



# VORONEZHSHYNTHEZKAUCHUK JSC

## SAFETY DATA SHEET

According to 1907/2006/EC, article 31 (REACH)

### STYRENE-BUTADIENE RUBBER (SBR) SBR-1500

#### Emulsion type

Version: 2.1

Created: 03/07/2012

Regulation: EC No 1272/2008

#### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1 Product identifier	
Name of Substance:	Synthetic styrene-butadiene rubber (emulsion type) SBR 1500
Name of IUPAC	benzene, ethenyl-, polymer with buta-1,3-diene
Synonyms	Poly(styrene- <i>co</i> -butadiene)
Registration # for 1,3-butadiene (CAS #106-99-0; EC #203-450-8) <i>Index No(CLP): 601-013-00-X</i>	01-2119471988-16-0034 01-2119471988-16-0033
Registration for styrene (CAS #100-42-5; EC #202-851-5) <i>Index No(CLP): 601-026-00-0</i>	01-2119457861-32-0016

#### 1.2 Relevant identified uses of the substance

Most common technical function of Styrene Butadiene Rubber (emulsion type): tyre production, technical rubber parts (profiles, hoses, shoe soles, belt production, technical rubber goods), rubber compound.

#### DISCLAIMER

*This product is a polymer and is not classified as dangerous under criteria of Directives No 67/458/EEC, No 1999/45/EC and Regulation (EC) No 1272/2008 (Regulation CLP). This polymer does not contain SVHCs, SVHCs included in Candidate List, substances classified as dangerous under Article 59.2 Regulation (EC) No 1272/2008, namely:*

- *In an individual concentration of  $\geq 1$  % by weight for non-gaseous mixtures posing human health or environmental; or*
- *In an individual concentration of  $\geq 0.1$  % by weight for non-gaseous mixtures that is carcinogenic category 1, 2 or toxic to reproduction category 1A, 1B and 2, skin sensitiser category 1, respiratory sensitiser category 1, or has effects on or via lactation or is persistent, bioaccumulative and toxic (PBT) in accordance with the criteria set out in Annex XIII or very persistent and very bioaccumulative (vPvB) in accordance with the criteria set out in Annex XIII REACH; or*
- *A substance for which there are Community workplace exposure limits.*

*In accordance with mentioned above, this product does not require and official e-SDS as per Regulations (EC) No 1907/2006 (articles 31.1; 31.2) and Commission Regulation (EU) No 453/2010.*

*This e-SDS is developed in good faith to provide a customer with sufficient information allowing to take necessary measures to comply with relevant HSE requirements.*



### 1.3 Details of the supplier of the safety data sheet

#### Only representative

Company name: Gazprom Marketing and Trading France  
Address: 68 avenue des Champs-Élysées, 75008, Paris, France  
Contact Telephone: +33 1 42 99 73 50  
Fax: +33 1 42 99 73 99  
Email Address: Yury.severinchik@gazprom-mt.com

#### Suppliers

Company name: Voronezhsynthetkauchuk JSC  
Address: 2, Leninsky avenue, Voronezh, Russian Federation, 394014  
Phone: +7 4732 20 65 26  
Fax: +7 4732 20 69 40, 20 68 19  
Email Address: office@vrnsk.vrn.ru  
Emergency phone: +7 4732 49 09 00 (round the clock)

**Emergency phone in the country of delivery:** 112 (Please note that emergency numbers may vary depending upon the country of delivery though 112 remains valid as universal number)

## SECTION 2. HAZARDS IDENTIFICATION

#### Classification:

ANNEX I OF DIRECTIVE 67/548/EEC:

Physical/Chemical Hazards:  
None.

Health Hazards:  
None.

Environmental hazards:  
None.

EU CLP 2008:

Physical/Chemical Hazards:  
None.

Health Hazards:  
None.

Environmental hazards:  
None.

#### Specific hazard:

No significant health hazard in normal industrial use conditions.

Contact with melted/ heated product may cause thermal burns.

Processing vapours, which can irritate eyes and respiratory tract, may form when product is heated at high temperatures.

Combustible solid.



### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a synthetic rubber consisting of at least 90% co-polymer from styrene and butadiene (21-26% bound styrene), 0.7-2.0% antioxidant (CAS#119-47-1/EC# 204-327-1 or CAS#68610-06-0/EC # 271-847-3), 4.5-7.5% organic acids (fatty acids C<sub>14-18</sub>). May contain traces of styrene (<0.05%).

