**SIBUR TOGLIATTI LLC**

**SAFETY DATA SHEET**


**BUTADIENE- alpha-METHYLSTYRENE RUBBER (SBR)**

Emulsion type

**GRADE SBR 1502**

<table>
<thead>
<tr>
<th>SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.1 Product identifier</strong></td>
</tr>
<tr>
<td><strong>Name of Substance:</strong></td>
</tr>
<tr>
<td><strong>Name of IUPAC:</strong></td>
</tr>
<tr>
<td><strong>Synonyms:</strong></td>
</tr>
<tr>
<td><strong>Product name, grades:</strong></td>
</tr>
<tr>
<td><strong>Registration # for 1,3-butadiene:</strong></td>
</tr>
<tr>
<td><strong>Index No(CLP):</strong></td>
</tr>
<tr>
<td><strong>Registration for 2-phenylpropene:</strong></td>
</tr>
<tr>
<td><strong>(alpha-Methylstyrene)</strong></td>
</tr>
<tr>
<td><strong>Index No(CLP):</strong></td>
</tr>
</tbody>
</table>

| **1.2 Relevant identified uses of the substance** |
| **1.2.1 Identified use(s):** | tyre production, technical rubber goods, rubber compound. |
| **1.2.2 Uses advised against:** | Uses other than those given in section 1.2.1 are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled. |

**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 substances classified as dangerous under Article 59.2 Regulation (EC) No 1272/2008, namely:

- in an individual concentration of ≥ 1 % by weight for non-gaseous mixtures posing human health or environmental; or
- in an individual concentration of ≥ 0.1 % by weight for non-gaseous mixtures that is carcinogenic category 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; 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.
1.2 Relevant identified uses of the substance
1.2.1 Identified use(s): tyre production, technical rubber goods, rubber compound.
1.2.2 Uses advised against: Uses other than those given in section 1.2.1 are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.

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-Elysées, 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: SIBUR Togliatti LLC
Address: Novozavodskaya str. 8, 445007, Togliatti, Samara Region, Russian Federation
Phone: +7 8482 29-91-51; 23-11-04; 29-32-69
Fax: +7 8482 22-14-41; 70-15-18
Email Address: officetk@tltk.ru; office@tltk.ru
Emergency phone: +7 8482 36-91-51 (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

2.1. Classification of the substance or mixture
2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)
Not classified as a hazardous substance.

2.2 Label elements
2.2.1 Labelling according to Regulation (EC) No 1272/2008 (CLP/GHS)
Not applicable.

2.3 Specific hazard
No significant health hazard in normal industrial use conditions.
Contact of melted/ heated product may cause thermal burns.

Processing vapours may form when product is heated at high temperatures. Processing vapours may content thermal decomposition products which can irritate eyes and respiratory tract.
Combustible solid.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS
This product is a synthetic rubber consisting of at least 90% co-polymer from butadiene and alpha-methylstyrene (21.0-24.0% bound alpha-methylstyrene), 0.7-2.0% antioxidant (CAS#68610-06-0/ EC #271-847-3), 5.0-7.2% organic acids (fatty acids, C14-18 and C16-18-unsatd., CAS #67701-06-8/ EC#266-930-6). The product may contain traces of alpha-methylstyrene (monomer): < 0.1%.
Formula:

\[ -CH_2 - CH = CH - CH_2 - ]_m \quad \left( \begin{array}{c} \text{CH}_3 \\ \text{C}_6\text{H}_5 \end{array} \right)_n \]

where

m = 0.7 - is the number of polybutadiene block fragments
n = 0.3 - is the number of alpha-Methylstyrene block fragments;

<table>
<thead>
<tr>
<th>Name</th>
<th>EC #</th>
<th>CAS #</th>
<th>Content, %</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-butadiene, polymer with alpha-methylstyrene</td>
<td>none</td>
<td>25034-68-8</td>
<td>≥ 90</td>
<td>none</td>
</tr>
</tbody>
</table>

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

**SECTION 4. FIRST-AID MEASURES**

**4.1 Description of first aid measures**

**General information**

Butadiene-α-methylstyrene rubber at normal conditions is stable, non-volatile, causes non-exhaustive effects. Spontaneous penetration of rubber into human organism is impossible.

