CHEMICAL PRODUCT SAFETY DATA SHEET

Listed in **the Safety Data Sheets Register**

RPB No. 53505711 · 20 · 47570 dated 2.8.2017

Valid till 2.8.2020

Association "Non-profit partnership
"Coordination and Information Center of the CIS Member States
On the convergence of regulatory practices"

Deputy Director / signature / /N.M. Muratova /
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[stamp: NON-PROFIT PARTNERSHIP "COORDINATION AND INFORMATION CENTER OF THE CIS MEMBER STATES" ON THE CONVERGENCE OF REGULATORY PRACTICES INN 7727498416 Registry of Safety Datasheets Association "NP CIC CIS"]

NAME

technical (as per RD)	**Benzene-toluene fraction (BENTOL)**
chemical (as per IUPAC)	None
trade	**Benzene-toluene fraction (BENTOL)**
Synonyms	None

OKPD 2 code 20.14.12.130

TN VED code 2902900000

Symbol and name of a regulatory, technical or information document for the product (GOST, TU, OST, STO, (M)SDS)

TU 2415-020 * 53505711-2010 "Benzene-toluene fraction (BENTOL)"

HAZARD CHARACTERISTICS

Signal word: **Danger**

Brief (verbal): Highly hazardous substance according to the degree of impact on the body - 2 hazard class.
It has a sensitizing and skin resorptive action, has gonadotropic, mutagenic, embryotropic, teratogenic and carcinogenic effects. It has a narcotic effect.
Highly flammable liquid, fire and explosion hazard (T1-IIA).
Harmful to aquatic organisms.

In details: in the 16 attached sections of the safety data sheet

BASIC HAZARDOUS COMPONENTS	**MPC w.z., mg/m^3**	**Hazard Class**	**CAS No.**	**EU No.**
Benzene	15/5	2	71-43-2	200-753-7
Toluene (methylbenzene)	150/50	3	108-88-3	203-625-9

APPLICANT JSC Sibur-Khimprom, (name of organization) Perm (city)

Applicant Type manufacturer, Supplier, Seller, ~~Exporter, Importer~~ (delete if not applicable)

OKPO code 53505711 **Emergency Phone** (342) 290-87-05

Head of the applicant organization: /signature/ (signature) / K.N. Yugov / (transcript)

[stamp: Joint Stock Company "Sibur-Khimprom" BIN 1025901207804 * TIN 5905018998 * KPP 590501001 Russia, Perm]

Safety Data Sheet (rus: PB) complies with UN Recommendations ST/SG/AC.10/30 "GHS"

GORAS - International Union of Pure and Applied Chemistry

GHS - UN Recommendations ST/SG/AC. 10/30 “Globally Harmonized System of Classification and Labeling of Chemicals (GHS)”

OKPD 2 - All-Russian classifier of products by types of economic activity

OKPO - All-Russian Classifier of Enterprises and Organizations

TN VED - Harmonized Commodity Description and Coding System

CAS No - the number of the substance in the Chemical Abstracts Service Register

EU No - the number of the substance in the registry of the European Chemicals Agency

MPC w.z. - maximum permissible concentration of a chemical substance in the air of the working zone, mg/m^3

Signal word - word used to emphasize the degree of danger of chemical products and selected in accordance with GOST 31340-2013

[stamp:
REFEREFENCE COPY
Technical department
№ 5374
Date 03.08.2017]

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

1.1 Chemical Identification

1.1.1 Technical Name	Benzene toluene fraction (BENZENE) [1] (hereinafter referred to as the 'Product').
1.1.2 Brief application guidelines (including restrictions on use)	The Product is used as a solvent, as well as for the separation of benzene and toluene [1].