Formula:  $[(-C_4H_6)_m (-C_9H_{10})_n]$

Name	EC #	CAS #	Content, %	Classification EC#67/548/EEC and EC#1272/2008 (CLP)
Poly(styrene-co-butadiene)	none	9003-55-8	> 90	none

The product does not contain impurities or additives that could affect product's labelling and classification according to Regulation (EC) No 67/548/EEC and Regulation (EC) No 1272/2008 (CLP) in the concentration ranges specified.

### SECTION 4. FIRST-AID MEASURES

#### General information:

Spontaneous penetration of styrene-butadiene rubber into human organism is impossible.  
Styrene-butadiene rubber at normal conditions is stable and non-volatile.  
Under high temperatures and during rubber processing release of monomer vapors are possible which in poor ventilated areas may cause irritation of eyes mucous and upper respiratory ways.  
Contact with eyes may cause mechanical damage, irritation of eyes mucous, delacrimation.  
No significant health hazard in normal industrial use conditions.  
Contact with melted/ heated product may cause thermal burns.

#### Inhalation:

In emergency and in case of poisoning by rubber combustion products or if decomposition or thermal destruction products are inhaled:  
Move any exposed person to fresh air at once. Keep warm and at rest. If there is respiratory distress give oxygen. If respiration stops or shows signs of failing, apply artificial respiration. Get medical attention.

#### Ingestion:

In case of accidental swallowing  
Wash out mouth with water and give plenty of water to drink, provided person is conscious. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have the exposed person lean forward.  
Get medical aid.

#### Skin contact:

There are no risks in normal industrial use conditions. In the case of contact with hot product remove contaminated clothing and wash skin with plenty of running water, under a shower if affected area is large enough to warrant this. Get medical attention.

#### Eye contact:

Rinse immediately eye with plenty of low pressure water for at least 15 minutes.  
Remove any contact lenses. Get medical attention.



## SECTION 5. FIRE-FIGHTING MEASURES

### **Extinguishing media:**

Use foam, dry chemical, carbon dioxide, sand or water spray.

### **Special fire fighting procedures:**

Keep away from sources of ignition – no smoking.

Extinguish fire keeping safe distance. Not yet ignited rubber briquettes to be kept cool by means of water spraying.

### **Unusual fire & explosion hazards:**

None.

### **Specific hazards:**

Combustion generates irritating and toxic fumes.

Burning causes emissions of carbon oxide.

### **Protective measures in fire:**

Wear canvas protective suit, gloves, helmets, face shields, rubber or kersey boots, gas mask.

In proximity to fire wear full protective clothing and MSHA/NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions:**

See section 8.

### **Individual safety measures:**

Remove sources of ignition.

Provide workplace ventilation, process equipment and communication sealing, air monitoring of the workplace, avoid contact with skin and eyes.

### **Environmental precautions:**

Do not allow penetration of the product into water reservoirs, surface and ground water, sewer ducts and soil. Preventing disposal into water reservoirs of contaminated water without treatment.

Monitor content of hazardous substances in the air.

Provide sealing of process equipment.

### **Spill clean-up methods:**

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

## SECTION 7. HANDLING AND STORAGE

### **Handling:**

Handle in accordance with good industrial hygiene and safety practice.

Provide input-extract and local ventilation of work zones.

Provide thorough sealing and grounding of process equipment.

Regularly control work zone air.



**Usage precaution:**

Use in accordance with safety measures, rules of personal hygiene and industrial sanitation in the production at the facility.

Avoid contact with eyes and skin. Do not ingest or inhale combustion or decomposition products.

**Storage precautions:**

Store in a dry, well-ventilated area, at temperature not exceeding 30°C.

Keep away from direct sunlight, atmospheric precipitation and incompatible substances in a closed container. Prevent from freezing.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure limits:**

None listed.

**Personal protective equipment:**

Respiratory tract:

Not required (if is used workplace conditions).

In emergency or in case of increase of concentration of hazardous substances at the workplace wear positive pressure MSHA/NIOSH-approved self-contained breathing apparatus.

Hand protection:

Wear approved protective gloves.