Inhalation poisoning is unlikely.

Contact with eyes may cause mechanical damage.

Contact with skin has no effects.

If eye/skin contact with hot product occurs, obtain immediate medical attention.

Thermal decomposition products inhalation may irritate respiratory system and eye.

**Inhalation**

No hazard in normal use of product.

In case the processing vapours penetrate the respiratory airways, do the following:

Immediately move an 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**

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.
If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately.

**Eye contact**
Rinse immediately eye with plenty of low pressure water for at least 15 minutes. Remove any contact lenses. Consult a physician if required.

### 4.2 Most important symptoms and effects, both acute and delayed

**Inhalation symptoms:** Thermal decomposition products inhalation may irritate respiratory system, eye irritation.
**Skin contact symptoms:** Contact with hot product may cause serious burns.
**Eye contact symptoms:** Eye contact may cause mechanical damage, irritation of eyes mucous. Contact with hot product may cause serious burns.
**Ingestion/aspiration symptoms:** Ingestion/aspiration may cause irritation of digestive tract. May cause gastrointestinal blockage.

### 4.3 Notes for the doctor
If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

#### SECTION 5. FIRE-FIGHTING MEASURES

**5.1 Extinguishing media**
Use water with wetting agent, water spray, air-filled foam, chemical foam, extinguishing vapor, carbon dioxide type fire extinguisher, foam extinguisher, solid-extinguishing agents, dry chemical, ground chalk, sand.

**5.2 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.

**5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases**

**5.4 Special Protective Equipment for fire-fighters**
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

**6.1 Personal precautions, protective equipment and emergency procedures:**
Take precautionary measures against static discharges. Ensure adequate ventilation.
6.2 Individual safety measures
Remove sources of ignition, provide workplace ventilation, air monitoring of the workplace, avoid contact with skin and eyes.

6.3 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.

6.4 Spill clean-up methods
When the product gets into water or ground collect the product in a separate container for recycling or disposal.

6.5 Reference to other sections
For additional information, refer to Section 8, Exposure Controls and Personal Protection equipment.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.
Avoid all sources of ignition.
Avoid contact with eyes and skin. Do not swallow.
Do not ingest or inhale combustion or decomposition products.
Provide input-extract and local ventilation of work zones.
Regularly control work zone air.
Workers should be protected from the possibility of contact with molten product.

7.2 Storage precautions
Store in a dry, well-ventilated area, at temperature not exceeding 40°C.
Keep away from direct sunlight, atmospheric precipitation and incompatible substances in a closed container.

7.3 Specific end use(s)
Please check the identified uses given in Section 1.2 of this safety data sheet.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 National and International Occupational Exposure Limits
For 1,3-butadiene, polymer with alpha-methylstyrene (CAS: 25034-68-8): not established

Occupational Exposure Limits for the possible products of thermal degradation (see section 10.6):
1) for alpha-methylstyrene (2-phenylpropene): International Limit Values

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>LTEL 8 hr TWA ppm</th>
<th>LTEL 8 hr TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
<td>Maximum Workplace Concentrations (“Maximale Arbeitsplatzkonzentrationen”–</td>
</tr>
</tbody>
</table>
### Indicative Occupational Exposure Limits (IOELVs)