1.2 Information about the manufacturer and/or supplier

1.2.1 The full official name of the organization	Sibur-Khimprom Joint-Stock Company (JSC Sibur-Khimprom)
1.2.2 Address (postal and legal)	street Promyshlennaya, 98, Perm, Russian Federation, 614055
1.2.3 Telephone, incl. for emergency consultations and time limits	(342) 290-87-05 (round-the-clock) operator (342) 290-89-01 (from 7:00 to 15:00 - Moscow time) - Chief Engineer
1.2.4 Fax	(342) 290-86-60
1.2.5 E-mail	Mail-shp@sibur.ru

2 Hazard Identification

2.1 The degree of danger of chemical products in general (information on hazard classification in accordance with the legislation of the Russian Federation (GOST 12.1.007-76) and GHS (GOST 32419-2013, GOST 32423-2013, GOST 32424-2013, GOST 324252013)	According to GOST 12.1.007 refers to substances highly hazardous , 2nd class of danger in terms of effects on the human body (by the most toxic component i.e. benzene) [1 D. Hazard Classification according to GHS: According to GOST 32419, it is classified: By physical and chemical properties: - chemical products, flammable liquid, class 2. By effects on the human body: - acutely toxic, class 5; - irritates skin, class 2; - irritates eyes severely, class 2A; has a sensitizing effect when contacting the skin; - mutagen (benzene), class 1C; - carcinogens (for benzene), class 1A; - affects the function of reproduction, class 1C; - possesses selective toxicity on target organs and / or systems upon repeated / prolonged exposure (for benzene), class 1. By the impact on the environment: - acutely toxic for the aquatic environment, class 2 [29].

2.2 Information about the warning label in accordance with GOST 31340-2013

2.2.1 Signal word — Danger [17].

2.2.2 Hazard symbols

[17].

2.2.3 Brief Description of Danger. (H-phrases)

H225: Flammable liquid. Vapors form explosive mixtures with air;

H303: May be harmful if swallowed;

H315: Causes skin irritation if in contact;

H319: Causes severe eye irritation;

H317: Contact with skin may cause an allergic reaction;

H340: May cause genetic defects

H350: May cause cancer.

H360: May adversely affect the ability to bear children or to an unborn child.

H372: It affects organs (skin, upper respiratory tract) as a result of repeated or prolonged exposure. H402: Harmful to aquatic organisms, [17].

3 Composition (information on ingredients)

3.1 General information about the product

3.1.1 Chemical name (according to IUPAC) — None [1].

3.1.2 Chemical formula — None [1].

3.1.3 General characteristics of the composition (including brand assortment; method of preparation) — Mixture of substances (benzene, toluene, styrene, ethylbenzene). A by-product in the production of styrene [1].

3.2 Components

(name, CAS and EU numbers, mass fraction (the total shall be 100%), MPC w.z. or SRLI w.z., hazard classes, references to data sources)

Table 1 [1,2]

Ingredients (name)	Mass fraction,%	Hygienic standards in the air of the working zone		CAS No.	EU No.
		MPC w.z., mg/m^3	Hazard Class		
Benzene	20.0 - 50.0	15/5 (v, c.-)	2	71-43-2	200-753-7
Toluene (methylbenzene)	50.0 - 80.0	150/50 (v)	3	108-88-3	203-625-9
Styrene		30/10 (v)	3	100-41-4	202-849-4
Ethylbenzene	not more than 6.0	150/50 (v)	4	100-42-5	202-851-5
Note: v: vapors, c: carcinogens, +: requires special protection of the skin and eyes					

4 First Aid Measures

4.1 Observed symptoms

4.1.1. In case of poisoning by inhalation	Arousal, alternating drowsiness, headache, dizziness, shortness of breath, nausea, vomiting, incoordination, continuous tremor, gradually subsiding and alternating with convulsions, later immobility occurs (for benzene)[9] Sore throat, cough, in severe cases, cramps, hallucinations, loss of consciousness (in toluene) [10].
4.1.2 When impacting the skin	Redness, dryness, itching [8].
4.1.3 Eye contact	Cutting, tearing [8, 10].
4.1.4 In case of poisoning by oral route (if swallowed)	Vomiting, pain: in the throat, along the esophagus, in the stomach [9].

4.2 First aid for victims

4.2.1 In case of poisoning by inhalation	Fresh air, rest, heat. With the breathing is weakened or complete stopped - artificial respiration. After providing first aid, consult a doctor [1].
4.2.2 Skin contact	Rinse with water for 15 minutes. Seek medical attention [1].
4.2.3 Eye contact	Rinse with water for at least 15 minutes [8].
4.2.4 If poisoned when swallowed	Drink plenty of water, activated carbon, sodium sulfate (1 tbsp per cup of water). After first aid, it is imperative to seek medical help [1].
4.2.5 Contraindications	The use of castor oil, milk, alcohol is prohibited [1]. Do not induce vomiting! [1]. Adrenaline and adrenolytic drugs are contraindicated [11].