Eye protection:

Wear approved safety goggles.

Skin protection:

Wear protective clothing and footwear, in contact with the hot product wear thermally resistant gloves.

**Hygiene measures:**

Personal hygiene and industrial sanitation in the production at the facility (wash hands at the end of each work shift and before eating, drinking, smoking or using the toilet).

**Technical safety measures:**

Forced-air and exhaust ventilation in work zones.

Compulsory monitoring of air conditions in work areas.

Sealing and grounding of equipment and communications.

Usage of intrinsically safe equipment.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state at 20°C and 1013 hPa	elastic solid
Appearance	rubber is produced in the form of briquettes
Odour	peculiar, at processing temperatures slight odor of organic compounds is possible
Colour	light yellow to dark-yellow



pH value	not applicable, insoluble
Density	0.928 g/cm <sup>3</sup>
Solubility	insoluble in water soluble in aromatic and aliphatic solvents (benzene, toluene, heptane, hexane, gasoline) under normal conditions
Vapor pressure	does not evaporate
Ignition temperature	285 °C
Auto-ignition temperature	336 °C
Flammability	does not ignite spontaneously, burn only upon entering into a source of fire
Explosive properties	non explosive
Viscosity according to Muni (MB1+4)	40-65 conv.units (at 100°C)
Average molecular weight	220000-260000
Granulometry	not applicable, substance is not marketed or used in granular form

## SECTION 10. STABILITY AND REACTIVITY

### **Stability:**

Stable under normal temperatures and pressures.

### **Reactivity:**

Oxidizes, hydrogenates.

### **Materials to avoid:**

Acids, alkalis, organic solvents, aliphatic and aromatic hydrocarbons, oxidising agents.

### **Conditions to avoid:**

Avoid naked flame. Avoid high temperatures. Avoid prolonged heat. Avoid long term exposure to direct sun beams. Avoid contact with incompatible substances.

### **Hazardous decomposition products:**

Carbon oxides.

## SECTION 11. TOXICOLOGICAL INFORMATION

### **General information:**

No significant health hazard in normal industrial use conditions.



Property	Synthetic poly (styrene-co-butadiene) rubber (CAS #9003-55-8)
<b>Acute toxicity:</b>	LD50/oral/rat: > 5000 mg/kg. LD50/dermal/rabbit: >2000 mg/kg. Inhalation toxicity: very low toxicity. The substance is a non-volatile elastic solid and is produced in the form of briquettes. There is therefore no potential for inhalation exposure.
<b>Irritation and corrosion:</b>	Not irritating or corrosive. Skin: none. Eye: none. Respiratory tract: none.
<b>Sensitisation:</b>	Not sensitizing. Skin: none. Eye: none. Respiratory tract: none.
<b>Carcinogenicity:</b>	Not carcinogenic.
<b>Mutagenicity:</b>	Non mutagenic.
<b>Toxicity for reproduction:</b>	Not investigated.
<b>Repeated dose toxicity:</b>	Not investigated.
<b>Other information:</b>	Not investigated.
Reference	Russian Register of Potentially Hazardous Chemical and Biological Substances /FBEPH.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity:

The product is poorly biodegradable but does not pose a hazard to the environment.  
Does not form toxic compounds with other substances in air and water.

### General information:

No significant ecological hazard in normal industrial use conditions  
At normal conditions rubber is a very stable product.  
Does not form toxic compounds with other substances in air and water.  
Pollution of water ponds and soil with polymer flakes may occur only if production, handling and transportation rules are not followed, in case of effluent discharge without treatment, as a result of emergencies and accidents.

Property	Synthetic poly (styrene-co-butadiene) rubber (CAS #9003-55-8)
<b>Aquatic toxicity:</b>	Not investigated.
<b>Biodegradation:</b>	Abiotic degradation: $t_{1/2}$ : > 30 d extremely stable.
<b>Chemical degradation:</b>	Not investigated.
<b>Bioaccumulative potential</b>	Not investigated.
<b>Mobility in soil:</b>	Not investigated.



<b>Property</b>	<b>Synthetic poly (styrene-co-butadiene) rubber (CAS #9003-55-8)</b>
<b>Results of PBT and vPvB assessment:</b>	Can be stated that the substance does not fulfill the PBT criteria (not PBT) and not the vPvB criteria (not vPvB).
Reference:	Russian Register of Potentially Hazardous Chemical and Biological Substances /FBEPH.