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>MAK (ppm)</th>
<th>TWA ppm</th>
<th>STEL (mg/m³)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
</tr>
<tr>
<td>Denmark</td>
<td>50</td>
<td>240</td>
<td>100</td>
<td>480</td>
</tr>
<tr>
<td>European Union</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
</tr>
<tr>
<td>France</td>
<td>25</td>
<td>123</td>
<td>100</td>
<td>492</td>
</tr>
<tr>
<td>Germany (AGS) (1)</td>
<td>50</td>
<td>250</td>
<td>100</td>
<td>500</td>
</tr>
<tr>
<td>Germany (DFG)</td>
<td>50</td>
<td>250</td>
<td>100</td>
<td>500</td>
</tr>
<tr>
<td>Italy</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
</tr>
<tr>
<td>Hungary</td>
<td>-</td>
<td>246</td>
<td>-</td>
<td>492</td>
</tr>
<tr>
<td>Latvia</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>49</td>
</tr>
<tr>
<td>Poland</td>
<td>-</td>
<td>240</td>
<td>-</td>
<td>480</td>
</tr>
<tr>
<td>Spain</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>492</td>
</tr>
<tr>
<td>Sweden</td>
<td>20</td>
<td>98</td>
<td>50</td>
<td>245</td>
</tr>
<tr>
<td>Switzerland</td>
<td>50</td>
<td>250</td>
<td>100</td>
<td>480</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>-</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>50</td>
<td>246</td>
<td>100</td>
<td>491</td>
</tr>
<tr>
<td>ACGIH</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA-NIOSH (1)</td>
<td>50</td>
<td>240</td>
<td>100</td>
<td>485</td>
</tr>
<tr>
<td>USA-OSHA</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>480</td>
</tr>
</tbody>
</table>

**Note:**

1) GESTIS International Limit values: [http://bgia-online.hvbg.de/LIMITVALUE/WebForm_ueliste.aspx](http://bgia-online.hvbg.de/LIMITVALUE/WebForm_ueliste.aspx)

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### Recommended Exposure Limit (REL)

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>MAK (ppm)</th>
<th>TWA ppm</th>
<th>STEL (mg/m³)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>5</td>
<td>11</td>
<td>20</td>
<td>44</td>
</tr>
<tr>
<td>Belgium</td>
<td>2</td>
<td>4.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Denmark</td>
<td>10</td>
<td>22</td>
<td>20</td>
<td>44</td>
</tr>
<tr>
<td>European Union</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>France</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Note:**

1) workplace exposure concentration corresponding to the proposed tolerable cancer risk (see background document: Germany AGS)

2) workplace exposure concentration corresponding to the proposed preliminary acceptable cancer risk (see background document: Germany AGS)
8.1.2 DNEL/ PNEC values from the CSR in accordance with REACH regulation:

8.1.2.1 For 1,3-butadiene, polymer with alpha-methylstyrene
DN(M)ELs for workers have not been derived.
DNEL and PNECs for freshwater, saltwater, sediment and soil have not been derived.

8.1.2.2 For alpha-methylstyrene (CAS #98-83-9; EC #202-705-0)

<table>
<thead>
<tr>
<th>Country</th>
<th>DNEL (CAS #98-83-9; EC #202-705-0)</th>
<th>PNEC water (freshwater)</th>
<th>PNEC water (marine water)</th>
<th>PNEC water (intermittent release)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>-</td>
<td>4.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Spain</td>
<td>2</td>
<td>4.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.5</td>
<td>1</td>
<td>5 (1)</td>
<td>10 (1)</td>
</tr>
<tr>
<td>Switzerland</td>
<td>5</td>
<td>11</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>-</td>
<td>46.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>10</td>
<td>22</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ACGIH</td>
<td>2</td>
<td>4.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>USA-NIOSH</td>
<td>0.19</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>USA-OSHA</td>
<td>1</td>
<td>15</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

(1) Short-term value, 15 minutes average value

8.1.2.3 For 1,3-butadiene (CAS #106-99-0; EC #203-450-8)

DN(M)ELs for workers
DMEL, Long-term - systemic effects, Inhalation: 2.21 mg/m³

DN(M)ELs for the general population
DMEL, Long-term - systemic effects, Inhalation: 0.0664 mg/m³

PNEC water
No PNEC water (freshwater, marine water, intermittent release) is proposed.
Substance is a gas and is extremely unlikely to reside in the aquatic compartment. Deriving an aquatic PNEC for a gas is unreasonable and technically of little use for risk assessment as the substance will not be present in the aquatic environment.

**PNEC sediment**
No PNEC sediment (freshwater, marine water) is proposed.
Substance is a gas and is extremely unlikely to reside in the sediment compartment. Deriving a sediment PNEC for a gas is unreasonable and technically of little use for risk assessment as the substance will not be present in the sediment environment.