5 Fire-fighting measures

5.1 General characteristics of fire and explosion hazard (according to GOST 12 1.044-89)	Flammable liquid [1,6].
5.2 Fire/explosion hazards (list of indicators according to GOST 12 1.04489 to GOST 30852.0-2002)	The category and group of explosive mixtures are NA-T1 [1].

Table 2 [1,6]

Indicators	Value
Flash point (z.t.), °C	minus 4
Auto-ignition temperature, °C	615
Ignition point, °C	31-91
Temperature limits of flame propagation (ignition), °C	minus 4 - 25

Concentration limits of distribution of a mixture of benzene with toluene (1:1) at 60°C,% vol.	1.37-7.05

5.3 Products of combustion and/or thermal destruction and the danger they cause	Thermal decomposition produces carbon oxides, toxic gases that cause asphyxiation and dizziness [9,10,12].
5.4 Suitable fire extinguishing media	Chemical and air-mechanical foam, water mist, powders, inert gases, sand [1,8].
5.5 Unsuitable extinguishing media	Compact water jets [7].
5.6 Personal protective equipment for extinguishing fires (PPE of firefighters)	Flame retardant suit complete with an SPI-20 self-rescuer [8].
5.7 Specifics of fire extinguishing	Extinguish the fire from a maximum distance. Cool containers with water from a maximum distance [8].

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

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

6.1.1 Generally applicable actions that are required in emergency and contingency situations	Isolate the danger zone within a radius of at least 200 m. Adjust the above distance according to the results of chemical reconnaissance. Withdraw everybody not involved in emergency response. When entering the danger zone, wear protective equipment on you. Observe fire safety rules. No smoking. Eliminate sources of fire and sparks. Keep to the windward side. Avoid low places. Provide victims with first medical aid. Send people from the scene to the medical examination [8].
6.1.2 Personal protective equipment in emergency situations (PPE of emergency response crews)	For emergency teams: an insulating protective suit KIH-5, complete with a gas mask IP-4M or breathing apparatus DIA-2 [8].

6.2 Emergency response procedure

6.2.1 Actions in case of leakage, spillage, scattering around (including measures to eliminate these situations and precautionary measures to protect environment)	Notify the authorities of sanitary and epidemiological surveillance. Do not touch the substance that spilled. Eliminate the leakage with caution. Pump the contents into a serviceable corrosion-proof tank or vessel for draining, subject to the rules of blending of liquids. Call the fire and gas services at the scene of the accident. Spill sites shall be embanked. Do not allow substance to enter water bodies or sewers. Use water spray to insulate the vapor [8].
6.2.2 Actions in case of fire	Do not approach tanks that are in fire. Cool containers with water from the maximum distance. Extinguish with water mist, air-mechanical and chemical foams from the maximum distance. Have people evacuated from nearby

buildings taking into account the direction of movement of toxic products of combustion [8].

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

7.1 Safety measures for handling chemical products

7.1.1 Systems of engineering safety measures	Supply and exhaust ventilation system, sealing equipment, storage and transportation tanks, monitoring the concentration of product vapors in the working area air at intervals according to Appendix 9 R 2.2.2006 [1.18]. Electrical equipment and artificial lighting should be performed in explosion-proof version [1].
7.1.2 Environmental precautions	The environmental protection during the production, transportation and storage of a product is ensured by the sealing of equipment, containers, except in cases of emissions to the atmosphere, soil, water bodies [1]. For more information, see Section 12.
7.1.3 Recommendations for safe movement and transportation	The product is transported in rail tank cars of the shipper (consignee) or rented in accordance with the "Rules for the transport of dangerous goods by rail", in tank trucks in accordance with the "Rules for the carriage of goods by road" and the requirements of GOST 1510. The degree (level) of filling the containers shall be calculated so that the capacity (carrying capacity) and volumetric expansion of the product with a possible temperature drop along the way is completely considered. After filling the product, seal the container tightly in accordance with the requirements of regulatory or technical documents on the container and seal it in accordance with GOST 18677 or GOST 18680 [1,15,20,24,32,33].

