, 2000. Emergency cards for dangerous goods transported on the railways of the CIS, the Republic of Latvia, the Republic of Lithuania , the Republic of Estonia, approved by the 48 Council for Railway Transport (as amended with the amendments of the CIS SGT dated 11/27/2020). / Emergency card No. 404/.
13. Guidelines on medical issues of prevention and elimination of consequences of accidents with dangerous chemical cargoes on railway transport. P/r Krivuli S.D.- M.: VNII ZHG, 1996.
14. Harmful chemicals. Inorganic compounds of groups V-VIII. Reference ed. P/r V. A. Filova. - L.: Chemistry, 1989.
15. Harmful substances in industry. Inorganic and organoelement compounds. Reference Ed. 7th, vol.3, edited by N.V. Lazarev and I.D. Gadaskina. - M.: Chemistry, 1977.
16. Water quality standards of water bodies of fishery importance, including the norms-limits of the maximum permissible concentrations of harmful substances in the waters of fish water bodies of economic importance. Approved. By Order No. 552 of 13.12.2016 of the Ministry of Agriculture of Russia.
17. SanPiN 2.1.3684-21. Sanitary and epidemiological requirements for the maintenance of territories urban and rural settlements, to water bodies, drinking water and drinking water supply, atmospheric air, soils, residential premises, operation of industrial and public premises, organization and conduct of sanitary and anti-epidemic (preventive) measures.
18. Recommendations for the transportation of dangerous goods. Model Rules, 21st ed. - New York and Geneva, UN, 2019
19. GOST 19433-88 . Dangerous goods. Classification and labeling.
20. GOST 14192-96 . Marking of goods.