**PNEC soil**
No PNEC soil is proposed.
Substance is a gas and is extremely unlikely to reside in the terrestrial compartment. Deriving a soil PNEC for a gas is unreasonable and technically of little use for risk assessment as the substance will not be present in the terrestrial environment.

**PNEC for sewage treatment plant**
No PNEC STP is proposed.
Substance is a gas and is extremely unlikely to reside in the aquatic compartment. Deriving an aquatic PNEC for a gas is unreasonable and technically of little use for risk assessment as the substance will not be present in the aquatic environment.

**8.2 Exposure controls**

**8.2.1 Technical safety measures**
Provide adequate 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.

**8.2.2 Personal protection equipment**
Use of personal protective equipment must be consistent with good occupational hygiene practices.
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).

**Eye/face protection**
Wear Goggles giving complete protection to eyes (BS EN 166).

**Skin Protection (Hand and Body)**
Wear approved protective gloves (Nitrile rubber. BS EN 374)
If contact with hot product is anticipated, gloves should be heat-resistant and thermally insulated.
Wear insulating gloves BS EN407 (heat).
Wear apron or other protective clothing and antistatic boots.

**Respiratory Protection**
Not required (if is used workplace conditions).
In emergency or in case of increase of hazardous substances concentration at the workplace wear positive pressure MSHA/NIOSH-approved self-contained breathing apparatus (BS EN 14387:2004). Use filter type A (against vapours of organic substances) according to EN 141 (Class 1 up to 0.1 Vol-%, Class 2 up to 0.5 Vol-%, Class 3 exceeding 1 Vol-%).
8.2.3 Environmental Exposure Controls
None specific.
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.
Provide sealing of process equipment.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state (at 20 °C and 1013 hPa)</td>
<td>Elastic solid (rubber is produced in the form of briquettes)</td>
<td>visual method</td>
</tr>
<tr>
<td>Colour</td>
<td>from light-yellow to yellow</td>
<td>visual method</td>
</tr>
<tr>
<td>Odour</td>
<td>Peculiar, at processing temperatures slight odor of organic compounds is possible</td>
<td>sensory examination</td>
</tr>
<tr>
<td>pH (Value)</td>
<td>Not applicable, insoluble</td>
<td>-</td>
</tr>
<tr>
<td>Melting Point (°C) / Freezing Point (°C)</td>
<td>Not available</td>
<td>-</td>
</tr>
<tr>
<td>Glass transition temperature (°C)</td>
<td>“-” 51</td>
<td>GOST 19920.14</td>
</tr>
<tr>
<td>Initial boiling point/boiling range (°C)</td>
<td>Not available</td>
<td>-</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
<td>-</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Does not ignite spontaneously, burn only upon entering into a source of fire</td>
<td>-</td>
</tr>
<tr>
<td>Upper/lower flammability or Explosive limit ranges</td>
<td>Not available</td>
<td>-</td>
</tr>
<tr>
<td>Vapour Pressure (hPa)</td>
<td>Not available (does not evaporate)</td>
<td>-</td>
</tr>
<tr>
<td>Vapour Density (Air=1)</td>
<td>Not available (does not evaporate)</td>
<td>-</td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td>0.94</td>
<td>ASTM D 792</td>
</tr>
<tr>
<td>Solubility (Water)</td>
<td>Insoluble</td>
<td></td>
</tr>
<tr>
<td>Solubility (Other)</td>
<td>soluble in aromatic solvents under normal conditions</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient n-Octanol/Water</td>
<td>Not available</td>
<td>-</td>
</tr>
<tr>
<td>Ignition temperature (°C)</td>
<td>293</td>
<td>ISO 4589-84 (GOST 12.1.044)</td>
</tr>
<tr>
<td>Auto Ignition Temperature (°C)</td>
<td>339</td>
<td>ISO 4589-84 (GOST 12.1.044)</td>
</tr>
<tr>
<td>Decomposition Temperature (°C)</td>
<td>Not available</td>
<td>-</td>
</tr>
<tr>
<td>Viscosity according to Muni (MML 1+4)</td>
<td>51±6 conv.units (at 100°C)</td>
<td>ASTM D 1646 (GOST R 54552)</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Non explosive</td>
<td>-</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not available</td>
<td>-</td>
</tr>
<tr>
<td>Granulometry</td>
<td>Not applicable, substance is not</td>
<td>-</td>
</tr>
</tbody>
</table>
SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
Product is stable under all ordinary circumstances at ambient temperatures. Product may oxidize, thermal decomposition.