7.2 Chemical product storage rules

7.2.1 Safe storage terms and conditions (including warranty storage duration, shelf life; substances and materials incompatible with storage)	The product is stored in accordance with the requirements of GOST 1510 The manufacturer guarantees that the product complies with the technical requirements under the conditions of transportation and storage for 1 year from the date of manufacture [1,15] Avoid contact with oxidizing agents, acids, alkalis, flammable substances, flammable liquids [9,10].
7.2.2 Containers and packages (including the materials from which they are made)	Steel rail tank cars or tank trucks. Packaging must comply with the requirements of GOST 26319 [1,27].
7.3 Precautionary measures and storage rules in everyday life.	Not used in everyday life [1].

8 Dangerous exposure control and personal protection equipment

8.1 Parameters of the working zone subject to mandatory control (MPC w.z. or SRLI w.z.)	for benzene: MPC $_{w.z.}$ 15/5 mg/m^3 (vapors, c,-) [1,2] for toluene (methylbenzene): MPC$_W$, 150/50 mg/m^3 (vapors) [1,2].
8.2 Measures to ensure the content of harmful substances within permissible concentrations	Supply and exhaust ventilation system, sealing equipment, storage and transportation tanks, monitoring the concentration of product vapors in the working area air at intervals according to Appendix 9 R 2.2.2006 [1,18].

8.3 Personal Protective Equipment

8.3.1 General recommendations	Avoid direct contact with the product, use PPE. Follow the rules of personal hygiene. Pregnant women and persons under the age of 18 are not allowed to work with the product. Employees shall undergo preliminary (upon admission to work) and periodic medical examinations [1,14].
8.3.2 Respiratory protection (types of respiratory protective equipment)	Respiratory protection in emergency situations: a filtering industrial gas mask with a box, type DOT 600 or BKF [1].
8.3.3 Protective Equipment (Material, Type) (overalls, safety shoes, hand protection, eye protection)	Cotton suit, leather boots, protective helmet, helmet comforter [16]. Protective gloves in accordance with GOST 12.4.252 [16,28]. The closed protective goggles of GOST 12.4.253 G16.191.
8.3.4 Personal protective equipment for use in everyday life	Not used in everyday life [1].

9 Physical and chemical properties

9.1 Physical condition
(state of matter, color, smell)

A colorless or slightly yellow liquid with a pronounced odor [1, 9, 10].

9.2 Parameters that characterize basic properties of the product
(temperature, pH, solubility, n-octanol/water coefficient and other parameters that are specific for this type of product)

Indicators	Value
Boiling point, °C	94.7
Density at 20°C, g/cm^3	0.867-0.873
Water solubility at 20°C, mg/l: - for benzene - for toluene	 1800 500
Solubility in fats: - for benzene - for toluene	 yes yes

[1,7,9,10]

10 Stability and reactivity

10.1 Chemical stability (for unstable products, specify products of decomposition)	Under normal conditions: the substance is stable [9,10].
10.2 Reactivity	Generally, for the product: no data available, not studied [1]. For ingredients:

	Benzene may be chlorinated, oxidized, nitrated [9]. Toluene is oxidized, nitrated, adkylated, hydrogenated, Sulfated, halogenated G101.
10.3 Conditions to avoid (including dangerous manifestations when in contact with incompatible substances and materials)	Heating. Conducting work with open fire [1], Under certain conditions, vapors can form explosive mixtures when mixed with air [7].