**Water hazard classification:**

According to the German VwVwS: WGK- 0 (not classified)

**SECTION 13. DISPOSAL CONSIDERATIONS**

**General information:**

Place into a suitable closed container for disposal.

**Disposal methods:**

Dispose of in accordance with local and national regulations.

Waste water containing rubber should be treated.

Packaging waste (paper bags) shall be collected and send for recycling. Plastic waste shall be removed to disposal.

**SECTION 14. TRANSPORT INFORMATION**

**General:**

The product is not covered by international regulations on the transport of dangerous goods.

UN: none.

**SECTION 15. REGULATORY INFORMATION**

**Chemical Safety Report has been performed for monomers:** 1,3-butadiene (CAS #106-99-0; EC #203-450-8), styrene (CAS #100-42-5; EC #202-851-5).

**SECTION 16. OTHER INFORMATION**

**16.1 Indication of changes:**

VERSION	Date of change	Section	Description of changes
Version: 1.0	24/02/2010		First edition created according to recommendations of Regulations (EC) #1907/2006 (Article 31.1).
Version: 2.0	07/02/2011	1.1, 2	Sections 1.1, 2 were updated.
Version: 2.1	07/02/2012	1; 3-13; 15; 16	1. Product name SKS-30 ARK (SBR-1500) was renamed into SBR-1500. 2. Section 1.1 was updated. 3. Section 1.3 was updated (E-mail address, Emergency phone for suppliers). 4. DISCLAIMER was added on the first page. 5. Sections 4. General information subsection was added. Inhalation subsection was updated. 6. Section 5. Extinguishing media, Special fire fighting procedures were updated.





			<p>7. Section 6. Individual safety measures, Environmental precautions subsections were updated.</p> <p>8. Section 8. Personal protective equipment, Hygiene measures, Technical safety measures Subsections were updated.</p> <p>9. Section 12. Ecotoxicity subsection was updated.</p> <p>10. Section 13. Disposal methods subsection was updated.</p> <p>11. Sections 3; 9, 10; 11; 15, 16 were fully updated.</p>
Version: 2.2	03/07/2012	Disclaimer	<p>1. Version 2.2 created according to update of Candidate List (last updated: 18/06/2012).</p> <p>2. DISCLAIMER was updated on the first page.</p>

## 16.2 Relevant R-phrases, Hazard- and EU Hazard-statements

**Labelling: none.**

**R-phrases: none.**

### Safety Advice (S-phrases):

- S 16 Keep away from sources of ignition - no smoking.
- S 41 In case of fire and/or explosion do not breathe fumes.
- S 47 Keep at temperature not exceeding 30°C.
- S 61 Avoid release to the environment.

### 16.3 Abbreviations and acronyms

- LD50 Lethal Dose to 50% of a test population (Median Lethal Dose).
- LC50 Lethal Concentration to 50 % of a test population.
- PBT Persistent, bioaccumulative, toxic chemical.
- vPvB Very Persistent, Very Bioaccumulative.
- UN United Nations.
- WGK Wassergefährdungsklasse (*German: Water Hazard Class.*)

## 16.4 Key literature references and sources

### EU DIRECTIVES

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Regulations. Commission regulation (EU) no 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).



DIRECTIVE 1999/45/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

DIRECTIVE 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances.

COMMISSION DECISION of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes (notified under document number (2001/118/EC).

NATIONAL REGULATIONS (GERMANY)  
Major Accident Hazard Legislation 82/501/EWG.

Russian Register of Potentially Hazardous Chemical and Biological Substances (FBEPH). BENZENE, ETHENYL-, POLYMER WITH BUTA-1,3-DIENE. Dossier of potentially hazardous chemical and biological substance BT#001343, 1998. Ministry of Health of the Russian Federation.

#### *DISCLAIMER*

*This information is based on our current level of knowledge. This information may be subject to revision as new knowledge and experience becomes available, and SIBUR makes no warranties and assumes no liability in connection with any use of this information. Since SIBUR cannot be aware of all aspects of your business and the impact the REACH Regulation has for your company, SIBUR strongly encourages you to get familiar with the REACH Regulation in order to comply with its requirements and timelines.*