10.2 Chemical stability
Product is stable under normal conditions.

10.3 Possibility of hazardous reactions
None specific.

10.4 Conditions to avoid
Avoid naked flame, prolonged heat, contact with incompatible substances. Keep away from heat and sources of ignition.

10.5 Materials to avoid
Oxidising agents, acids, alkalis, aromatic solvents.

10.6 Hazardous decomposition products
None under normal conditions at ambient temperatures. Combustion products: Carbon oxides. Thermal decomposition products may include trace amounts of monomers: alpha-methylstyrene and 1,3-butadiene.

SECTION 11. TOXICOLOGICAL INFORMATION

General information
No significant health hazard in normal industrial use conditions.

<table>
<thead>
<tr>
<th>Property</th>
<th>Results</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes of Exposure</td>
<td>At ambient temperature the product is a non-volatile elastic solid. There is no potential for inhalation exposure.</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>LD50: &gt;5000 mg/kg bw (rat)</td>
<td>FBEPH. BT#001560, 1999</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td>Irritation/Corrosivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin irritation/corrosion</td>
<td>Not classified. Skin contact with melted/heated product may cause serious thermal burns.</td>
<td>Experimental result. RU Guidelines: RU 2102-79 (Dermal irritation. Single exposure; long-term - systemic effects).</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>Not classified.</td>
<td></td>
</tr>
<tr>
<td>Property</td>
<td>Results</td>
<td>Remarks</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Contact with eyes may cause mechanical damage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye contact with melted/heated product may cause serious thermal burns.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal decomposition products may cause irritation of eye.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory tract</td>
<td>Not classified. Thermal decomposition products inhalation may cause irritation of respiratory system.</td>
<td></td>
</tr>
<tr>
<td><strong>Sensitization:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Not classified. No data available</td>
<td>Experimental result. RU Guideline: RU 1.1578-96 (Skin sensitization)</td>
</tr>
<tr>
<td>Respiratory system</td>
<td>Not classified. No data available</td>
<td>Experimental result. RU Guideline: RU 1.1578-96 (Respiratory sensitization)</td>
</tr>
<tr>
<td><strong>Repeated dose toxicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic oral toxicity</td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td>Chronic inhalation toxicity:</td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td>Chronic dermal toxicity</td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In vitro data</td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td>In vivo data</td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td><strong>Carcinogenicity</strong></td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td><strong>Toxicity for reproduction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects on fertility</td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td>Developmental toxicity</td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td><strong>STOT - single exposure</strong></td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td><strong>STOT - repeated exposure</strong></td>
<td>Not classified. No data available</td>
<td></td>
</tr>
<tr>
<td>Other effects</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 12. ECOLOGICAL INFORMATION**

**General information**
At normal conditions rubber is a very stable product.
Product does not form toxic compounds with other substances in air and water.
The product is poorly biodegradable but does not pose a hazard to the environment.
Pollution of water ponds and soil with rubber 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.
### Aquatic toxicity
Not expected to be acutely toxic, but material may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
<td>Not classified. No data available</td>
</tr>
<tr>
<td>Aquatic invertebrates</td>
<td>Not classified. No data available</td>
</tr>
<tr>
<td>Sediment organisms</td>
<td>Not classified. No data available</td>
</tr>
<tr>
<td>Toxicity to soil macro-organisms/micro-organisms</td>
<td>Not classified. No data available</td>
</tr>
<tr>
<td>Toxicity to terrestrial plants</td>
<td>Not classified. No data available</td>
</tr>
</tbody>
</table>

### Persistence and degradability
No specific ecological data are available for this product. This water-insoluble rubber is expected to be inert in the environment. No appreciable biodegradation is expected.