11 Toxicological information

11.1 General characteristics of the impact (evaluation of the degree of danger (toxicity) of influence to the body and the most characteristic manifestations of danger)	For the most toxic component, which is benzene, a highly hazardous substance: it belongs to the 2nd hazard class in terms of the degree of influenc on the human body [1,9]. The product is generally a toxic substance. It has irritating, skin-resorptive, sensitizing, embryotropic and teratogenic effects. In high concentrations, it acts narcotically [1].
11.2 Ways of Impact (inhalation, oral, in contact with skin and eyes)	Inhalation, oral, contact with skin and eyes [8,9,10].
11.3 Affected organs, human tissues and systems	Central and peripheral nervous systems, respiratory system, gastrointestinal fact, kidneys, liver, blood system, eyes, skin [1,9,10].
11.4 Information about hazardous health effects in direct contact with products, as well as the effects of these effects (irritant effect on the upper respiratory tract, eyes, skin; skin-resorptive and sensitizing effects)	If inhaled, irritates the upper respiratory tract [9, 10]. Irritates skin and eyes if contacted [9,10]. When ingested, it causes toxic poisoning [9,10]. It has a sensitizing and skin resorptive effect [9,10].
11.5 Details of the dangerous long-term effects of exposure to the body (influence on the reproductive function, carcinogenicity, mutagenicity, cumulativeness and other chronic effects)	Embriotropic - yes [9,10]. Gonadotropic - yes [9]. Teratogenic - yes [9]. Cumulativeness is moderate [10], weak [9]. Mutagenic - yes [9,10]. Carcinogenic - yes [9], not found [10]. According to the IARC, benzene belongs to the 1st group i.e. the substance is definitely carcinogenic to humans [9].

11.6 Indicators of high toxicity (DL_{50} (LD_{50}), route of entry (intragastrically, epidermally), animal species; CL_{30} (LC_{50}), exposure time (h), animal species)

Indicator	Value	Route of entry Exposure time (h)	Animal species
For benzene [9]			
DL_{50}, MG/KG	1175-6400	intragastrically	rats
CL_{50}, MG/M^3	65000	4	rats
For methylbepzol (toluene) [10]			
DL_{50}, MG/KG	2600-7500	intragastrically	rats

DL_{50}, mg/kg	8390-18090	epidermally	rabbits
CL_{50}, mg/m^3	45000-53600	4	rats

12 Environmental impact information

12.1 General characteristics of the impact on the environment
(atmospheric air, water bodies, soils, including the observed signs of impact)

When released into the air, water and soil, the product has a toxic effect on biological objects. It has a toxic effect on fish, daphnia, algae. At concentrations of 5-25 mg/l, it does not violate the processes of self-purification of water bodies (benzene) [9].

At a concentration of 34 mg/l, it suppresses photosynthesis and respiration in the communities of marine phytoplankton; at a concentration of 50 mg/l, it inhibits nitrification processes (in toluene) [10].

12.2 Ways of environmental impact

Harmful effects of the product on the environment can manifest themselves in emergency cases only when the product can get into the air and water basins and the soil [1].

12.3 Most important environmental impact characteristics

12.3.1 Hygienic standards
(permissible concentrations in ambient air, water, including fishery ponds, soils)

Table 2 [3,4,9,10,13,31]

Ingredients	MPC atm.air (m.o./d.a.)*, mg/m^3 (LNV[1], hazard class)	MPC water[2], mg/l, (LNV, hazard class)	MPC fishery [3] mg/l (LNV, hazard class)	MPC of soil, mg/kg (LNV)
Benzene	0.3/0.1 (cut., 2)	0.001 (s.-t. 1)	0.5 (tox. 4)	0.3 (air and migration)
Methylbenzene (toluene)	0.6/- (refl., 3)	0.024 (org. lept., 4)	0.5 (org., 3)	

* m.o./d.a.: maximum one-time/daily average

12.3.2 Ecotoxicity indicators
(CL, EU, NOEC, etc. for fish (96 hours), daphnia (48 hours), algae (72 or 96 hours), etc.)

For benzene:

	Value	Exposure Time h	Species
Acute toxicity for fish			
CL_{50}, MG/L	5.8	96	Mogone saxatilis
	9.2		Salmo gairdneri (rainbow trout)
	34.4		Carassius auratus (silver carp)
Toxic effect for Daphnia Magna			
CL_{50}, mg/l	10	4	
Toxic effects for algae (in growth)			
EU (inhibition	>1400		Scenedesmus quadricauda

[1] LNV the limiting indicator of harm (tox.: toxicological; s.-t.: sanitary-toxicological; org. for organoleptic with clarification of the nature of changes in the organoleptic properties of water (smel. ->changes the smell of water; turb. -> increases the turbidity of the water; col. -> colorizes the water; foam -> causes the formation of foam; pl. -> forms a film on the surface of the water; off-flavour -> gives the water the off-flavour; op.-> causes opalescence); refl. -> reflectory; res.-> resorptive; refl.-res.-> reflex-resorptive; fish.-> fisheries (changes in commercial qualities of commercial aquatic organisms); gen. -> general sanitary).