### Environmental distribution
No specific ecological data are available for this product.

### Bioaccumulation
Effects on nature due to bioaccumulation are not known.

### Results of PBT and vPvB assessment
Not classified as PBT or vPvB.

### Other adverse effects
No information available.

Water hazard classification:
According to the German VwVwS: WGK- 0 (not classified).

### SECTION 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods
Disposal should be in accordance with local, state and national legislation. Waste water has to be treated.

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

#### 13.2 Additional Information
European Waste Code (2001/118/EC):
19 12 04 plastic and rubber

### 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

#### 15.1 EU regulations
Authorisations: Not applicable.
Restrictions on use: None

#### 15.2 National regulations
None known.
15.3 Chemical Safety Assessment
Chemical Safety Assessment (CSA) is not required for the substance since it is not subject to registration as a polymer according to the provisions of Article 2(9) of REACH.

Chemical Safety Report has been performed for monomers
1,3-butadiene (CAS #106-99-0; EC #203-450-8);
Alpha-Methylstyrene (CAS #98-83-9; EC #202-705-0).

SECTION 16. OTHER INFORMATION

### 16.1 Indication of changes

<table>
<thead>
<tr>
<th>VERSION</th>
<th>Date of change</th>
<th>Section</th>
<th>Description of changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version: 1.0</td>
<td>11/07/2013</td>
<td>All</td>
<td>Initial SDS.</td>
</tr>
<tr>
<td>Version: 1.1</td>
<td>17/12/2013</td>
<td>All</td>
<td>Version was checked for compliance with Candidate List of Substances of Very High Concern (SVHC) for Authorisation updated on December, 16, 2013.</td>
</tr>
</tbody>
</table>
| Version: 1.2 | 23/06/2015    | 2, 3, 16 | 1. Sections 2, 3 were updated according to CLP Regulation requirements.  
2. Section 16.2 from the previous version was removed. Section 16 was renumbered. |
| Version: 1.3 | 01/07/2016    | Title, 1.3 | Company name of the Supplier was changed from «Togliattikauchuk» on «SIBUR Togliatti». |

### 16.2 Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGS</td>
<td>The German Committee on Hazardous Substances (Ausschuss für Gefahrstoffe – AGS)</td>
</tr>
<tr>
<td>ACGIH</td>
<td>American Conference of Industrial Hygienists</td>
</tr>
<tr>
<td>DFG</td>
<td>Germany Research Foundation</td>
</tr>
<tr>
<td>DMEL</td>
<td>Derived Minimal Effect Levels</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No Effect Level</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose to 50% of a test population (Median Lethal Dose)</td>
</tr>
<tr>
<td>LTEL</td>
<td>Long Term Exposure Limit</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health (USA CDC)</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration (USA)</td>
</tr>
<tr>
<td>PEC</td>
<td>Predicted No Effect Concentration</td>
</tr>
<tr>
<td>PNEC</td>
<td>Predicted No Effect Concentration</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, bioaccumulative, toxic chemical</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent, Very Bioaccumulative</td>
</tr>
<tr>
<td>STEL</td>
<td>Short Term Exposure Limit</td>
</tr>
<tr>
<td>STOT</td>
<td>Specific Target Organ Toxicity</td>
</tr>
<tr>
<td>STP</td>
<td>Sewage treatment plant</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
</tbody>
</table>

### 16.3 Key literature references and sources

**EU DIRECTIVES**


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

Russian Register of Potentially Hazardous Chemical and Biological Substances (FBEPH).

RU Guideline 2102-79. Assessment of skin exposure of hazardous chemical compounds and justification of permissible levels of skin pollution (Ministry of Health of the Russian Federation).
RU Guideline 1.1578-96. Requirements to statement of experimental studies on justification of permissible concentration levels of industrial chemical allergens in workplace air and in atmosphere. (Ministry of Health of the Russian Federation).

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END OF SDS