[2]Water of household and cultural and community water bodies

[3]Water of water objects of fishery importance (including marine)

growth), mg/l			(green algae)
CL50, mg/l	525	48	Chlorella vulgaris (Chlorella)
Identified effects on model ecosystems			
EU (growth inhibition), mg/l	96	16	Pseudomonas putida

[9]

For methylbenzene (toluene):

	Value Time of exposure, h		Species
Acute toxicity for fish			
CL_{50}, mg/l	25	48	Brachydanio (Danno striped)
CL_{50}, mg/l	5.4	96	Salmo (Salmon)
CL_{50}, mg/l	13-59.3	96	Carassius auratus (golden carp)
CL_{50}, mg/l	7.3	96	Morone saxatilis (SEA BASS)
CL_{50}, mg/l	13	96	Lepomis machrochirus (bluegill)
CL_{50}, mg/l	*26*	96	Pimephales promelas (large-headed pimephales)
Acute toxicity for Daphnia Magna			
EU_{50}, MG/L	313	48	
Toxic effects on algae (in growth)			
EU_{50}, MG/L	245	24	Chlorella vulgaris |
EU_{50}, MG/L	>433	96	Selenastrum j capricornutum

[10]

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

Transforms in the environment. Stable under abiotic conditions [9,10].

The transformation products are benzyl alcohol, benzoic acid [10].

For benzene [9]**:**

Biodegradation in biotic conditions t ½ 16-28 days in groundwater and river waters. The maximum concentration, which, under continuous exposure for a long time, does not cause disturbance of the biochemical processes of the water in water bodies: MCsafe 25 mg/l.

Biological dissimilation 10-20% (difficult);

BOD_{FULL} = 1.15 mgO_2/mg of the substance;

BOD5 = 0.55 mgO_2 / mg of the substance;

COD = 3.07 mgO_2/mg of substance

For methylbenzene (toluene) [10]:

Biological dissimilation is difficult (10-20%),

BD = 10%;

BOD_{pmN}env $^{=}$ 1.1 mgO_2/mg of the substance;

BOD; = 0.19 mgO_2/mg of the substance;

COD - 1.87 mgO_2/mg of the substance.

13 Recommendations for disposal of waste (residues)

13.1 Safety measures when handling wastes generated during use, storage, transportation	Safety measures when handling wastes are similar to those applied when handling the product. Compliance with the handling of flammable substances, avoid contact of waste with an open flame (see Section 7, 8).
13.2 Information about the places and methods of disposal, recycling or elimination of waste products, including packages.	The accumulation and disposal of industrial waste is carried out in accordance with SanPiN 2.1.7.1322. Elimination through burning [9,10,21]. Packages may be reused after removing the residue [15].
13.3 Recommendations for the disposal of waste generated by domestic use of the product	Not used in everyday life [1].

14 Information during transportation

14.1 UN Number (in accordance with the UN Recommendations on the Transport of Dangerous Goods)	1993 [1,8,25].
14.2 Correct shipping and transport name	Benzene-toluene fraction (BENTOL) [1,22]. HIGHLY FLAMMABLE LIQUID, NOS [25].
14.3 Used types of transport	Railway or motor transport [1]. Air transportation of samples and product samples is allowed [26,30].
14.4 Hazard Classification of Cargo according to GOST 19433-88:	[22]
- class	3
- subclass	3.3
- classification code (according to GOST 19433-88 and for rail transportation)	3012
- the number(s) of drawing(s) of the danger sign(s)	3
14.5 Hazard Classification of Cargo according to the UN Recommendations on the Transport of Dangerous Goods:	[25]
- class or subclass	3
- additional danger	
- UN packing group	1
14.6 Transport marking (Manipulation signs in accordance with GOST 14192-96)	“Keep away from direct sunlight”, “Sealed packaging” [1,23].
14.7 Emergency cards (with railway, sea and other kinds of transportation)	№328 [1,8].

15 Information on national and international legislation

15.1 National legislation

15.1.1 Laws of the Russian Federation	Law “On Technical Regulation”, Law “On Environmental Protection”, Law “On Sanitary-Epidemiological Welfare of the Population”, “Labor Code of the Russian Federation”, Law “On Production and Consumption Wastes”, Law “On Industrial Safety of Hazardous Production Facilities”, Law “On Air Protection”.
15.1.2 Information about the documentation governing the requirements for the protection of humans and the environment	State registration certificate: Series VT№ 000039 from 04/21/1994 [9]; Series BTX 000042 from 04/28/1994 [10].
15.2 International conventions and agreements (if the product falls under regulation of the Montreal Protocol, the Stockholm Convention, etc.)	No data.

16 Additional Information

16.1 Information on revisions (reprints) of the Safety Data Sheet	The safety data sheet was re-registered after the expiration date, the previous RPB-Ys 53505711.24.32629 dated 10.12.2013

16.2, List of data sources used in the preparation of the safety data sheet[4]

1 TU 2415-020-53505711-2010 Fraction benzene toluene (BENTOL). Specifications.
2 GN 2.2.5.1313-03 Maximum Permissible Concentrations (MPC) of harmful substances in the air of the working zone
3 GN 2.1.6.1338-03 "Maximum permissible concentrations (MPC) of pollutants in the atmospheric air of settlements"
4 GN 2.1.5.2280-07, Maximum Permissible Concentrations (MPC) of Chemicals in the Water of Water Bodies of Household, Drinking, and Cultural and Domestic Water Use;
5 GOST 12.1.007-76 OSSS. Harmful substances. Classification and general safety requirements.
6 GOST 12.1.044-89 OSSS. Fire and explosion hazard of substances and materials. The nomenclature of indicators and methods for their determination.
7 A.Ya. Korolchenko, D.A. Korolchenko, Fire and explosion hazard of substances and materials and means of their extinguishing. Handbook, Moscow: Ace. "Pozhnauka", 2004.
8 Emergency cards for dangerous goods transported by railways of the CIS, the Republic of Latvia, the Republic of Lithuania, the Republic of Estonia, approved by Council on Railway Transport of the Commonwealth Member States, Statement dated 30.05.08, No.48 (AK 328).
9 Information Card for a Potentially Hazardous Chemical (RPHC) Benzene. Series BT No.000042.
10 Information Card for a Potentially Hazardous Chemical (RPHC) Methylbenzene. Series BT No.000039.
11 Harmful chemicals. Hydrocarbons. Halogenated hydrocarbons. Handbook. Ed. by V.A. Filova. Leningrad, Chemistry, 1990
12 Information Card for a Potentially Hazardous Chemical (RPHC) Carbon (II) oxide. Series AT No.000672.
13 GN 2.1.7.2041-06 “Maximum Permissible Concentrations (MPC) of Chemicals in Soil”.
14 Order of the Ministry of Healthcare and Social Development of the Russian Federation No. 302n of 12.04.2011 On approval of the lists of harmful and (or) hazardous production factors and work, during which preliminary and periodic medical examinations (examinations) are carried out, and the Procedure for conducting preliminary and periodic medical examinations (examinations) of workers engaged in heavy work and work with harmful and (or) dangerous working conditions
15 GOST 1510-84 Petroleum and petroleum products. Marking, packing, transportation and storage

[4] Ordinal numbers of data sources are given in each paragraph of the Safety DS as links

16

17 Standard rules for the free distribution of special clothes, special shoes and other personal protective equipment to employees of organizations in the refining and petrochemical industry who work in harmful and (or) hazardous working conditions, as well as those engaged in work performed under special temperature conditions or associated with pollution, Order Ministry of Labor and Social Security of the Russian Federation No. 11 Jun from 22.12.2015.

18 GOST 31340-2013 Labelling of chemicals. General requirements.

19 GOST 12.1.018-93 "OSSS. Fire and explosion safety of static electricity. General requirements.

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